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PUNJAB STATE CIVIL SERVICES

MOST EXPECTED QUESTIONS

2015 PSCSCCE

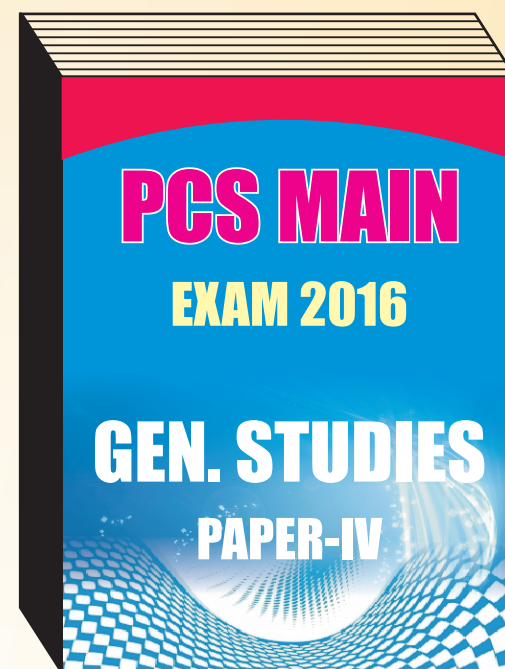
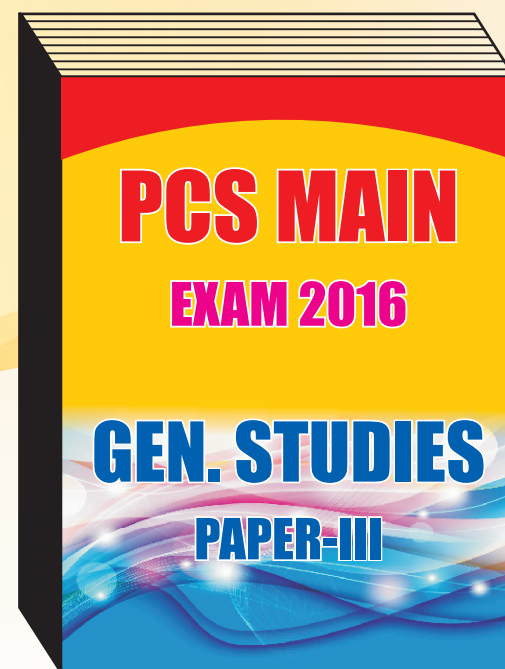
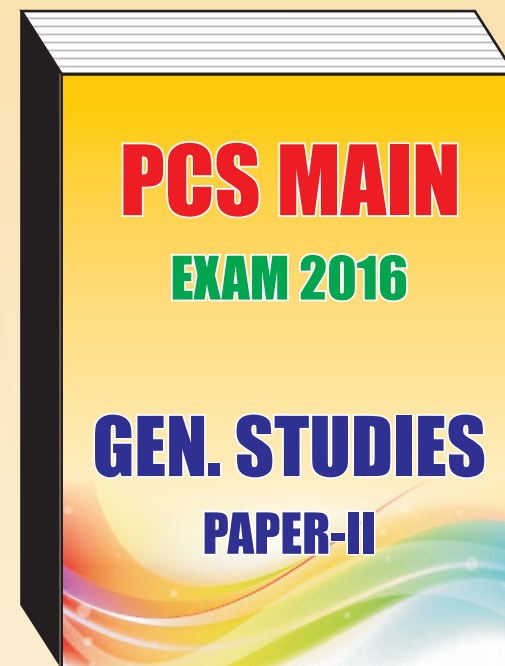
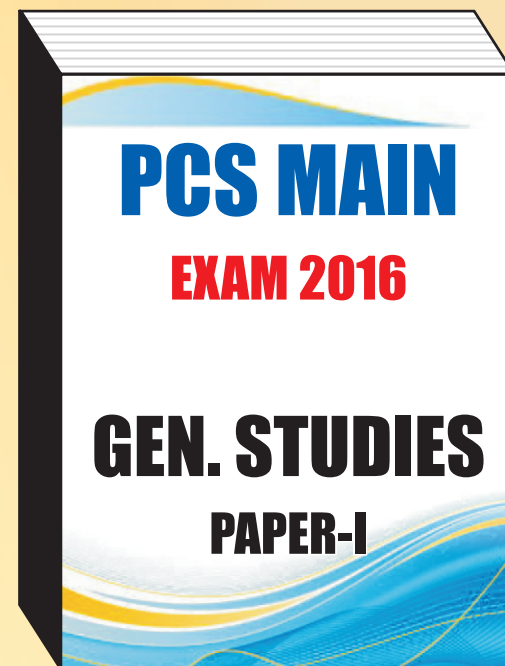
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Exam Date 6th Dec 2015
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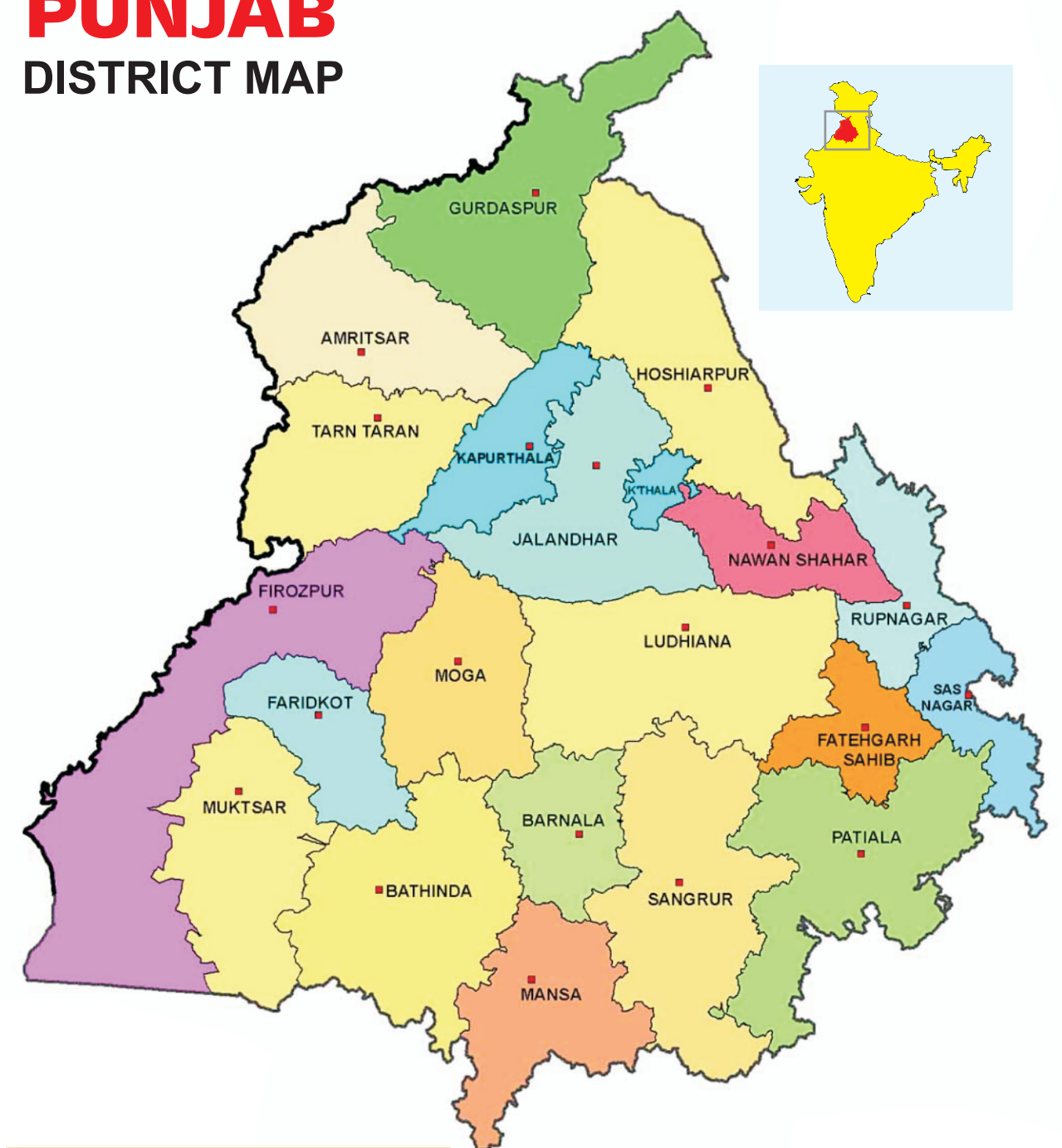
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PUNJAB DISTRICT MAP



LEGEND

- international boundary
- State Boundary
- District Boundary
- District HQ

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Preface

What are strategies to solve MCQs effectively & fast?

A part or whole of almost all the competitive exams today consists of multiple choice questions (MCQs). Such an exam, be it an online MCQ test or a pen and paper one, tests a candidate for knowledge, concepts and intelligence. This article assumes that you have already prepared yourself for an MCQ test and tells you only about how to take such an examination. Though you need to prepare for such MCQ tests in a different way too, this article is only about taking an MCQ test and nothing more. Following tips come handy for MCQ tests:

Accelerate your mind before the start. Maintain a uniform speed throughout.

What you do is enter the exam hall in a relaxed mind and about 5 minutes before you are supplied the question booklet. Keep yourself in a pleasant and relaxed mood in this period.

What happens is you get the question paper in an accelerated- thinking-state of the mind. Your mind is already active by the time you and start answering. So you start better and faster.

Moreover, do not try to speed up in the beginning. As you enter into the thick of the question paper, your speed naturally increases.

Read the questions cautiously and then answer. Pay special attention to questions with more than 1 correct answer.

Do not try to solve everything in one go. Each question paper has a mix of easy, somewhat difficult and difficult questions. So it is better to attempt all the easy questions first. You may come back after hovering over the question paper once and then solve the difficult questions. The long questions which may consume a good chunk of time in reading may be avoided in the first go.

Take half to one minute breaks if possible.

Finding time to take a break in an objective type question paper is not easy. But it is advisable to take a very small rest intermittently, say after every half an hour, by closing your eyes, relaxing the muscles and breathing deeply. The rest period may be as small as half to one minute. It increases your efficiency.

Use method of elimination.

This method is to be used when you are not sure about the answer. Reduce the number of choices by eliminating the ones which seem to be entirely out of chance. Among the remaining choices, the one with maximum probability may be chosen. If only one answer is supposed to be correct but you find that more than one answer are almost similar, then all such options may be eliminated. An option may be wrong in itself and can thus be eliminated. It means that irrespective of the question, the fact contained in the option may be wrong and so the option may be eliminated.

Sometimes guessing the answer intelligently may fetch you some marks.

PUNJAB, NATIONAL, INTERNATIONAL CURRENT AFFAIRS

- **14th Sant Namdev National Award-2015:**
- Punjab Chief Minister (CM) Parkash Singh Badal was conferred the prestigious **14th Sant Namdev National Award- 2015**. He was awarded was bestowed upon him for promoting peace, communal harmony and universal brotherhood. The award comprised of citation, a monetary prize of 101000 rupees and a memento. Parkash Singh Badal is the longest-serving Chief Minister of Punjab with over 15 years in office. Currently, he is heading Akali Dal-BJP coalition government. He previously had served as CM for first time in 1970 to 1971. Later for second time from 1977 to 1980 and for third time from 1997 to 2002. He is generally regarded as the second most powerful Sikh leader in world after former Prime Minister Manmohan Singh. In 2015, he was awarded with India's second highest civilian award, Padma Vibhushan.
- India's first satellite-controlled solar power plant was inaugurated in which state on 6 May 2015? –

Punjab

- **Explanation :** India's first-ever satellite-controlled solar power plant was opened in Lalpur village in Punjab's Hoshiarpur district. Built at a cost of Rs. 35 crore, the project will produce 4.2 MW of electricity.
- Which town of Punjab's Gurdaspur district came to news on 27 July 2015 with the incident of a huge terrorist attack taking place here resulting in the death of seven persons? – **Dinanagar**. Dinanagar is the 3 largest town of Punjab's Gurdaspur district and has a municipal council. It is located quite close to the

Pakistan border. The seven people killed included Punjab Police SP Baljeet Singh, who was shot in the head once the terrorists stormed into the police station and two home guards.

- **What is the name of the Punjabi film, the slated release of which on 22 August 2014 was stopped by the Union Govt. on 21 August 2014? – 'Kaum De Heere'**
- **India's first climate change theatre opened at Pushpa Gujral Science City in Kapurthala, Punjab.** Objective: To provide information on climate changes and global warming to school and college students and sensitize the audience about the currently debated subject of Climate Change and Global Warming. Visitors will be made aware of and have a better understanding and appreciation for the latest climate science and the issues surrounding the human role in climate change. The multi-screen theatre is synchronized with the objects kept inside the theatre and as film starts those objects showcases the same happenings which are being depicted in the film. A 25 minute special movie on climate change and global warming and its affect gives a message that how we together can make a difference in preserving the atmosphere. It explores what a worst-case future might look like if humans do not take action on current or impending problems which could threaten civilization. The movie starts by giving a glimpse of future – floods, droughts, earthquakes and other natural disasters and coming back to the present, the Earth introduces itself and talks to the audience about current situation and

impacts it is experiencing due to global warming.

- **Industrial policy 2015 for Chandigarh launched**

Aimed at boosting employment and motivate medium and small industries in the city, Industrial Policy 2015 was released in July 2015. The objectives of the policy are to promote non-polluting industry in Chandigarh and to maximize production, achieve higher productivity through modern and efficient work techniques and optimum utilization of available resources.

- The endeavour of the UT Chandigarh is to make Chandigarh a hub of pollution free and knowledge based industrial activities. To facilitate the industry the administration will start Common Application Form system so as to reduce the paper work through Single Window system.

The services like water connection, sewer connection, acknowledgement under MSMED Act, 2006, power connection, CST/TIN number, and license under Factories Act would be provided in a time bound manner and if and department does not provide the services within the prescribed time limit, the service would be deemed to have been approved.

- **National Level Sikh museum to be constructed in Lakhnour Sahib Village of Punjab**

A national level museum of Sikh heritage will be setup in Lakhnour Sahib village. Lakhnour Sahib is a historical village as the mother of tenth Sikh guru Guru Gobind Singh, Mata Gujari belonged to the place.

Guru Gobind Singh had also spent a few years of his childhood in the village. Some articles belonging to Guru Gobind Singh and his mother Mata Gujari will also be kept in the museum and it would be developed on the lines of Anandpur Sahib Museum.

- Recently, The Punjab government banned holding of health camps without prior approval of civil surgeons in respective districts. The move follows after least 15 people lost their eyesight upon being operated for cataract at a camp in Gurdaspur district recently.
- **Punjab approves to set up Rs 150-crore mega food park at Ludhiana**
- Punjab government has announced that year 2015-16 will be observed as development year to give further fillip to the all-round development of the state. It was announced by Chief Minister Parkash Singh Badal, in Dhuri Assembly segment of the state. For this state government will make concerted efforts for the overall development of the urban and rural areas in the state. In this regard, state government will be to provide ultra-modern civic amenities to the people in urban and rural areas and major schemes will be implemented in the current fiscal. In urban areas state government will focus to provide the facility of water supply, sewerage, Sewerage Treatment Plants (STPs), streetlights, roads and parks. Whereas in rural areas provision of roads, disposal of waste water, potable drinking water and toilets will be state government thrust areas.
- **Punjab has become the first state in India to issue Soil Health Cards (SHCs)**, a Union Government initiative to all farmers in the state. In this regard, every district of state has been assigned mobile soil testing lab. These labs will take soil sample from every farm and issue a digitalised soil health details.

Presently, state government has 66 such laboratories and has capability to test 3.5 lakh soil samples annually. State government also has made mandatory for these labs to check soil health on quarterly basis. Importance of SHC in Punjab The advent of green revolution in Punjab has made soil testing more necessary in view of over exploitation of soil. It will help farmers in maintaining the balanced health structure of the soil and educate them to use right quantity of fertilisers in order to prevent soil from becoming arid. About Soil Health Card (SHC) Scheme The SHC contains all basic and crop-wise recommendations of fertilizers or nutrients required for farms of different soil types. It also provides crop-wise nutrient recommendation and other inputs in order to increase the productivity of farms. It will also lead in profiling of soil structure which will in turn help in diversification of crops as per the soil content of that area as well. Prime Minister Narendra Modi had formally launched the nationwide 'Soil Health Card' Scheme in February 2015 in Suratgarh, Rajasthan.

- **In Punjab MGNREGA recent wage rate Rs210:**

Punjab Government has established a special MGNREGA cell to coordinate effective implementation of National Rural Employment Guarantee Scheme in the state. It has been established by Punjab Rural Development and Panchayat Department at Chandigarh with an outlay of 233 crore rupees. This cell will monitor implementation of Union Government's flagship 100 days employment guarantee scheme of MGNREGA. It will also monitor the wage rate under MGNREGA which has been fixed by Union Government on the basis of consumer Price Index- Agricultural Labourers (CPI-AL) which is

implemented on 1st April every year and will be applicable for whole financial year. It should be noted that all the districts of Punjab are being covered under MGNREGA with effect from 1st April, 2008. The recent wage rate has been revised from 202 rupees to **210 rupees** with effect from 1st April 2015. The wages will be directly transferred by state government in the bank accounts of the beneficiaries from 15th September 2015.

- Punjab Government has won first award for achievement in solar rooftop power capacity:

Punjab Government has won first award in the category of highest capacity addition in grid connected solar rooftop power in the country during the financial year 2014-15. It is one of 5 awards won by Punjab New and Renewable Energy Department (PNRED) for outstanding performance in the various fields of Renewable Energy and Power Generation. The other four areas in which Punjab won awards includes Highest capacity addition of off-grid waste to energy plants. Deployment of highest cumulative numbers of Solar Water Pumps. Achieving highest cumulative grid connected solar rooftop power capacity. Achieving highest capacity addition in grid connected solar power in the country. These awards were conferred to the Punjab state by Union Minister of State for Power, Coal and New and Renewable Energy Piyush Goyal at a function held in Bengaluru, Karnataka. Union Territory of Chandigarh bagged the second spot in the highest capacity addition in grid connected solar rooftop power in the country category

- **15 Gharials to be released in beas belt to boost tourism: punjab**

Punjab government has announced to release 15 Gharials in the Beas belt, near Harike Patan in order boost

tourism. The Gharials species will be released as part of state government's plan to make Beas belt, a natural habitat of the fish-eating crocodile species. The release of Gharials has been planned in February-March 2015 near Karmowal village (near Harike Patan water bodies) by the Experts from World Wide Fund for Nature (WWFN). Karmowal village has ample water bodies with sand banks making it suitable site for developing as habitat for the species. Gharials will be released depending upon the success of the initial phase of making natural habitat and after the release they will be kept under close watch. About Gharial Gharial (*Gavialis gangeticus*) is also known as the gavial. It is last surviving species of the family Gavialidae. It is a fish-eating crocodile and belongs to one of the three crocodilian species found in the Indian Sub-Continent. In historic times it was present in Indus River system, including Beas and Sutlej rivers, indicating healthy river system. Protection Status: It is listed in Schedule I of Indian Wildlife (Protection) Act, 1972. It is also listed as Critically Endangered in the International Union for Conservation of Nature (IUCN) Red List of Endangered Species.

- **Satnam Singh Bhamara :**

Satnam Singh Bhamara became the first Indian born basketball player to be drafted in the National Basketball Association (NBA). He was chosen by the Dallas Mavericks team as the 52nd pick in the NBA Draft. He was selected amongst the 60 young men who will play in the next season of NBA. About Satnam Singh Bhamara Born: 10 December 1995. The 19-year-old Satnam hails from a small village Ballo Ke in Barnala district of Punjab. He stands 7 feet 2 inches tall and comes from a farmer's family. Prior to this selection he was going training at IMG Academy at Florida, US and was coached by Scott

Fleming. He had played for the IMG Academy graduate team during the season 2014-15. He was undergoing training in the US since September 2010 as part of a scholarship program between IMG and Reliance. Earlier in 2011, Singh had represented the India national basketball team at the FIBA Asia Championship. He also had represented India at the 2013 FIBA Asia Championship. It should be noted that Canada born Sim Bhullar was the first Indian origin player to play in NBA. He had briefly featured for the Sacramento Kings in the 2014 season of NBA.

- Punjab state is celebrating the 350th years of foundation of holy city Sri Anandpur Sahib. The celebrations began after Chief Minister Prakash Singh Badal dedicated the 81 feet high 'Khanda', installed at Sri Anandpur Sahib to the humanity. The installed Khanda symbolizes the glorious legacy and rich cultural heritage of this holy city of bliss on its 350th foundation day.

Facts about Sri Anandpur Sahib The holy city Sri Anandpur Sahib was founded in 1665 by the Sri Guru Tegh Bahadur, ninth Guru of Sikhs. Later in 1699, Khalsa Panth was created here by the Tenth Guru Sri Guru Gobind Singh. Anandpur Sahib is situated in a city in Rupnagar district (Ropar) of Punjab and located on the lower spurs of the Himalayas surrounded with the river Sutlej forming a border on the south west. It is commonly known as the holy City of Bliss which is one of the most important sacred places for Sikhs. It is closely linked with their religious traditions and history of Sikhism.

- **Punjab CM Launched ePMS Portal On July 2, 2015**

As a part of nationwide 'Digital India' week, the Punjab Chief Minister Mr. Parkash Singh Badal launched the state Portal ePMS (Electronic Projects Management System) here at his official residence.

This portal was developed and managed by the Cabinet Secretariat Informatics Division of National Informatics Centre (NIC), Rashtrapati Bhawan, New Delhi.

To fast track infrastructure investment stalled projects, both in the public and private sectors, involving investment between Rs. 100 crores and Rs 1,000 crores.

This project was started to enhance efficiency, bring transparency, boost the investor confidence, revive the investment cycle, eliminate the human interaction and improve the communication between industries to Government (B2G), State to Centre (G2G) or vice versa (G2B).

- 88th Akhil Bhartiya Marathi Sahitya Sammelan (All India Marathi Sahitya Sammelan) on 3 April 2015 began in Ghumaan village in Gurdaspur district of Punjab. It was inaugurated by Union Road Transport Minister Nitin Gadkari along with the Chief Minister Parkash Singh Badal. The three-day long sammelan is dedicated to Marathi Saint Bhagat Namdev (Sant Namdeo). In this conference large contingent of Marathi litterateurs is going to take part. The President of 88th Akhil Bhartiya Marathi Sahitya Sammelan is Dr. Sadanand More. Apart from inaugurated the sammelan, foundation stone of Bhagat Namdev Degree College was also laid in the Ghumaan village. Village Ghumaan is the place where Marathi Saint Bhagat Namdev had spent 18 years of his life and gave valuable teachings to the society. It is believed that in Ghuman, Sant Namdeo had composed his shlokas in Awadhi, Marathi and Punjabi. His 61 shabads were included in holy scripture of the Sikhs i.e. in Guru Granth Sahib.

- **Padho Punjab- Khedo Punjab Mission'**

Punjab Government has launched 'Padho Punjab- Khedo Punjab

Mission' i.e. Learn Punjab- Play Punjab Mission. It is a special mission launched to provide school students a separate period in the curriculum for playing along with studies. The purpose of the mission is to encourage more youngsters towards sports to produce quality players for the country. This will also inculcate the sportsmanship spirit and competitiveness amongst them. Under this mission a 40 to 50 minute special period has been kept for sports. During this period students of middle schools will be taught various games including the games played locally. Mission's pilot project was launched by State Education Minister Dr. Daljeet Singh Cheema at a government girl's school in Rupnagar district of state. As part of it five teachers have been trained for purpose Padho Punjab-Khedo Punjab Mission. They will further give training to other teachers to physically train students in sports.

- Punjab government has launched e-stamping project in the state. It was launched by state Deputy Chief Minister Sukhbir Singh Badal. This project seeks to computerise revenue departments of the state in order to remove malpractices and end leakage of government revenue. It also seeks to make revenue transactions safe and secure. Key facts At present, e-stamping has been initiated as a pilot project in five districts of state. They are Mohali, Amritsar, Jalandhar, Ludhiana and Bathinda. All districts of state will be covered under this project by 31 March 2015. This project will help citizens to pay the exact fee through a wire transfer, a draft or even a cheque for stamp instead of buying it from middlemen at higher cost. E-stamps have various safety features which includes a unique ID generated by computer and could be verified online and also UV, ultra violet, micro

film and thermal fixtures besides an encrypted 2 D bar code.

- Punjab has become first state in India, to completely ban the sale of loose cigarettes (even as single sticks) and loose tobacco. State government had banned the sale of loose cigarettes and tobacco under Section 7 of the Cigarettes and Other Tobacco Products Act, 2003 (COTPA Act, 2003). Section 7 of COTPA bans sale of these products if they are traded, supplied or distributed without specified warning including pictorial warning on it. State government notification in this regard clearly mentions that loose cigarettes and tobacco products do not carry a pictorial or a written warning so they are banned. Earlier state government had banned sale of nicotine in the form of e-cigarette. About COTPA Act, 2003 It was enacted by Parliament in 2003. It prohibits advertisement and regulates tobacco business in India. This Act has put restriction on tobacco products which includes cigarettes, gutka, panmasala (containing tobacco), cigar, cheroot, Beedi, Snuff, chewing tobacco, hookah, tooth powder containing tobacco.
- **E-cigarette :** It is a battery-powered vaporizer which has the feel of tobacco smoking. They do not produce smoke like regular cigarette but rather an aerosol (mist), which is inaccurately referred to as vapor. They have a heating element that atomizes a liquid solution known as e-liquid. E-liquids are usually a mixture of propylene glycol, glycerin, nicotine, and flavorings. Using an E-cigarette is called Vaping.
- Punjab's first Mega International Food Park was inaugurated at Dabwala Kalan, in Fazilka District Punjab under the aegis of Mega Food Park Scheme. It was inaugurated by Union Food Processing Industry Harsimrat Kaur Badal in the presence of Deputy

Chief Minister of Punjab Sukhbir Singh Badal. This food park is constructed on 55 acre land and has additional facilities for processing milk and milk products besides packaging vegetables and fruits. Initially it will provide employment for more than 700 local youth and later more will be employed in the park once other companies establishes their units in this facility. Mega Food Park Scheme: This scheme is based on cluster approach and on hub and spoke model. It aims at facilitating the establishment of a strong food processing industry backed by an efficient supply chain, which includes collection centres, central processing center (CPC) and cold chain infrastructure. This scheme envisages one time capital grant of 50 per cent of the project cost (excluding land cost) subject to a maximum of Rs 50 crore in general areas. 75 per cent of the project cost (excluding land cost) subject to a ceiling of Rs 50 crore, in difficult and hilly areas including north east region and J&K.

- Thatheras of Jandiala Guru, Punjab is being inscribed on the UNESCO The traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab is being inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity, 2014. It was announced at UNESCO's 9th Session of the Intergovernmental Committee (IGC) for the Safeguarding of Intangible Heritage in Paris, France.

Key facts about Thatheras The craft of the Thatheras constitutes the traditional techniques of manufacturing brass, copper and kansa (an alloy of copper, zinc and tin) utensils. They have a unique ethnic and historical identity with an oral tradition that underpins their skill. The name of the community – 'Thatheras' is identical with the name

of the element. These craft utensils of Thatheras have both utilitarian and ritualistic value. The tradition of using the metals is recommended by the ancient Indian school of medicine, Ayurveda. Skills of the Thatheras have been orally transmitted from one generation to other generations. During the reign of Maharaja Ranjit Singh (1883) – the great 19th Century Sikh Monarch, the Thatheras crafts colony was established in Jandiala Guru, Punjab. Thus, Jandiala Guru became an area of repute due to the skill of the Thatheras. Representative List of the Intangible Cultural Heritage of Humanity: The Representative List of the Intangible Cultural Heritage of Humanity is made up of those intangible heritage elements that help demonstrate the diversity of this heritage and raise awareness about its importance. It encourages dialogues between communities worldwide that practice traditional metal craftsmanship to manufacture handcrafted products that are both useful and beautiful

- **Punjab rural sector has lowest “Credit Deposit (CD) ratio :**

Along with decline in the overall Credit Deposit (CD) ratio of banks in Punjab for the period ending June 2014, the CD ratio of state’s rural sector has been registered the “lowest” in comparison to that of in urban and semi-urban sectors. As per latest report of State Level Bankers’ Committee (Punjab), the CD ratio of banks in Punjab’s rural sector plunged to 60.76% as on June 2014 from 63.21% in corresponding period of year 2013.

“Credit Deposit (CD) ratio” refers to how much a bank gives as loans of the deposits it has mobilized. The low ratio shows banks are not fully utilizing their resources for banking activity. The Punjab government had already expressed concern over the low deposit ratio in rural sector.

It had even told the banks to increase the ratio. The overall CD ratio of Punjab has also reduced by 2.20% to 77.70% as on June 2014.

- The Punjab Government has agreed to the Ghana Government’s proposal offering land to Punjab farmers. As per the proposal, the government of Ghana would provide fertile farmland on a long-term lease to Punjab farmers for farm activities. Ghana has made this proposal to promote agriculture as a tool of progress in Ghana and if possible then by Punjab’s expertise in farming. Punjab Government has assured Ghana that a high-level delegation of officers as well as an expert from Punjab Agricultural University (PAU), Ludhiana, would be sent to Ghana to study the suitability of the entire project. Ghana also offered Punjab to export finished goods to Ghana. It has invited Punjabi entrepreneurs to visit Ghana to start manufacturing facilities in the country and take advantage of Ghana’s natural resources like various minerals, timber, oil, cocoa, palm oil fish and cotton.
- The recent 6.5% hike in railway freight rate has led to an increase of Rs 300 a tonne in the prices of steel products across the country. Traders are considering a further increase of Rs 700-1,000 a tone in coming days. Ingot rates at the standard Mandi Gobindgarh market in Punjab, India’s largest spot steel market, increased by Rs 300 a tonne to Rs 39,750 a tonne. The cost of steel production will certainly surge on the freight rate hike, with a rise in iron ore transportation costs. With the increase in freight cost, all raw materials, including coal and iron ore, will become dearer. Consequently, coal, iron ore and steel prices will increase.
- The skeletal remains of the Indian soldiers, who were killed by the British troops for participating in the First War of Independence in 1857,

are exhumed at Ajnala well in Amritsar district, Punjab. These were our freedom fighters who sacrificed their lives during the First War of Independence in 1857.

- ‘Kalian Wala Khuh’: Martyrs place where the remains of over 250 Indian soldiers dumped unceremoniously by the British in a deep well at Ajnala in the wake of the 1857 uprising. Neither the Indian Government nor the Government of Punjab, attempted to extract the bodies of the martyrs and perform the last rites and restore the honour of the soldiers of the first freedom struggle. Gurdwara Shaheed Ganj Committee (a gurdwara in the border town of Ajnala) exhumed the remains of Indian soldiers who were executed by the British authorities for participating in the 1857 mutiny. The exercise is being done to perform last rites of these soldiers after 160 years. The well that was dug was previously known as kaliaanwala khu (well of the black people) has been renamed as Shaheedanwala khu (well of the martyrs).
- What British authorities did with the Indian soldiers of the 26th Bengal Native Infantry (in Lahore) in 1857, when they revolted against the East India Company? In the 1857 mutiny, around 500 soldiers of 26th Native Infantry Regiment revolted at Mian Mir Cantonment in Lahore. They marched towards Ajnala from Lahore after hearing the reports of the Sepoy mutiny in Meerut where Hindu and Muslim troops rebelled against the East India Company over the cartridges for their rifles being greased with animal fat. When soldiers were moving ahead to join the revolt, they had an encounter with the British troops on the banks of the Ravi, where 220 soldiers attained martyrdom and their bodies were thrown into the river. The remaining 280 soldiers were arrested and were confined in the overcrowded barracks located at

Ajnala tehsil complex. Later, the British killed these soldiers too and buried them in Kalian Wala Khuh. India's First War of Independence (Indian Rebellion of 1857) Also known as the Sepoy Mutiny, the Revolt of 1857, the Uprising of 1857, etc. A violent revolt against the British rule. Immediate cause of Revolt: The introduction of Enfield greased rifles whose cartridges were said to have a greased cover made of beef and pork sparked off the revolt. It antagonized both Hindu and Muslim soldiers. The Indian Rebellion of 1857 began as a mutiny of sepoys of the East India Company's army on 10th May 1857, in the town of Meerut. It soon escalated into other mutinies and civil rebellions largely in the upper Gangetic plain and central India, with major hostilities confined to present-day Uttar Pradesh, Bihar, northern Madhya Pradesh, and the Delhi region. Leaders of 1857 revolt: Mangal Pandey, Rani Lakshmi bai, Bahadur Shah II, Begum Hazrat Mahal, Babu Kunwar Singh, Nana Saheb Peshwa, Bakht Khan, etc. Outcome of revolt: British victory – Suppression of the rebellion, End of the Mughal and Maratha Empires, End of Company rule in India and Transfer of rule to the British crown.

- **First India-China Yoga College at Yunnan Minzu University, China :** Minister of State (MoS) for External Affairs V K Singh inaugurated first India-China Yoga College at Yunnan Minzu University in Kunming, China.

Heron Drones :

- India has approved to buy **10 Heron TP Drones** worth of **400million US\$** from **Israel**. It will be operated by Indian Air Force.

Tadoba Festival:

- Maharashtra government set to hold a three-day '**Tadoba festival**' in **Mumbai**.

- **'Santhara'/Sallekhna ritual illegal:**

The Supreme Court (SC) of India has stayed Rajasthan High Court's order declaring Santhara, a Jain ritual of voluntary and systematic fasting to death illegal. The stay order was given by SC Bench comprising Chief Justice of India H.L. Dattu and Justice Amitava Roy. What is Santhara? Santhara is a religious custom of Jain religion that embraces voluntary death in order to purge oneself of bad 'karma' and attain 'moksha'. The practitioners of this custom take an oath to stop eating until they die of starvation. This oath is taken in consultation with a guru and follows the most detailed of procedures. Background Earlier in August 2015, Rajasthan High Court had banned the practice of Santhara by declaring it as a criminal offence and mentioning it as illegal in the eyes of law. The High Court in its ruling had made this religious practice a punishable offence under section 306 (abetment of suicide) and Section 309 (attempt to commit suicide) of the Indian Penal Code (IPC). Constitutional Validity Article 25: The Rajasthan High Court in its ruling had mentioned that as per Article 25, religious liberty and freedom is only limited to the scope of essential religious practices of particular religion. So practice of Santhara is not essential religious practice of Jainism. Article 21: The Rajasthan High Court also mentioned that Protection of life and personal liberty does not include Right to die. So it is illegal from this point of view. The ruling of High Court was based on public interest litigation (PIL) filed by advocate and human rights activist Nikhil Soni to ban this centuries old Jain ritual claiming it as social evil and should be considered as suicide. Jain Community's Viewpoint Jain community clearly mentioned that the practice of Santhara is an integral

part of Jainism and has been mentioned in religious texts. It is also an intrinsic practice to a person's ethical choice to live with dignity until death and not an exercise in trying to achieve an unnatural death.

- **President gives assent to re-promulgation of Land Ordinance for 3rd time:**

President Pranab Mukherjee has given his assent to re-promulgation of land ordinance for third time as per provisions of Article 123 of Indian Constitution. Earlier, Union Cabinet meeting chaired by Prime Minister Narendra Modi had approved re-promulgation of the ordinance, which was to expire on 3 June 2015. Currently, The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015 is with the Joint Committee of Parliament chaired by BJP MP S.S. Ahluwalia for detailed discussion on the provisions of the legislation. Earlier, Lok Sabha had passed the bill, however in Rajya Sabha it was not able to pass were as government is in minority and opposition parties including Congress and Left as well as some NDA allies had opposed it.

Article 123 of Constitution

- It gives legislative power to President. He can issue ordinances when Parliament is in recess i.e. not in session if there is urgent need to have a law on some urgent public matter. The promulgated ordinance has similar effect to an act of parliament. However, every ordinance must be laid and approved by both houses of the parliament within 6 weeks from the reassembling. If not placed and approved by both houses of the parliament after reassembling it becomes invalid or lapses.
- Food group Nestle on 5 June 2015 withdrew the highly popular "Maggi" noodles from sale in India

following a food scare sparked by reports of excess lead and presence of harmful MSG in it. The “Maggi” brand of instant noodles is under fire in India as reports of presence of these harmful substances have been reported from labs of several states across the country. What is the name of the food inspector belonging to the Uttar Pradesh FDA who had taken the first step against Nestle’s “Maggi” noodles in 2014 for allegedly flouting food safety norms? – **V.K. Pandey**

- India and Bangladesh on 6 June 2015 ratified the Land Boundary Agreement (LBA) to settle the land boundary dispute between the two countries through exchange of territories. This ratification thus sealed an agreement signed by the then Indian Prime Minister Indira Gandhi and her Bangladeshi counterpart Mujib-urRehman. When That path-breaking agreement was signed? – **1974 (Under the agreement, India will have an advantage of 500 acres and 10,000 acres will go to Bangladesh.)**
- 6th BRICS summit, being hosted by Brazil, started on 15 July 2014. Which Brazilian city is hosting this summit? – **Fortaleza**
- Who was awarded the Gandhi Peace Prize for 2013 by the President Pranab Mukherjee on 15 July 2014? – **Chandi Prasad Bhatt**, the noted Environmentalist
- **5th Commonwealth Youth Games:** They were held in Apia, the capital of Samoa. India ranks 5th in commonwealth Youth Games 2015 at Samoa.
India: 9 gold, 4 silver, 6 bronze
Total = 19
- **“Swavlamban Health Insurance Scheme” for persons with disabilities 22 september, 2015**
- **The Trust Fund for Empowerment of Persons with Disabilities** under the Department of Empowerment of

People with Disabilities, Ministry of Social Justice and Empowerment, signed **MoU** with the **New India Assurance Company Limited** on providing affordable Health Insurance Scheme **“Swavlamban Health Insurance Scheme”** for the **Persons with Disabilities (PwDs)**.

- **Sherif Ismail sworn in as new Prime Minister of Egypt:**
- **Urdu scholar Shamim Hanfi wins first Jnangarima Manad Alankaran Award**
- **Odisha celebrates the Festival Nuakhai**
 - **Nuakhai**, is a festival of **Harvest** observed by the people of **western Odisha** in India.
 - Prime Minister, **Narendra Modi** and Odisha Chief Minister **Naveen Patnaik** have greeted the people of Odisha on this festival.
 - Prime Minister, Narendra Modi said in a statement, “Nuakhai Juhar! Greetings to the people of Odisha as they celebrate the festival of Nuakhai. May this festival further happiness in society.”
- **Salman Rushdie’s Two Years Eight Months and Twenty Eight released** A book titled **“Two Years Eight Months and Twenty Eight Nights”** written by the British Indian novelist **Sir Ahmed Salman Rushdie** was released.
- **SK Biswas**, has been honoured with the prestigious **Rajbhasha Kirti Award** (third) the award from President Pranab Mukherjee at a glittering ceremony. September 14: National Hindi Divas It is celebrated as an event every year on 14th of September, because the Hindi language was first adopted by the Constituent Assembly of India as the official language of the Republic of India on 14th of September in 1949. Hindi is spoken as a native

language by 258 million people and is recognized as the **4th largest language in the world**.

- Board of Control for Cricket in India (BCCI) was founded in 1928.
- **Gandhi Peace Prize 2014 conferred on ISRO:**
- **ISRO Chairman A S Kiran Kumar** received the honour which carries **Rs one crore in cash**, a plaque and a citation. ISRO has achieved **29 successful** flights of the PSLV SRO scripting space history on September 24, 2014 by successfully placing the Mars Orbiter Mission Mangalyaan around Mars in its first attempt. launching not only Indian satellites but **also 45 satellites of 19 other countries**.
- Earthquake of 8.3-magnitude on Richter scale has hit off Chile’s coast in Illapel, the capital of Choapa Province in central Coquimbo Region of Chile. US Geological Survey has noted its epicenter at a depth of 12.5 kilometers off Chile’s coast in Illapel. After the initial earthquake, two aftershock quakes of magnitudes 6.2 and 6.4 occurred west of Illapel.
- India’s Polar Satellite Launch Vehicle (PSLV-C23) successfully put five satellites from abroad into their perfect orbits on 30 June 2014. These 5 satellites belonged to which four countries? – **France, Germany, Canada and Singapore (The PSLV put into orbit SPOT satellite from France, AISAT from Germany, NLS7.1 and NLS7.2, both from Canada, and VELOX-1 from Singapore.**
- Which wildlife sanctuary was recently notified as 47TH Tiger Reserve of India? – **Bor Wildlife Sanctuary** (Maharashtra)
- The United States has named a **mountain in Antarctica in honour of an eminent Indian-American scientist** whose pioneering biological research expedition has provided critical data about animal populations. What is the name of this

Indian scientist who was born in Bihar? – **Akhouri Sinha**

- Pentagon, the defence headquarters of the United States, recently notified the sale of the antiship missiles to India. What is the name of it? Harpoon
- What is the name of the large and powerful typhoon that was heading northwest toward **Japan's southern** islands on 7 July 2014 and it hit
- Okinawa on early 8 July with winds of up to 150 mph? – **Typhoon Neoguri**
- What is the name given to the mission to provide total sanitation to every Indian by 2019, which was announced in the Union Budget 2014-15? –

Swachh Bharat Abhiyan

- Germany created history by winning the FIFA World Cup 2014 on 13 July 2014 at the Maracana Stadium in Rio. Germany defeated Argentina by 1-0. This win was Germany'stitle win of FIFA World Cup? – **Fourth**
- Who won the prestigious Golden Boot award for FIFA World Cup 2014? – **James Rodriguez of Colombia**
- Who won the „Golden Ball“ award for FIFA World Cup 2014? – **Lionel Messi (Argentina)**
- Who won the „Golden Glove“ award in FIFA World Cup 2014? – **Manuel Neuer (Germany)**
- Which country is to host the 21st FIFA World Cup to be held in 2018? – **Russia**
- What is the name of the Northwest Pacific typhoon that struck into the Philippines on 15 July 2014 and is expected to bring in heavy rains in India too? – **Typhoon Rammasun**
- A Malaysian Airlines passenger plane (Flight No. MH-17) carrying 295 people crashed in Eastern Ukraine on 17 July 2014. Reports suggested that the ill-fated plane was shot down in a missile attack but the reports were not confirmed. This plane was on its flight to

Malaysian capital Kuala Lumpur from which European city? – **Amsterdam**

- Which city hosted the summit of IBSA (India, Brazil and South Africa) in 2015? – **New Delhi**
- Which country became the first in the world to legalise child labour recently? – **Bolivia**
- What is India's Human Development Index (HDI) rank in the recently released Human Development Report (HDR) 2014? – **135 out of 187 countries**
- What is the name of the typhoon which killed thirteen people in China and affected about 2.5 million people before being dissipated on 26 July 2014? – **Typhoon Matmo**
- What is the name of the mission announced by the Union Govt. on 28 July 2014 envisioned to protect the indigenous breeds of cows in the country? – **Rashtriya Gokul Mission**
- A new plant to produce the paper for high-denomination currency notes domestically was inaugurated by the Union Finance Minister Arun Jaitley on 30 May 2015. This plant is at which place? – **Hoshangabad (Madhya Pradesh)**
- India and five nations on 3 June 2015 signed an agreement to join 60 countries, including **Switzerland**, to exchange financial information automatically from **2017**. What is the name of this agreement that would pave way to have a control on black money overseas? – **Multilateral Competent Authority Agreement (MCAA)**
- The appointment of the first woman President of Mauritius was approved by the country's Parliament on 4 June 2015. What is her name? – **Ameenah Gurib-Fakim**
- Serena Williams won Grand Slam title and third French Open women's singles title at Roland Garros on 6 June 2015. Whom she defeated in the final? – **Lucie Safarova (Czech Republic)**

- The 2-day Summit of G7 countries started on 7 June 2015. This summit is being held at which place? – **Schloss Elmau (Germany)**
- Who won the men's singles title of French Open 2015 by defeating the much-fancied Novak Djokovic (Serbia) in the finals on 7 June 2015 to become the oldest winner of the French Open in 25 years? – **Stanislas Wawrinka (Switzerland)**
- On 6 June 2015 former Prime Minister Atal Bihari Vajpayee was conferred with which award by the Bangladesh Govt. for his role in the country's independence struggle and consolidating India's friendship with the nation? – **“Bangladesh Liberation War Honour”**
- Who was appointed as the new Central Vigilance Commissioner (CVC) by the Union Government on 8 June 2015? – **K.V. Chowdary**
- Who was appointed by the Union Govt. as the new Chief Information Commissioner (CIC) on 8 June 2015? – **Vijai Sharma**
- Cambodia has recently lodged a protest to India over a private trust's plans to build an Angkor Wat replica in Bihar. It alleged that the plans of this Bihar temple, seriously violates the 12th century Hindu temple and a world heritage property which holds exceptional and universal value. What is the name of the trust in this case, which is planning to construct a replica of the largest Hindu temple in the world at Angkor Wat? – **Mahavir Mandir Trust**
- A first of its kind operation of operation was carried out by the Indian Army on 9 June 2015 when it conducted **an anti-terrorist operation on a foreign soil for the first time**. This bold operation was carried out in which country with strategic support from that country? – **Myanmar**
- Noted Indian author Amitav Ghosh's third and final book under the “Ibis trilogy” was published recently.

- What is the name of this book? – **“Flood of Fire”**
- The World Health Organisation (WHO) during June 2015 declared India free of which infection which was much prevalent in the country at a period of time? – **Maternal and Neonatal Tetanus**
 - Nek Chand Saini, who passed away on 12 June 2015 at the age of 90, was the creator of which iconic creation in Chandigarh? – **Rock Garden**
What is the name of the Joint-Military Exercise that started between the armies of India and UK at Salisbury Plains Training Area, UK on 13 June 2015? – **“Ajeya Warrior 2015”**
 - Which state is poised to become the first in India to impose streetlight tax on its citizens as approved by the state cabinet during June 2015? – **Andhra Pradesh**
 - What is the name of the Indonesian volcano which is in news for being active once again during June 2015 and has been active since 2010 after being dormant for more than 400 years? – **Mount Sinabung**
 - Which state overtook Gujarat to become the leader in Solar Energy generation in India? **Rajasthan**
 - **World Yoga day : 21 june**
 - What is the name of the last surviving member of the plane named ‘Enola Gay’ that dropped the first atomic bomb on Hiroshima, who passed away during July 2014? – **Theodore Van Kirk**
 - **Explanation :** Van Kirk was the navigator of the plane named ‘Enola Gay’ that on 6 August 1945 on Japanese city of Hiroshima. Tom Ferebee and Paul Tibbets were the other members of this mission.
 - General Dalbir Singh Suhag on 31 July 2014 took charge as new chief of the Indian Army. He succeeded Gen. Bikram Singh, who retired on the same day. Suhag is theChief of the Army Staff – 26TH
 - Who was chosen for th 22nd edition of the Rajiv Gandhi National Sadbhavana Award? – Muzaffar Ali, the noted filmmaker
 - On 3 August 2014 the curtains were raised on the 20 Commonwealth Games 2014 held at Glasgow (Scotland). Which country topped the medals tally? – **England**
 - Which city would host the 21st Commonwealth Games of 2018? – Gold Coast City (Australia)
 - What is India’s final position in the medals tally in the 20th Commonwealth Games 2014 that culminated on 3 August 2014? – Fifth (India won 15 gold medals, 30 silver medals and 19 bronze medals. India’s total medal tally was thus 64, which is far less than the 19th Commonwealth Games of 2010 at New Delhi, where India won a total of 101 medals.)
 - India and Nepal on 4 August 2014 agreed to review, adjust and update the “Treaty of Peace and Friendship” between the countries with an objective of charting a new course in bilateral relations. In which year this historic treaty was signed between the two countries? – In 1950
 - What is the name of India’s first multi-sensor moored observatory that was deployed between North Pole and Norway during July 2014? – IndARC
 - What is the name of NASA’s vintage spacecraft which successfully completed a return visit to the earthmoon system during August 2014? – ISEE-3
 - Who was nominated as the new Prime Minister of Iraq to replace Nouri al-Maliki on 11 August 2014? – Haider al-Abadi
 - Who was elected as the Deputy Speaker of the Lok Sabha on 13 August 2014? - M. Thambidurai 55 gallantry awards (peacetime) were announced on the eve of 68th Independence Day on 14 August 2014. Who was conferred the lone Ashok Chakra, India’s highest peacetime gallantry award? – Late Maj. Mukund Varadarajan
 - Which Iranian-born professor became the first woman ever to win the Fields Medal of the International Mathematical Union (IMU), which is considered the top prize in the field of mathematics? – Dr. Maryam Mirzakhani
 - Which woman bank officer was appointed as the Executive Director of the Bharatiya Mahila Bank on 14 August 2014? – SM Swathi
 - 2nd Summer Youth Olympic Games started on 16 August 2014 in China with Rugby making its return to the Olympic programme after 92 years with these Games. Which Chinese city is hosting these Games? – Nanjing
 - Who was appointed the Chairman of the Public Accounts Committee (PAC) by Lok Sabha Speaker Sumitra Mahajan on 16 August 2014? – K.V. Thomas
 - With 16,100 MW wind power produced in 2013, China was ranked World’ top wind power producing country in the recently released Renewables 2014 Global Status Report. What was India’s rank in this report? – 5th (China was followed by USA, Germany, Spain and India to complete the Top 5 nations in this list.)
 - A Manipur court on 19 August 2014 ordered the release of Manipuri woman Irom Sharmila, who has staged a 14-year hunger strike in protest at human rights abuses in Manipur. She began her fast on 4 November 2000 after witnessing the killing of 10 people by the army at a bus stop near her home in Manipur. Her protests against the abuses allegedly committed by security forces are subject of which law, which has been opposed in the state? – Armed Forces Special Powers Act (AFSPA)

- World-renowned Yoga guru B.K.S. Iyengar passed away at a Pune hospital on 20 August 2014 at the age of 96 years. What is the name of the iconic book written by him which is considered as the Bible of Modern Yoga? – “Light on Yoga”
- What is the name of the ambitious e-governance project of the Union Govt., which was approved by the Union Cabinet on 20 August 2014 and which aims to ensure that government services are available to citizens electronically? – ‘Digital India’ Project
- US space agency NASA’s 11-year Old probe mission for Mercury ended abruptly on 30 April 2015 after it crashed into the little planet. What was the name of this historic probe? – **Messenger**
- Software giant Microsoft recently unveiled its new web browser, which would eventually replace the existing Internet Explorer. What is the name of this browser? **Edge** Which state govt. on 30 April 2015 issued a circular banning the use of the phrase “**Horn Ok Please**” on the rear side of commercial vehicles? – **Maharashtra**
- Which noted Indian scientist was chosen for Japan’s highest civilian award – the “Order of the Rising Sun, Gold and Silver Star” as announced by the Japanese Govt. on 2 May 2015? – **Prof. C.N.R. Rao**
- In an important development, India’s 41-year-old border issue with Bangladesh was settled on 7 May 2015 as Indian Parliament unanimously passed a historic bill to operationalise the Land Boundary Agreement that provides for exchange of territories. This agreement became possible as the Lok Sabha, showing rare unanimity, passed the Constitution (119 Amendment) Bill. With the passing of this bill which Constitutional amendment came into effect? – **100th Constitutional amendment**
- What was India’s place in the State of the World’s Mothers 2015 Report prepared by „Save the Children that was launched on 6 May 2015? – **140 out of 179 Countries**
- Which noted banker of India was on 11 May 2015 appointed as the first President of the \$100-billion New Development Bank (NDB) of the BRICS countries, to be based in China’s financial hub Shanghai? – **KV Kamath**
- How many agreements between India and China were signed after Prime Minister Narendra Modi’s talks with Chinese Premier Li Keqiang on 15 May 2015? – **Twenty Four (24)**
- Who won the 2015 Man International Booker Prize as announced on 20 May 2015? – **Laszlo Krasznahorkai (Hungary)**
- What is the name given to India’s first space observatory which has been developed at ISRO’s Satellite Centre in Bangalore and is now ready for intensive tests before its tentative launch in October 2015? – **AstroSat**
- Which country became the first country in the world to give its approval to same-sex marriage by a popular vote on 24 May 2015? – **Ireland**
- What is the name of the Swedish newspaper that came into limelight after it claimed India had recently asked it to delete the reference made by President Pranab Mukherjee to the Bofors scam in an interview to it, a claim protested by the Indian Govt. on 27 May 2015? – **“Dagens Nyheter”**
- Which country is witnessing a civil disobedience movement named ‘Occupy Central’ demanding electoral reforms in the country? – **Hong Kong**
- What was the name of the 14-day India-US military exercise held in Uttarakhand that concluded on 30 September 2014? – **“Yudh Abhyas 2014”**
- Prime Minister Narendra Modi on 2 October 2014 India’s biggest-ever cleanliness drive – the “Swachh Bharat Abhiyaan (Clean India Mission)” on the occasion of Mahatma Gandhi Jayanti. What is the main objective of this huge mission on which around Rs.62,000 crore would be spent? – **To accomplish the vision of “Clean India” by 2 October 2019 (The 150 Birth Anniversary of Mahatma Gandhi)**
- 17th Asian Games concluded at Incheon (South Korea) on 4 October 2014 with a glittering closing ceremony. The next edition of Asian Games would be held in which city? – **Jakarta (Indonesia)**
- Norwegian couple May-Britt Moser and Edvard Moser and Anglo-American John O’Keefe were announced as the winner of the 2014 Nobel Prize for Medicine on 6 October 2014. The three are being rewarded for which of their pioneering work associated with the human mind? – **They solved the mystery – How does the brain create a map of the space surrounding us and how can we navigate our way through a complex environment?**
- On 7 October 2014 Japanese scientists Isamu Akasaki and Hiroshi Amano and American Shuji Nakamura were named as the winners of the 2014 Nobel Prize for Physics for inventing what? – **LED light**
- What is the name given to the tropical cyclonic storm building over the north Andaman Sea which is expected to hit the coast of Andhra Pradesh and Odisha on sheer intensity on 12 October 2014? – **“Hud Hud”**
- American scientists Eric Betzig and William Moerner and Germany’s Stefan Hell were announced as the 3 winners of the Nobel Prize for

Chemistry on 8 October 2014. They have been honoured for their contribution in which field of Chemistry? – **Optical Microscopy**

- The state govt. of Madhya Pradesh on 9 October 2014 organised Global Investors Summit 2014 (GIS 2014), a huge summit of top corporate houses. This meet is held at which city of MP? – **Indore**
- Indian child-rights activist Kailash Satyarthi and Pakistani teenager Malala Yusoufzai were announced as the joint winners of the prestigious Nobel Peace Prize for 2014 by the Nobel jury on 10 October 2014. They were awarded for promoting child rights in the Indian sub-continent. What is the name of the movement started by Satyarthi to fight Child labour? – „**Bachpan Bachao Andolan**
- Prime Minister Narendra Modi on 11 October 2014 launched the ambitious Saansad Adarsh Gram Yojana (SAGY) on the occasion of the birth anniversary of renowned socialist leader Jai Prakash Narayan. What is the primary aim of SAGY? – **Every MP of Indian Parliament to take responsibility to develop 3 villages of the country by 2019**
- Who won the Nobel Prize for Economics for 2014 as announced by the Royal Swedish Academy of Sciences on 13 October 2014? – **French economist Jean Tirole**
- Australian author Richard Flanagan was awarded the prestigious Man Booker literature prize for 2014 on 14 October 2014. Flanagan's which literary work was chosen for this award? – „**The Narrow Road to the Deep North**
- What was India's position in the Global Hunger Index 2014 (GHI) that was released on 13 October 2014 by the International Food Policy Research Institute (IFPRI)? – **55 out of 76 countries**
- Woman police inspector from India – Inspector Shakti Devi has been

named recipient of the International Female Police Peacekeeper Award 2014 by the UN's Police Division for her exceptional achievements with the UN mission in Afghanistan. She is currently deployed in the UN Assistance Mission in Afghanistan (UNAMA). Shakti Devi is associated with the police force of which Indian state? – **Jammu & Kashmir**

- India's third navigation satellite IRNSS-1C was launched and placed successfully in its pre-designated orbit on 16 October 2014. This launch was executed by ISRO from the Satish Dhawan Space Centre (SDSC) in Sriharikota at 1.32 a.m. Which rocket of ISRO launched this satellite? – **PSLV-C26**
- Which country became the sixth West African country to be hit by the deadly Ebola virus after its government on 23 October 2014 confirmed first case of Ebola in the country? – **Mali(The other five West African countries to be hit by Ebola are Guinea, Liberia, Sierra Leone, Senegal and Nigeria.)**
- India is to purchase 8,356 units of Israel's Spike anti-tank guided missile as agreed in the meeting of the Defence Acquisition Council (DAC) on 25 October 2014. With this decision India rejected the rival offer from the United States for similar missile. What is the name of the U.S. missile for which Washington had lobbied hard? – **Javelin**
- What was India's rank in World Economic Forum's 2014 gender gap index that was released on 27 October 2014? – **114th**
- India wins UNESCO Award for conserving Sree Vadakkunnathan Temple in Kerala
- India has won the UNESCO prize 'Award of Excellence' 2015 for the conservation efforts of the Sree Vadakkunnathan Temple in Kerala. The top award was given in the Asia Pacific Heritage Award for Cultural

Heritage Conservation. This award recognises the conservation effort of sacred sites and its tangible attributes with conservation techniques emphasising on architecture and construction. These sacred sites employ age-old rituals and conservation techniques drawn from vastu shastra focusing on construction and architecture. It should be noted that, UNESCO's "Award of Merit" in Heritage Award was bestowed upon 150-year-old Sino-Portuguese former residence of a Thai aristocrat, which now has been converted into a local museum and historic inn.

- IS damages ancient Temple of Bel in Syria's Palmyra
- Islamic State (IS) militant group has destroyed part of historical Temple of Bel in the ancient site of Palmyra in Syria. The ancient temple was dedicated to the Palmyrene gods and was one of the best preserved parts of the historical sites of Palmyra. Key facts The ancient site of Palmyra in ancient times was one of the most important cultural centres and now has monumental ruins of great ancient city. The site boasts a number of monumental projects including more than thousand columns and more than 500 tombs. The art and architecture of this city is blend of Greco-Roman techniques with combination of local traditions and Persian influences, dating back to the 1st and 2nd centuries. The ancient city of Palmyra is a UNESCO World Heritage site. It was a major tourist attraction of Syria before it descended into civil war. Earlier in August 2015, IS militant group had destroyed the ancient Temple of Baalshamin in same region of Palmyra.
- Union Government launches School Nursery Yojana
- Union Government has launched the School Nursery Yojana in a bid to bring school students closer to

nature by involving them in raising of saplings in school nurseries. The scheme was launched by Union Environment Minister Prakash Javadekar in New Delhi. About School Nursery Yojana Objective: To create an everlasting bond between the young school students and plants, trees. It also seeks to provide an opportunity to the students to learn about nature. It will develop an organic linkage and positive emotions for the environment among the school students and in turn keep the schools and the neighbourhood green. Activities: Schools will distribute saplings to students to plant in their homes and surroundings through School Nursery. The school nursery will be in small space of a minimum of 100 sq meters in premises of school which will provide essential facilities for raising saplings. In this nursery students will prepare beds for raising saplings and use it for other nursery-related activities such as preparing mixture of soil, good earth and manure and storage of seeds. Other activities: The schools also take up other activities like composting, rain water harvesting and water recycling. Thus, the scheme will seek to inculcate best environmental awareness practices in young minds.

- Tenth World Hindi Conference begins in Bhopal
- The Tenth World Hindi Conference (विश्व हिन्दी सम्मेलन) has begun in Bhopal, Madhya Pradesh with the theme of Hindi Jagat-Vistar and Sambhavnaye. The three-day conference was inaugurated by Prime Minister Narendra Modi. It has been organised in Madhya Pradesh for the first time and being held in India after 32 years. It is joint event of Union Ministry of External Affairs in partnership with the state Government of Madhya Pradesh. This edition of conference will host scholars from 39 countries who are

going to discuss issues like Hindi in administration, foreign policy and law during the event. An exhibition showcasing assimilation of Hindi with modern techniques also has been set up at the conference venue. World Hindi Conference The First World Hindi Conference was organized in Nagpur by then Prime Minister Indira Gandhi. It was held from 10 to 12 January 1975. Since then every year 10th January is being observed as the World Hindi Day. In the first conference, then Prime Minister of Mauritius Seewoosagur Ramgoolam was Chief Guest and it was attended by 122 delegates from 30 countries. Ninth edition of World Hindi Conference was held in Johannesburg, South Africa in 2012.

- **International cricket council:** established in 1909.

President : Zaheer Abbas

Chairman: N.Srinivasan

Total member countries : 106

Full member countries : 10

Chief Ministers of Punjab

- The current chief minister of Punjab is S. Parkash Singh Badal. He has become the chief minister of the state for the fifth time. The last elections held in 2012 were for the 14th Punjab Assembly and S. Parkash Singh Badal formed the government with clear majority of 68 seats from a total of 117 seats and Sardar Parkash Singh Badal became the chief minister of state.
- Dr. Gopi Chand Bhargava was the first CM of Punjab.
- First CM of Punjab (Before Independence)
Punjab Legislative Council (Punjab Assembly or Punjab Vidhan Sabha) was formed under the Government of India Act of 1935 and the first elections were held in 1937. In these elections, Unionist Party won 95 seats and its leader Sir Sikander Hayat Khan formed the government and became the first Premier of

Punjab province. The post of Premier is same as that of Chief Minister in today's terms.

- First CM of Punjab (After Independence)

With the independence of India in 1947, there came the partition of Punjab into East Punjab (today's state of Punjab in India) and West Punjab (Punjab province in Pakistan). Dr. Gopi Chand Bhargava was elected as the leader of assembly of East Punjab and hence became the first CM of Punjab after independence.

- Some details about Dr. Gopi Chand Bhargava : He was born in 1889 in Sarsa district of undivided Punjab, which is now in Haryana. He passed MBBS from Medical College, Lahore in 1912 and started medical profession in 1913. He belonged to Indian National Congress (INC) and became chief minister of the state for three times. He first became chief minister of Punjab on 15 August, 1947 and was in the chair till 13 April, 1949. Then he again became CM of the state for second time from 18 October, 1949 to 20 June 1951. On 21 June, 1964 he became the cm of Punjab for the third time and remained the chief minister till 6 July, 1964. He died on 26 December, 1966.
- First CM of PEPSU

When India got independence, there were many princely states which were ruled by Kings or Nawabs and were not under the rule of Government of India. The control of such states, falling within the boundary of India, was taken over by the government. In 1948, eight princely states of Punjab region were merged to form a new state named PEPSU (Patiala and East Punjab States Union). These states were - 1. Patiala, 2. Jind, 3. Nabha, 4. Faridkot, 5. Kapurthala, 6. Kalsian, 7. Malerkotla, 8. Nalagarh. Gian Singh Rarewala was the first chief minister of PEPSU. He was the first non-

Congress chief minister of any state in independent India.

- CM during reorganization of Punjab in 1956
- On 1 November 1956, PEPSU state was merged with larger state of Punjab under the States Reorganization Act of 1956. This merger was done on the recommendations of States Reorganization Commission, which was formed to recommend the restructuring of states of India. Partap Singh Kairon was the chief minister of Punjab at that time. The leaders of the PEPSU assembly were included into Punjab assembly and the then chief minister of PEPSU Gian Singh Rarewala was included as a cabinet minister in Punjab government headed by Kairon as chief minister.
- Division of Punjab and CM of new Punjab In 1966, then state of Punjab was divided into Punjab, Haryana and Himachal Pradesh on linguistic basis. The division was made effective through The Punjab Reorganization Act 1966. Hence the today's state of Punjab came into existence on 1 November 1966 and this day is celebrated every year as New Punjab Day. Ram Kishan was the last chief minister, till July 1966, before this division and the state was under President's rule (from July 1966 till October 1966) at the time of division. Giani Gurmukh Singh Musafir became the first chief minister of new Punjab and he took the charge on 1 November 1966. He was a member of Indian National Congress.
- First Lady Chief Minister of Punjab Smt. Rajinder Kaur Bhattal is the first lady chief minister of Punjab and is the only woman to become cm of this state till date. She is a senior leader of Indian National Congress. She was the chief minister for less than 3 months, from 21 November 1996 to 11 February 1997.
- First Non-Congress CM of Punjab
- Justice Gurnam Singh was the first akali chief minister and he belonged to Akali Dal (Sant Fateh Singh group). He was in the office for less than a year, from 8 Mar 1967 to 25 Nov 1967. This was the first time when a non-congress government was formed in the state. He again became chief minister of the state in February 1969, this time as a Shiromani Akali Dal member.
- First CM from Shiromani Akali Dal In today's politics of Punjab, Shiromani Akali Dal is a major political party so some of the readers may be willing to know that when did this party first come into power. Shiromani Akali Dal formed the government for first time in 1967. S. Lachhman Singh Gill was the first chief minister belonging to Shiromani Akali Dal and he became the chief minister on 25 Nov 1967.
- A complete list of all the chief ministers of Punjab is given here.
 1. Dr. Gopi Chand Bhargava - After the independence, he was the first chief minister of Punjab. He was born in 1889 in Sarsa district of undivided Punjab. He name of his father was Munshi Badri Prasad. He passed MBBS from Medical College, Lahore in 1912 and started medical profession in 1913. He became chief minister of Punjab on 15 August, 1947 and was in the chair till 13 April, 1949. Second time, he was the chief minister of the state from 18 October, 1949 to 20 June 1951. On 21 June, 1964 he became the chief minister for the third time and remained the chief minister till 6 July, 1964. He died on 26 December, 1966.
 2. Shri Bhim Sen Sachar - This freedom fighter of Punjab was born on 1 December, 1893 in the house of Rai Sahib Nanak Chand Sachar at Peshawar (now in Pakistan). He was the chief minister of Punjab from 13 April, 1949 to 18 October, 1949. He was again elected as chief minister for second time on 17 April, 1952 and resigned from the post on 23 January, 1956. He was remained the governor of Andhra Pradesh and Orissa.
 3. S. Partap Singh Kairon
 4. Shri Ram Kishan
 5. Giani Gurmukh Singh Mussafir
 6. S. Gurnam Singh
 7. S. Lachhman Singh Gill
 8. **S. Parkash Singh Badal** : S. Parkash Singh Badal is the current chief minister of Punjab. He is a member of Shiromani Akali Dal. He became the chief minister of the state for the fifth time. He became the chief minister in 1970, 1977, 1997, 2007 and 2012. He also has the record of becoming MLA of the state for maximum number of times. In 2012 elections, he was elected MLA for the 10th time and represents Lambi constituency in Sri Muktsar Sahib district.
S. Parkash Singh Badal, chief patron of Shiromani Akali Dal, was chosen of Padma Vibhushan award in year 2015, by Narendra Modi led BJP government in the center. It is the second highest civilian award in India. He was honoured with this award for his life time contribution to the political scene in India. He was presented this award on 30 March, 2015 by the President of India Sh. Pranab Mukherjee. The citation presented to Badal termed him the "grand patriarch on the Indian political scene."
 9. Giani Zail Singh
 10. S. Darbara Singh
 11. S. Surjit Singh Barnala
 12. S. Beant Singh
 13. S. Harcharan Singh Brar
 14. Smt. Rajinder Kaur Bhattal - She was the chief minister for less than 3 months, from 21 November 1996 to 11 February 1997. Till date, she is the only female chief minister of Punjab.
 15. Capt. Amarinder Singh

QUESTION

- Q. Who is the current speaker of Punjab Vidhan Sabha?
- A. S. Charanjit Singh Atwal is the current speaker. He is MLA from Payal constituency of Ludhiana district.
- Q. In the independent India, when was the first elections of Punjab Assembly held?
- A. The first elections were held in 1952.
- Q. Who was the first speaker?
- A. Kapur Singh was the first speaker. He was the speaker from 1947 to 1951.

Punjab Census :

- According to 2011 census, the total Population of Punjab is 2,77,43,338. The decadal change i.e. increase in population from 2001 to 2011 is 13.89%. The decadal growth rate is lowest since 1961. The population of Punjab in 2001 was 2,43,58,999. As per figures of 2011, the male population is 1,46,34,819 and female population is 1,30,69,417. The male/female ratio in Punjab is 895 which is much lower than the national ratio of 940. The below table shows some important figures:

Current Population of Punjab

- The population of Punjab in 2011 was 2.77 crore. The decadal change from 2001 to 2011 was 13.89%. If we calculate the increase in population according to these figures, the estimated current population of Punjab in 2015 will be around 2.96 crore. This is just an estimate, not an official figure. Actual population survey is done after every 10 years and the next census will be held in 2021.

Religion Wise Population of Punjab

- The government released the religion wise population of Punjab and other states in August 2015. According to this data, the majority of population of Punjab belong to

Sikh religion. The percentage of Sikh population in Punjab is 57.69% of the total population of the state. This is the only state in India having majority of population belonging to Sikh community. At national level, Sikh population is 20833116 (2.08 Crore) which forms 1.7% of the total population of India. The next major

religion in Punjab is Hindu religion, which is followed by the 38.49% of the total population. The Sikh and Hindu community forms more than 96% of the total population of state. The population of each religious community and their ratio in total population of the state is given below:

Population of Punjab By Religion

Religion	Total Persons	Total Ratio	Rural	Urban
Sikh	16004754	57.69%	12348455	3656299
Hindu	10678138	38.49%	4396066	6282072
Muslim	535489	1.93%	278825	256664
Christian	348230	1.25%	242977	105253

Literacy Rate In Punjab

- The literacy rate in Punjab is 75.84% which is better than the national average of 73.0%. The male literacy rate is 80.4% and female literacy rate is 70.7%. The male literacy rate is slightly less than national average of 80.9%. But the female literacy rate in Punjab is better than that of India. The female literacy rate in India is 64.6%. See complete details at : Literacy Rate In Punjab

Population Density In Punjab

- Punjab is one of the densely populated states of India. The population density is 551, which is higher as compared to all India average of 382. Amongst all the districts of Punjab, Ludhiana has the highest population density of 978, followed by Amritsar with population density of 928.

Rural Vs Urban Population

- In Punjab, majority of people live in rural areas. In terms of percentage of population, urban population constitutes only 37.5% whereas rural population is 62.5% of the total population. Total rural population is 1,73,44,192 i.e. 1.73 crore and the urban population is 1,03,99,146 i.e. 1.04 crore. The decadal change from 2001 figures for urban population is 25.9% whereas the rural population has increased only 7.8%.

Sex ratio in Punjab

- The low sex ratio (number of females per 1000 males) in Punjab has always been a matter of concern. With the efforts of the state government and the public awareness, it has improved during the last decade but its still low. The total number of females per 1000 males is 895 in 2011. It is 907 in rural population and 875 in urban population. The figures are better in rural area than the urban area. The corresponding figures in 2001 were - 876 (Total), 890 (Rural), 849 (Urban).
- Sex ratio in Punjab in the age group of 0 to 6 years is just 846, which will create a serious social problem in the coming times. The value is 844 in the rural folks and 852 in the urban people.

District Wise Population of Punjab

- The below table shows the population of all districts of Punjab:

District	Population 2011	Population 2001
Ludhiana	3498739	3032831
Amritsar	2490656	2157020
Gurdaspur	1621725	2103455
Jalandhar	2193590	1962761
Firozpur	965337	1746107
Patiala	1895686	1584780
Sangrur	1655169	1473242
Hoshiarpur	1586625	1481292
Bathinda	1388525	1183295
Tarn Taran	1119627	939057
Moga	995746	894793
Mohali (S.A.S. Nagar)	994628	746987
Mukatsar (Shri Mukatsar Sahib)	901896	777493
Kapurthala	815168	754521
Mansa	769751	688758
Rupnagar	684627	628846
Faridkot	617508	550892
Nawan Shahr (S.B.S. Nagar)	612310	587468
Fatehgarh Sahib	600163	538470
Barnala	595527	526931
Pathankot	676598	0
Fazilka	1063737	0

Graphical view of population of Punjab

NOTE : In 2011, two new districts Pathankot and Fazilka were created. Pathankot district was created from Gurdaspur district and Fazilka district was created from Firozpur district. According to census held in 2011, the population of Gurdaspur before the creation of Pathankot was 2298323 and the population of Firozpur before the creation of Fazilka was 2029074.

Frequently asked questions:

- Q. How much is the total population of Punjab?
- A. According to the latest census of India held in 2011, the total population of Punjab is 27743338.
- Q. Which district has the highest population?
- A. The district of Punjab with highest population is Ludhiana. It is followed by Amritsar and Jalandhar respectively.
- Q. Which district of Punjab has the lowest population?
- A. District Barnala has the lowest population amongst the districts in Punjab. It is followed by Fatehgarh Sahib as the second least populated district.
- Q. How much is the population density of Punjab?
- A. The population density of Punjab is 551. It is higher than the national average.
- Q. How many villages are there in Punjab?
- A. There are total 12673 villages in Punjab.

- India's first CNG (Compressed Natural Gas) based train was flagged-off by the Union Railway Minister Suresh Prabhu on 15 January 2015 from which station? – Rewari (Haryana)
- Which country became the first country in the world to give its approval to same-sex marriage by a popular vote on 24 May 2015? – Ireland
- Two Indians have been chosen for this year's Ramon Magsaysay Award 2015 – bureaucrat Sanjiv Chaturvedi, who blew the whistle on alleged scam at the premier All India Institute of Medical Sciences, and Anshu Gupta, who heads the NGO Goonj.
- The world's largest animal sacrifice ritual, the Gadhimai festival of which of the following countries is no more a bloody affair as the animal sacrifice at the festival has been banned? Nepal
- MAST (Multi-Application Solar Telescope): Asia's biggest telescope was inaugurated at the Udaipur Solar Observatory in Rajasthan.
- Which town of Punjab's Gurdaspur district came to news on 27 July 2015 with the incident of a huge terrorist attack taking place here resulting in the death of seven persons? – Dinanagar
- The Sinhastha Kumbh Mela, held after every 12 years on Godavari River, started at which place in Maharashtra on 14 July 2015? – Trimbakeshwar (Nasik)
- According to the UN's 2015 Revised World Population Prospect report released recently, India will become the most populous nation by 4) 2022
- Cyclone _____ hit parts of West Bengal and north Odisha recently. Komen
- RBI keeps key rates unchanged (5TH August 2015 data):
- Rates and Ratios

- CRR 4%
- SLR 21.5%
- Bank Rate 8.25%
- Repo Rate 7.25%
- Reverse Repo Rate 6.25%
- MSF 8.25%
- Rural Development Minister Chaudhary Birender Singh on 4 August 2015 launched SAMANVAY, a compilation of all schemes of both Union and State governments for Gram Panchayats. SAMANVAY was launched with an aim to help MPs in utilising relevant schemes in the planning and implementation of Saansad Adarsh Gram Yojana (SAGY). Saansad Adarsh Gram Yojana was launched in October 2014 under which MPs are to develop three Adarsh Gram Panchayats by 2019. The objective of the programme is to create Model Villages.
- Dr. Amalendu Krishna has won the Ramanujan Prize for year 2015.
- India will host the heads of 14 island nations at the Forum for India-Pacific Islands Cooperation (FIPIC) on 21 August 2015. This important event will be hosted at which city as reported on 3 August 2015? – Jaipur
- The newest and the 18th Indian Institute of Technology (IIT) of the country was opened on 3 August 2015 with a total of 117 students. This IIT is in which city? – Palakkad (Kerala)
- Which country became the latest and the 206th member of the Olympic family after the International Olympic Committee (IOC) approved its inclusion? – South Sudan
- The 14th Special Olympics Games (Summer) were inaugurated on 25 July 2015 in which city? – Los Angeles (United States)
- Who was appointed as the Chief Coach of the Indian hockey team on 25 July 2015? – Roelant Oltmans
- Prime Minister Narendra Modi launched the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in Patna on 25 July 2015. What is the primary objective of DDUGJY? – Facilitating 24×7 supply of power in rural areas of the country
- Prime Minister Narendra Modi launched the “Skill India Mission” on 15 July 2015 on the occasion of the World Youth Skills Day. What are the main objectives of the “Skill India Mission”? – To converge and monitor all skill development schemes across the country, promoting entrepreneurship and equipping 500 million Indians with skills by 2022 that would enable them to find jobs
- India on 13 July 2015 formally launched the Satellite Based Augmentation System GAGAN, which will offer seamless navigation to the aviation industry. With this India has become the fourth country to offer space-based satellite navigation services to the aviation sector. Which 3 countries/continents have successfully developed this technology before India? – US, Europe and Japan
- Novak Djokovic defeated Roger Federer by 7-6, 6-7, 6-4, 6-3 in the men’s singles final of Wimbledon 2015 on 12 July 2015 to bring to a disappointing end Federer’s bid to become the oldest champion of the Open Era at the championships. With this win Djokovic has won how many singles titles at Wimbledon? – Three
- Who became the sixth Indian to win a Grand Slam junior title after winning the boys doubles trophy at the Wimbledon championships on 12 July 2015? – Sunil Nagal
- India and Pakistan were given membership of which international organisation on 10 July 2015, at Ufa (Russia), which is often seen by Russia as a counterweight to Western alliances? – Shanghai Cooperation Organisation (SCO)
- Shanghai Cooperation Organisation is political, economic and military organisation that was founded in 2001 by 6 countries in Shanghai – China, Russia, Kazakhstan, Uzbekistan, Tajikistan and Kyrgyzstan. With inclusion of India and Pakistan in SCO, its total membership reached- 8
- Serena Williams (US) won her sixth Wimbledon women’s singles title on 11 July 2015. This was her fourth Grand Slam championship in a row and 21 Grand Slam title overall. Whom she defeated in this final, who had made into her first Grand Slam final appearance? – Garbine Muguruza (Spain)
- Sania Mirza of India created history on 11 July 2015 when she won the Wimbledon women’s doubles title with her Swiss partner Martina Hingis. What history was made by Sania in this title win? – She became the first female player from the country to win a women’s doubles Grand Slam trophy
- History was created on 10 July 2015 when Indian space agency ISRO launched its heaviest commercial mission that carried five satellites on board PSLV-C28 from the spaceport of Sriharikota (AP). With the overall mass of five satellites is about 1,440kg, this launch became the heaviest commercial mission ever undertaken by ISRO. The 5 satellites launched through this mission belonged to which country? – Britain
- 7th BRICS Summit, which concluded on 9 July 2015 and featured five of the largest developing economies of the world, was held at which city of Russia? – Ufa
- Which country won FIFA Women’s Football World Cup 2015 on 5 July 2015? – The United States

- The “leap second” meant that the last minute of June 2015 was of 61 seconds instead of 60 seconds. The last minute of June 2015 was kept one second longer, for a process known as “leap second”. The leap second and leap years are added as basic ways to keep the clock in sync with the Earth and its seasons. When was the last time that the “leap second” was observed? – June 2012
- Blue Moon is July 31: The second of two full moons in a calendar month is often called a Blue Moon. it’ll be on July 31, 2015.
- Which African country is on its way to legally end its virtually worthless local currency which has witnessed hyperinflation as high as 500 billion percent in the recent times? Zimbabwe
- A tropical storm in the Arabian Sea was declared as a severe cyclonic storm on 8 June 2015. What is the name given to this storm which is expected to affect Karnataka, Goa and Maharashtra coasts during the next two days? – “Ashobaa”
- Who was appointed as the new Central Vigilance Commissioner (CVC) by the Union Government on 8 June 2015? – K.V. Chowdary
- Who won the men’s singles title of French Open 2015 by defeating the much-fancied Novak Djokovic (Serbia) in the finals on 7 June 2015 to become the oldest winner of the French Open in 25 years? – Stanislas Wawrinka (Switzerland)
- Serena Williams (US) won her 20 Grand Slam title and third French Open women’s singles title at Roland Garros on 6 June 2015. Whom she defeated in the final? – Lucie Safarova (Czech Republic)
- India and Bangladesh on 6 June 2015 ratified the historic Land Boundary Agreement between the two countries that will finally allow tens of thousands of people living in 161 border enclaves to choose their nationality. It will also permanently fix the contours of the 4,000 km India-Bangladesh border. This ratification was done on the occasion of Prime Minister Narendra Modi’s 2-day state visit of Bangladesh that started on the same day. Under the agreement, India will have an advantage of 500 acres and 10,000 acres will go to Bangladesh. The Land Boundary Agreement (LBA) between India and Bangladesh was agreed upon initially in 1974, when the Prime Ministers of the two countries signed the agreement to exchange enclaves and simplify the international border.
- The appointment of the first woman President of Mauritius was approved by the country’s Parliament on 4 June 2015. What is her name? – Ameenah Gurib-Fakim
- What is the name of the Swedish newspaper that came into limelight after it claimed India had recently asked it to delete the reference made by President Pranab Mukherjee to the Bofors scam in an interview to it, a claim protested by the Indian Govt. on 27 May 2015? – “Dagens Nyheter”
- J. Jayalithaa, who took over as the Chief Minister of Tamil Nadu on 23 May 2015, has now become state’s Chief Minister how many times? – 5 times
- Which African country came to news in May 2015 for a failed coup against its President? – Burundi
- Which West African country, which was at the center of the largest Ebola epidemic so far, was declared free of Ebola by the World Health Organization on 9 May 2015? – Liberia
- Who was appointed as the new Election Commissioner on 7 May 2015 to fill one of the two vacancies in the three-member body? – Achal Kumar Jyoti
- In an important development, India’s 41-year-old border issue with Bangladesh was settled on 7 May 2015 as Indian Parliament unanimously passed a historic bill to operationalise the Land Boundary Agreement that provides for exchange of territories. This agreement became possible as the Lok Sabha, showing rare unanimity, passed the Constitution (119 Amendment) Bill. With the passing of this bill which Constitutional amendment came into effect? – 100th Constitutional amendment
- Which noted Indian scientist was chosen for Japan’s highest civilian award – the “Order of the Rising Sun, Gold and Silver Star” as announced by the Japanese Govt. on 2 May 2015? – Prof. C.N.R. Rao
- US space agency NASA’s 11 year old probe mission for Mercury ended abruptly on 30 April 2015 after it crashed into the little planet. What was the name of this historic probe? – Messenger
- A Russian spacecraft loaded with cargo for the International Space Station (ISS) that was launched on 25 April 2015, went out of control and was on its way to crash into the earth’s atmosphere. What is the name of this space mission? – “Progress 59”
- Union Govt. on 27 April 2015 announced extending e-Tourist Visa scheme for 31 more countries. With this extension the scheme will be available for how many countries from 1 May 2015? – 76
- What is the name given to an ambitious road project proposed by the Union Govt. from Gujarat to Mizoram to be built along India’s vast West-to-East land border? – “Bharat Mala”

- What was India's rank in the 2015 World Happiness Report published by the United Nations (UN) during April 2015? – 117th
- What is the name given to Indian Army's relief and rescue operation in Nepal that was launched after the devastating earthquake in the country on 25 April 2015? – "Operation Maitri"
- At least 1,500 people died in a massive earthquake and a series of aftershocks that hit several parts of Nepal and India since morning of 25 April 2015. Which district of Nepal was the epicentre of the quake? – Lamjung
- What is the name of the volcano in Chile which erupted for the first time in more than 42 years on 22 April 2015 resulting in evacuation of residents from nearby areas? – Calbuco Volcano
- What will be the name of the new capital of Andhra Pradesh as approved by the Cabinet of the state on 1 April 2015? – "Amaravathi"
- Australia lifted the ICC World Cup 2015 on 29 March 2015 by defeating New Zealand in the final by 7 wickets at the Melbourne Cricket Ground (MCG). This was the 5th ODI cricket World Cup title for Australia thus further cementing its reputation of being the most dominant team in ODI cricket. Who was chosen as the Player of Tournament this edition of the World Cup? – Mitchell Starc (Australia)
- How many Mega Food Parks (MFPs) were sanctioned by the Union Govt. during March 2015 for which an investment of Rs. 2330 crore will be incurred? – 17
- Former Prime Minister and veteran parliamentarian Atal Bihari Vajpayee was conferred with the Bharat Ratna, India's highest civilian honour, on 27 March 2015. This award was conferred on him by President Pranab Mukherjee, who in a departure from protocol, drove to Vajpayee's residence in New Delhi to give the honour. Atal Bihari Vajpayee became theawardee of the Bharat Ratna – 44
- Which film personality was chosen for the Dadasaheb Phalke Award for the year 2014 as announced by the Union Govt. on 23 March 2015? – Shashi Kapoor
- Who became the highest run scorer in an ICC World Cup match by scoring an unbeaten 237 runs on 21 March 2015? – Martin Guptill (New Zealand)
- Lee Kuan Yew, who passed away on 23 March 2015, was the architect and the first Prime Minister of which Asian country? – Singapore
- South Africa stormed into the ICC World Cup semi-finals with a comprehensive nine-wicket victory over Sri Lanka at the Sydney Cricket Ground on 18 March 2015. Who became the first South African to take a hat-trick in the World Cup during this match? – JP Duminy
- Which former Union Minister belonging to Congress was chosen for the prestigious Saraswati Samman for year 2014 as announced on 9 March 2015? – M. Veerappa Moily
- In a bizarre incident, 10 people including three top French sports stars were killed when two helicopters collided in Argentina on 9 March 2015 during the filming of a reality TV show. The dead included Olympic swimmer Camille Muffat, yachtswoman Florence Arthaud and boxer Alexis Vastine. This ill-fated shooting was being done for which French reality show? – "Dropped"
- What is the name of the solar-powered plane that started its historic 35,000-km round-the-world journey from Abu Dhabi on 9 March 2015? – Solar Impulse – 2
- The joint military exercise Surya Kiran-VIII, that started from 23 February 2015, involves India and which country? – Nepal
- Cyclone Marcia and Lam struck which country on 20 February 2015 that left a trail of destruction in the country? – Australia
- Lunar New Year of numerous Asian countries including China started on 19 February 2015. This year is being observed as year of which animal according to the traditional Chinese zodiac system? – Year of the Sheep
- Who was selected for Jnanpith Award for 2014, which is the most prestigious literary honour in India? – Bhalchandra Vajji Nemade (Marathi litterateur)
- India's Leander Paes and Swiss Martina Hingis won the mixed doubles title of 2015 Australian Open on 1 February 2015. They defeated third seeds Daniel Nestor and Kristina Mladenovic by 6-4, 6-3 in the final. With this win, both Paes and Hingis have now won similar number of Grand Slam titles respectively. What is this identical number of Grand Slam title wins for both? – Fifteen
- During January 2015, excavations at which two Harappan sites in India was started as announced by the Archaeological Survey of India (ASI)? – Rakhigarhi (Haryana) and Binjor (Rajasthan)
- What name was given to the winter snow storm that hit the northeastern states of the United States on 26 and 27 January 2015 that resulted in huge amount of snowfall and shutting down of public transport and cancellations of thousands of flights? – "Juno"
- The BSE Sensex crossed which milestone level for the first time on 22 January 2015? – 29,000 points

- Which scheme of the Union Govt. was conferred with the Guinness record on 20 January 2015? – Pradhan Mantri Jan Dhan Yojana (PMJDY)
- Union Ministry for Water Resources would celebrate year 2015-16 as which year to spread the message the message of water conservation as announced on 17 January 2015? – „Jal Kranti Varsh (Water Revolution Year)
- Who took over as the new Chairman of Indian Space Research Organisation (ISRO) on 14 January 2015? – Alur Seelin Kiran Kumar (A.S. Kiran Kumar)
- Who was named as the new Chief Election Commissioner (CEC) of India on 14 January 2015? – Harishankar Brahma (H.S. Brahma)
- Who was selected for the prestigious Vikram Sarabhai Memorial Award for 2015 presented by the Indian Science Congress Association (ISCA)? – M.Y.S. Prasad
- Whose name was cleared as the first CEO of NITI Aayog by the Union Govt. on 6 January 2015? – Sindhushree Khullar
- On 5 January 2015 who was named as the first Vice-Chairman of the newly announced NITI Aayog (Policy Commission), which replaced Planning Commission? – Arvind Panagariya



WORLD HISTORY AND HISTORY OF INDIA

The Renaissance

- The Renaissance was a period of time from the 14th to the 17th century in Europe. This era bridged the time between the **Middle Ages** and modern times. The word “Renaissance” means “rebirth”.

Coming out of the Dark

- The Middle Ages began with the fall of the **Roman Empire**. Much of the advances in science, art, and government that had been made by the Greeks and Romans were lost during this time. Part of the Middle Ages is actually called the Dark Ages because so much of what was learned earlier was lost.

The Renaissance was a time of “coming out of the dark”. It was a rebirth of education, science, art, literature, music, and a better life for people in general.

A Cultural Movement

- A big part of the Renaissance was a cultural movement called humanism. Humanism was a philosophy that all people should strive to be educated and learned in the classical arts, literature, and science. It looked for realism and human emotion in art. It also said that it was okay for people to pursue comfort, riches and beauty.
- The Mona Lisa** : perhaps the world’s most famous painting - was painted during the Renaissance

It began in Italy

- The Renaissance started in Florence, **Italy** and spread to other city-states in Italy. Part of the reason it began in Italy was because of the history of Rome and the Roman Empire. Another reason it began in Italy was because Italy had become

very wealthy and the wealthy were willing to spend their money supporting artists and geniuses.

- City-states played a big role in the rule of Italy at the time. They were often ruled by a powerful family. Some important city-states included Florence, Milan, Venice, and Ferrara.

The Renaissance Man

- The term Renaissance Man refers to a person that is an expert and talented in many areas. The true geniuses of the Renaissance were great examples of this. Leonardo da Vinci was a master painter, sculptor, scientist, inventor, architect, engineer, and writer. Michelangelo was also a superb painter, sculptor, and architect.

Fun Facts about the Renaissance

- One of the most popular Greek philosophers was Plato. Many men studied Plato’s writings at the Academy in Florence.
- Venice was famous for its glass work, while Milan was famous for its iron smiths.
- Francis I, King of France, was patron of the arts and helped Renaissance art spread from Italy to France.
- Artists were initially thought of as craftsmen. They worked in workshops and belonged to a guild.
- Two of the biggest changes to art from the Middle Ages were the concepts of proportion and perspective.
- Michelangelo and Leonardo became rivals when Michelangelo mocked da Vinci for not finishing a statue of a horse.
- Hunting was a popular form of entertainment for the wealthy.

- Artists and architects would often compete for a job, or commission, to create a piece of art.

Renaissance Art:

- Many of the new ideas and attitudes that marked the Renaissance times were portrayed in art. A new idea called humanism put a focus on human interests, needs, and abilities. This new idea changed how artists painted their subjects as well as the choice of subjects they painted.

Renaissance art is often divided up into two periods:

- Early Renaissance** (1400-1479) - Artists learned by trying to emulate classical artists focusing on symmetry and creating the perfect form. This era featured such artists as Giotto, Masaccio, and Donatello.
- High Renaissance** (1475-1525) - A rising interest in perspective and space gave the art even more realism. Great artists such as Michelangelo, Leonardo da Vinci, and Rafael flourished during this period.

Change of Subjects

- In the Middle Ages the subject of almost all European art was religion, specifically Christianity and the Catholic Church. Although Renaissance artists continued to paint religious paintings, they also branched out to other subjects including Greek and Roman mythology, historical subjects, and portraits of individuals. They also focused on the details of everyday life.

Realism

- One of the big changes in art was to paint and sculpt subjects realistically. This is called realism and involves a number of techniques that

make the subjects and background look like they would in real life. This also meant giving the subjects more emotional qualities.

New Techniques and Styles

- Many new techniques were introduced during the Renaissance. These techniques helped to enhance the quality and realism of the art.
- **Perspective** : perspective is drawing or painting a picture such that it looks like there are three dimensions. It gives the illusion that some objects in the painting are further away than others.
- **Balance and Proportion** : Drawing subjects such that they are the correct size when compared to each other.
- **Use of Light and Dark** : Many artists started using light and shadows in their works to add drama, perspective, and timing to their art.
- **Sfumato** : This was a technique used by Leonardo da Vinci to add additional perspective and dimension to paintings. It was a way of blurring the lines between subjects. This technique was used in Leonardo's Mona Lisa.
- **Foreshortening** : Another technique that added perspective and depth to paintings, foreshortening is a way of shortening lines to give the illusion of depth.

Renaissance Music and Dance

- During the Renaissance one of the main forms of entertainment was music and dance. Music became a part of everyday life as people began to play music and sing for enjoyment. They experimented with new types of instruments and combinations of voices. Music was both an art form and a form of entertainment.

Choirs

- Some of the great music of the Renaissance was sung in churches in large choirs. One new style of

music was to interweave several different vocal melodies at the same time. This type of music was called polyphony and became popular in choirs.

Madrigal

- Another popular form of vocal music was the madrigal. The madrigal usually had between three and six singers, but could have more. The madrigal also had several melodies that were sung at the same time by different voices. The songs were often romantic poems and sung with emotion.

Instruments

- A number of new and improved instruments were developed during the Renaissance. Perhaps the most famous is the violin which was first made in Italy in the 1500s. Other popular instruments included horns such as the early trumpet and the cornett, stringed instruments such as the lyre and the hurdy gurdy, and woodwind instruments such as the bagpipe and the recorder.
- Harpsichord - This instrument looks like piano with keys, but when a key is played a string is plucked rather than hit (like with a piano).
- Hurdy gurdy - A stringed instrument similar to a violin, where melodies are played on a small keyboard and a crank-turned wheel rubs against the strings to make the tone.
- Lute - A stringed instrument similar to a guitar with a round back. The strings were plucked to make the notes.

Composers

- There are many famous composers from the Renaissance. They were able to use the printing press for their music allowing an even wider audience. Some of the most famous composers include William Byrd, Josquin Des Prez, and Thomas Tallis. The first dramatic opera was written by Claudio Monteverdi in 1607.

Dancing

- There were two main types of dances during the Renaissance: court dances and country dances. Court dances were formal dances performed by trained dancers. Country dances were dances where anyone could participate. Each dance had specific steps and movements.

Here are few examples of Renaissance dance steps :

- Reverence - This was a "greeting" step where the dancers would face each other. They would then slide the left foot back and bend both knees to bow to the other dancer.
- Saltarello - This is a lively dance step where the dancer would take three steps forward and then hop.
- Pavane - A slow "walking" dance that gave the dancers a chance to show off their fancy clothes and gowns. It was usually the first dance of the night.
- Italian Double or Doppio - A step where the dancers would take two elegant steps forward and then rise up on their toes.

Interesting Facts about Renaissance Music and Dance

- Most public celebrations and shows were accompanied by music and dance.
- In general, instrumental music was considered less important than singing music.
- Two popular types of Renaissance vocal music that preceded the madrigal were the frottola in Italy and the chanson in France.
- Sometimes percussion instruments were added to the music including drums and tambourines.
- The ballet was first introduced during the Italian Renaissance courts of the nobles. It moved to France and became very popular when Catherine De Medici became queen.

Renaissance Science and Inventions

- The Renaissance came about because of a change in the way of thinking. In an effort to learn, people began to want to understand the world around them. This study of the world and how it works was the start of a new age of science.

Science and Art

- Science and art were very closely related during this time. Great artists, such as Leonardo da Vinci, would study anatomy to better understand the body so they could create better paintings and sculptures. Architects such as Filippo Brunelleschi made advances in math in order to design buildings. The true geniuses of the time were often both artists and scientists. They were both considered talents of the true Renaissance man.

The Scientific Revolution

- Near the end of the Renaissance, the scientific revolution began. This was a time of great strides in science and mathematics. Scientists like Francis Bacon, Galileo, Rene Descartes, and Isaac Newton made discoveries that would change the world.

Printing Press

- The most important invention of the Renaissance, and perhaps in the history of the world, was the printing press. It was invented by German Johannes Gutenberg around 1440. By 1500 there were printing presses throughout Europe. The printing press allowed for information to be distributed to a wide audience. This helped to spread new scientific discoveries as well, allowing scientists to share their works and learn from each other.

Scientific Method

- The Scientific Method was further developed during the Renaissance. Galileo used controlled experiments and analyzed data to prove, or disprove, his theories. The process

was later refined by scientists such as Francis Bacon and Isaac Newton.

Astronomy

- Many of the great scientific discoveries made during the Renaissance were in the area of astronomy. Great scientists such as Copernicus, Galileo, and Kepler all made major contributions. This was such a big subject that we devoted an entire page to it. Learn more about it at our page on Renaissance Astronomy.

Microscope/Telescope/Eyeglasses

- Both the microscope and the telescope were invented during the Renaissance. This was due to improvements in making lenses. These improved lenses also helped with making eyeglasses, which would be needed with the invention of the printing press and more people reading.

Clock

- The first mechanical clock was invented during the early Renaissance. Improvements were made by Galileo who invented the pendulum in 1581. This invention allowed clocks to be made that were much more accurate.

Warfare

- There were also inventions that advanced warfare. This included cannons and muskets which fired metal balls using gunpowder. These new weapons signaled the end of both the Middle Age castle and the knight.

Other Inventions

- Other inventions during this time include the flushing toilet, the wrench, the screwdriver, wallpaper, and the submarine.

Alchemy

- Alchemy was sort of like chemistry, but generally wasn't based on a lot of scientific facts. A lot of people thought that there was a single substance from which all other substances could be made. Many

hoped to find a way to make gold and become rich.

Renaissance Astronomy

- During the Renaissance people began once again to explore and experiment with the world around them. One area of science which made great leaps during this time was astronomy. Astronomy is the study of celestial bodies in outer space such as the Moon, the planets, and the stars.

Earth as the Center of the Universe

- For almost 2000 years the people of Europe had relied on the discoveries of the Ancient Greeks. Greek scientists such as Aristotle and Ptolemy had produced theories that the Earth was the center of the Universe. They said that the sun and the planets orbited around the Earth. People considered this as a fact for all that time.

Nicolaus Copernicus

- Astronomer Nicolaus Copernicus put forth a new theory during the Renaissance. He said that the Sun was the center of the universe and that the Earth and the planets orbited the Sun. Of course, he was right about the Earth and the planets orbiting the Sun, but very few people believed him!

Galileo Galilei

- Galileo was one of the greatest scientists in history. A lot of his scientific work was in the area of astronomy. Galileo was already interested in studying the planets when he heard about the concept of the telescope. He improved the telescope and constructed one that could be used to observe the planets.
- Using his telescope, Galileo was able to make all sorts of new discoveries. He found out that the Moon was not really smooth, but covered with craters. He also thought that the moon didn't make its own light, but reflected light from the sun. Other

discoveries included the moons of Jupiter, the phases of Venus, and sunspots.

Galileo Agrees with Copernicus

- After recording and studying his observations of the planets and the moon with his telescope, Galileo believed that Copernicus' theory of the planets, including the Earth, rotating the Sun was correct. He wrote a famous work that explained why he thought this was the case. The Catholic Church did not agree, however, and put Galileo under house arrest.

Tycho and Kepler

- Two other major astronomers from the Renaissance were Tycho Brahe and Johannes Kepler. Tycho was a Danish nobleman who took many precise measurements of the planets and stars over a long period of time. Tycho made many strides in the work of observing the heavens.
- Kepler was a German astronomer who worked as Tycho's assistant for a time. Kepler developed the three laws of planetary motion and supported Copernicus' view of the planets orbiting the Sun. He also charted the orbit and position of many of the planets showing that they did not need to orbit the sun in a perfect circle.

Renaissance Architecture and Buildings

- During the Renaissance architects began to look back to the Romans and Greeks for inspiration when designing buildings. Much of Renaissance architecture style was taken from Ancient Rome and Greece and then altered to fit their current lifestyle.

Filippo Brunelleschi

- Brunelleschi was considered the first Renaissance architect. Some historians consider the start of the Renaissance to be 1419, when he won the commission to build the dome above the cathedral of

Florence. This dome was an ambitious undertaking as it was to be the largest dome built since the Pantheon in Ancient Rome, which had been built 1500 years earlier.

- The entire dome, including the lantern on top, would take much of Brunelleschi's life to complete. The gold ball at the top weighed nearly two tons by itself. It also took over four million bricks to construct the dome. Brunelleschi also had to invent new ways of lifting heavy objects high into the air, which would later be used by other architects.
- Brunelleschi also designed two churches in Florence; the church of San Lorenzo and the church of Santo Spirito. These churches were built with symmetry and order. Many more churches throughout Europe would mimic this basic design in the coming years.

Features of Renaissance Buildings

- Renaissance architecture had some distinct features that were fairly common to major construction:
 - **Square** - Many buildings were built as square or rectangle symmetrical shapes.
 - **Front** - The front or "façade" of the buildings were generally symmetrical around the vertical axis.
 - **Columns** - They used Roman type columns.
 - **Arches and Domes** - Arches and domes were popular. This was again taken from Roman and Greek architecture.
 - **Ceilings** - The ceilings of buildings were generally flat. Previously in the Middle Ages ceilings were often left open.

Examples of Renaissance Buildings

- **Basilica of St. Peter** - This is perhaps the most famous building built during the Renaissance. Several architects worked on the design for the building including Michelangelo. It has the largest

interior of any Christian church in the world and is considered by many to be the greatest Christian church building. It took 120 years to complete from 1506 to 1626.

- **The Sistine Chapel** - A chapel that is part of the official residence of the Pope in Vatican City, this building is most noted for its ceilings painted by Michelangelo.
- **Palazzo Pitti** - Originally built in 1458 for Florence banker Luca Pitti, this palace later became part of the Medici family empire.
- **Palazzo Farnese** - A palace from the High Renaissance built in Rome for the Farnese family.
- **El Escorial** - This majestic building was built in the late 1500s as the palace of the King of Spain. It is laid out in orderly symmetric squares as shown in the picture below. Some believe that the floor plan was to mimic Solomon's Temple.
- **Pazzi Chapel** - This chapel is said to be a masterpiece of the simple form of the architecture of the time. It is thought that the original design was by Filippo Brunelleschi even though the building wasn't finished until nearly 20 years after his death.

American Revolution:

- The Revolutionary War was between the Kingdom of Great Britain and the Thirteen American colonies. The colonists did not like the way the British were treating them, especially when it came to taxes. Eventually small arguments turned into larger fights and the colonists decided to fight for their own country, independent of Britain.

Events that led up to the war:

- **The Stamp Act** (March 22, 1765) - Britain sets a tax that requires a stamp on all public documents like newspapers or legal documents. The colonists did not like having this tax placed on them. This led to unrest in the colonies and the Stamp Act

Congress (October 1765).

- **The Boston Massacre** (March 5, 1770 - 5 Boston colonists are shot by British troops.
- **The Boston Tea Party** (Dec. 16, 1773) - Angry with a new tax on tea, some Boston colonists calling themselves the Sons of Liberty board British ships and dump crates of tea into the Boston Harbor.
- **The First Continental Congress Meets** (Sept. 1774) - Representatives from the colonies get together to unite and oppose British taxes.

The Revolutionary War Begins

- **Paul Revere's Ride** (April 18, 1775) - The Revolutionary War starts and Paul Revere makes his famous ride to warn the colonists that the "British are coming".
- **Battle of Lexington and Concord** (April 19, 1775) - The actual fighting starts with the first "shot heard around the world". The Americans win as the British retreat.
- **Capture of Fort Ticonderoga** (May 10, 1775) - The Green Mountain Boys led by Ethan Allen and Benedict Arnold capture Fort Ticonderoga from the British.
- **Battle of Bunker Hill** (June 16, 1775) - Major battle where William Prescott told the American troops "don't fire until you see the whites of their eyes".
- **The Declaration of Independence is Adopted** (July 4, 1776) - The Continental Congress agrees to Thomas Jefferson's Declaration of Independence.
- **George Washington Crosses the Delaware** (Dec. 25, 1776) - George Washington and his troops cross the Delaware River on Christmas night and surprise the enemy.
- **America Chooses a Flag** (June 14, 1777) - The Continental Congress adopts the "Stars and Stripes" Flag sewn by Betsy Ross.
- **Battles of Saratoga** (September 19 -

October 17, 1777) - British General John Burgoyne surrenders his army to the Americans after suffering defeat at the Battles of Saratoga.

- **Valley Forge** (Winter of 1777-1778) - The Continental army under George Washington spends the winter training at Valley Forge.
- **Alliance with France** (Feb. 16, 1778) - France recognized the United States as an independent country with the Treaty of Alliance.
- **Articles of Confederation** (March 2, 1781) - Defined the official government of the United States.
- **Battle of Yorktown** (Oct. 19, 1781) - The last major battle of the American Revolutionary War. British General Cornwallis' surrender at Yorktown was the unofficial end to the war.
- **Treaty of Paris** (Sept. 3, 1783) - Treaty that officially ended the war.

Major Events of the French Revolution

- The French Revolution was a major event in modern European history. The causes of the French Revolution were many: the monarchy's severe debt problems, high taxes, poor harvests, and the influence of new political ideas and the American Revolution, to mention only a few. Starting as a movement for government reforms, the French Revolution rapidly turned radical and violent, leading to the abolition of the monarchy and execution of King Louis XVI. Though the monarchy was eventually restored, the French Revolution changed France and the rest of Europe forever. It inspired a number of revolutionary movements of the nineteenth and early twentieth centuries that made the final end to institutions such as absolutism, feudalism, class privilege and legal inequality, and spread the principles of natural right, equality and freedom throughout the world.

Meeting of the Estates General

- The Estates General were reluctantly summoned by King Louis XVI in

May of 1789 with an aim to solve the monarchy's financial crisis. There were three classes represented by the Estates General: the nobles, clergy and the rest of the population or the so-called Third Estate. Each estate had only one vote. As a result, the nobility and clergy could always overrule the Third Estate. Fearing they would be forced to bear the burden of the financial crisis, the members of the Third Estate decided to form their own National Assembly. After being locked out of the meeting of the Estates General, they moved to an indoor tennis court where they pledged the so-called Tennis Court Oath, vowing to remain there until a new constitution had been written.

Fall of the Bastille

- On July 14, 1789, an angry crowd marched on the Bastille, a medieval fortress in east Paris that was mostly housing political prisoners. To many people in France, it was considered as a symbol of the much hated Louis' regime. Angry, unemployed and hungry Parisians saw it as a place to vent their frustrations. The commander of the Bastille, Marquis de Launay and his troops resisted for a few hours before they surrendered to the mob. After learning about the fall of the Bastille, King Louis XVI withdrew the royal troops from the French capital and recalled finance minister Jacques Necker whom he dismissed just three days earlier. However, he could no longer reverse the Revolution, while the National Assembly (from July 9 formally called the National Constituent Assembly) became de facto the French government.

March on Versailles

- Many people in Paris and the rest of France were hungry, unemployed and restless. In October, a large crowd of protesters, mostly women, marched from Paris to the Palace of Versailles, convinced that the royal

family and nobility there lived in luxury, oblivious to the hardships of the French people. They broke into the quarters of Queen Marie Antoinette who as an Austrian was particularly despised. The crowd demanded bread and wanted to bring the King and his family back to Paris to “live among the people”. Louis conceded to their demands and agreed to go to Paris with the mob, believing it would only be a temporary inconvenience. As they left Versailles the crowd chanted that it was “bringing back the baker, the baker’s wife and the little baker’s apprentice!”

Flight to Varennes

- The National Assembly continued working on a new constitution for France. After much debate, members of the Assembly decided to impose limits to the King’s authority. The King would have veto power but the National Assembly could overrule his veto. These restrictions appalled Louis XVI and Marie Antoinette. They also felt like prisoners in their Tuileries Palace in Paris. They decided to leave France and seek refuge in Austria, hoping to eventually be reinstated on the throne as absolute monarchs. Before leaving, Louis wrote a manifesto denouncing the Revolution. On June 20, 1791, the royal family quietly left Paris. They managed to get within a few miles of the border before being recognized in the town of Varennes and forced to go back. The incident was devastating for the National Assembly. The King’s attempt to flee and his denouncement of the Revolution came just as the new constitution was about to be implemented. Now they had to deal with a monarch who was against the constitution and very unpopular with the people.

Dissolution of the National Assembly

- The long awaited constitution finally came into effect on September

30, 1791. France was proclaimed a constitutional monarchy, while the National Assembly was dissolved and replaced by a new political body named the Legislative Assembly. No member of the National Assembly was elected to the new legislative body as it was agreed earlier that the members of the National Assembly would not be allowed to hold a seat in the new parliament. The result was the loss of everyone with valuable political experience. The Legislative Assembly was composed of various political factions, ranging from moderate royalists to radical republicans.

War

- The issue of war dominated the debate in the new Legislative Assembly. Tensions with the rest of Europe continued to rise. Revolutionary France was viewed with both fear and anger by the European monarchies, especially by the neighboring Austrian monarchy. In France, the support for war was growing as well. Louis XVI and hard line monarchists wanted war because they believed that foreign armies would easily overthrow the new government. The revolutionaries, on the other hand, pushed for war because they thought it would unify the nation and spread the ideas of the Revolution to the rest of Europe. On April 20, 1792, France declared war on Austria.

Attack on the Tuileries Palace

- In spring and summer of 1792, the French government found itself in a very difficult situation. The Austrian army and its Prussian allies started advancing into the French territory. Economic stagnation continued throughout the country. The King was widely viewed as a traitor for trying to flee the country. The Legislative Assembly was divided and Paris was getting increasingly radicalized. On August 10, a crowd

of about 20,000 people attacked the Tuileries Palace. The King and Queen had escaped the Palace and placed themselves under the protection of the Legislative Assembly. Fearing further violence, the Assembly placed them under arrest. The Revolution was moving into a more radical phase. Over the next month, hundreds of suspected royalists were executed in what became known as the “September Massacre”. Many French men and women fled for their lives.

Declaration of the Republic and the Trial of Louis

- Following the arrests of Louis XVI and Marie Antoinette, the Legislative Assembly disbanded and replaced itself with a new political body named the National Convention. The first act of the latter was to declare France as a republic on September 21, 1792. Meanwhile, the French military had halted the foreign invasion and pushed back the Austrians and Prussians. Louis was charged with treason. The vote at the end of the trial was unanimous: Louis was guilty. The vote on the death penalty was much closer but it passed. On January 21, 1793, Louis was driven through the streets of Paris to a guillotine and decapitated. Marie Antoinette had a short trial next. She was accused of numerous crimes, many of them based on rumors. On October 16, she too was found guilty and guillotined the same day.

Reign of Terror

- The new National Convention was dominated by the Committee of Public Safety. One man in particular, Maximilien Robespierre came to dominate the Committee and established himself as the leader of the so-called Reign of Terror. Robespierre wanted to rid France of all enemies of the Revolution and to protect the “virtue” of the nation. From September 1793 to July 1794,

an estimated 16,000 people were guillotined. Many radicals were executed along with moderates. Most leaders of the French Revolution were now either dead or had fled the republic. Opposition to Robespierre grew both in the Committee of Public Safety and within the National Convention. The execution of popular Committee member George-Jacques Danton and Robespierre proclaiming himself as the leader of a new religion of the Supreme Being caused much resentment. On July 27, 1794, Robespierre was arrested. He was guillotined the following day.

Directory and the Rise of Napoleon

- After the dramatic fall of Robespierre, the National Convention created a new constitution for France that was implemented in 1795. Leading the new government was the Directory consisting of an executive council of five members. Almost from the start, the Directory became mired in corruption, political conflict, financial problems and depended on the army to remain in power. In 1799, a successful military commander named Napoleon Bonaparte returned from a military expedition in Egypt and ousted the Directory. Napoleon established what he called the Consulate and himself as the First Consul.

The Industrial Revolution :

- The Industrial Revolution, which took place from the 18th to 19th centuries, was a period during which predominantly agrarian, rural societies in Europe and America became industrial and urban. Prior to the Industrial Revolution, which began in Britain in the late 1700s, manufacturing was often done in people's homes, using hand tools or basic machines. Industrialization marked a shift to powered, special-purpose machinery, factories and mass production. The iron and textile

industries, along with the development of the steam engine, played central roles in the Industrial Revolution, which also saw improved systems of transportation, communication and banking. While industrialization brought about an increased volume and variety of manufactured goods and an improved standard of living for some, it also resulted in often grim employment and living conditions for the poor and working classes.

Britain : Birthplace of the Industrial Revolution

- Before the advent of the Industrial Revolution, most people resided in small, rural communities where their daily existences revolved around farming. Life for the average person was difficult, as incomes were meager, and malnourishment and disease were common. People produced the bulk of their own food, clothing, furniture and tools. Most manufacturing was done in homes or small, rural shops, using hand tools or simple machines.
- A number of factors contributed to Britain's role as the birthplace of the Industrial Revolution. For one, it had great deposits of coal and iron ore, which proved essential for industrialization. Additionally, Britain was a politically stable society, as well as the world's leading colonial power, which meant its colonies could serve as a source for raw materials, as well as a marketplace for manufactured goods.
- As demand for British goods increased, merchants needed more cost-effective methods of production, which led to the rise of mechanization and the factory system.

Innovation and Industrialization

- The textile industry, in particular, was transformed by industrialization. Before mechanization and factories, textiles were made mainly in people's

homes (giving rise to the term cottage industry), with merchants often providing the raw materials and basic equipment, and then picking up the finished product. Workers set their own schedules under this system, which proved difficult for merchants to regulate and resulted in numerous inefficiencies. In the 1700s, a series of innovations led to ever-increasing productivity, while requiring less human energy. For example, around 1764, Englishman James Hargreaves (1722-1778) invented the spinning jenny ("jenny" was an early abbreviation of the word "engine"), a machine that enabled an individual to produce multiple spools of threads simultaneously. By the time of Hargreaves' death, there were over 20,000 spinning jennys in use across Britain. The spinning jenny was improved upon by British inventor Samuel Compton's (1753-1827) spinning mule, as well as later machines. Another key innovation in textiles, the power loom, which mechanized the process of weaving cloth, was developed in the 1780s by English inventor Edmund Cartwright (1743-1823).

- Developments in the iron industry also played a central role in the Industrial Revolution. In the early 18th century, Englishman Abraham Darby (1678-1717) discovered a cheaper, easier method to produce cast iron, using a coke-fueled (as opposed to charcoal-fired) furnace. In the 1850s, British engineer Henry Bessemer (1813-1898) developed the first inexpensive process for mass-producing steel. Both iron and steel became essential materials, used to make everything from appliances, tools and machines, to ships, buildings and infrastructure.
- The steam engine was also integral to industrialization. In 1712, Englishman Thomas Newcomen (1664-1729) developed the first practical steam engine (which was

used primarily to pump water out of mines). By the 1770s, Scottish inventor James Watt (1736-1819) had improved on Newcomen's work, and the steam engine went on to power machinery, locomotives and ships during the Industrial Revolution.

Transportation and the Industrial Revolution

- The transportation industry also underwent significant transformation during the Industrial Revolution. Before the advent of the steam engine, raw materials and finished goods were hauled and distributed via horse-drawn wagons, and by boats along canals and rivers. In the early 1800s, American Robert Fulton (1765-1815) built the first commercially successful steamboat, and by the mid-19th century, steamships were carrying freight across the Atlantic. As steam-powered ships were making their debut, the steam locomotive was also coming into use. In the early 1800s, British engineer Richard Trevithick (1771-1833) constructed the first railway steam locomotive. In 1830, England's Liverpool and Manchester Railway became the first to offer regular, timetabled passenger services. By 1850, Britain had more than 6,000 miles of railroad track. Additionally, around 1820, Scottish engineer John McAdam (1756-1836) developed a new process for road construction. His technique, which became known as macadam, resulted in roads that were smoother, more durable and less muddy.

Communication and Banking in Industrial Revolution

- Communication became easier during the Industrial Revolution with such inventions as the telegraph. In 1837, two Brits, William Cooke (1806-1879) and Charles Wheatstone (1802-1875), patented the first commercial electrical telegraph. By 1840, railways were a Cooke-

Wheatstone system, and in 1866, a telegraph cable was successfully laid across the Atlantic. The Industrial Revolution also saw the rise of banks and industrial financiers, as well as a factory system dependent on owners and managers. A stock exchange was established in London in the 1770s; the New York Stock Exchange was founded in the early 1790s. In 1776, Scottish social philosopher Adam Smith (1723-1790), who is regarded as the founder of modern economics, published "The Wealth of Nations." In it, Smith promoted an economic system based on free enterprise, the private ownership of means of production, and lack of government interference.

Quality of life During Industrialization

- The Industrial Revolution brought about a greater volume and variety of factory-produced goods and raised the standard of living for many people, particularly for the middle and upper classes. However, life for the poor and working classes continued to be filled with challenges. Wages for those who labored in factories were low and working conditions could be dangerous and monotonous. Unskilled workers had little job security and were easily replaceable. Children were part of the labor force and often worked long hours and were used for such highly hazardous tasks as cleaning the machinery. In the early 1860s, an estimated one-fifth of the workers in Britain's textile industry were younger than 15. Industrialization also meant that some craftspeople were replaced by machines. Additionally, urban, industrialized areas were unable to keep pace with the flow of arriving workers from the countryside, resulting in inadequate, overcrowded housing and polluted, unsanitary living conditions in which disease was rampant. Conditions for

Britain's working-class began to gradually improve by the later part of the 19th century, as the government instituted various labor reforms and workers gained the right to form trade unions.

Industrialization Moves Beyond Britain

- The British enacted legislation to prohibit the export of their technology and skilled workers; however, they had little success in this regard. Industrialization spread from Britain to other European countries, including Belgium, France and Germany, and to the United States. By the mid-19th century, industrialization was well-established throughout the western part of Europe and America's northeastern region. By the early 20th century, the U.S. had become the world's leading industrial nation.

Russian Revolution

- In 1917, two revolutions swept through Russia, ending centuries of imperial rule and setting in motion political and social changes that would lead to the formation of the Soviet Union. In March, growing civil unrest, coupled with chronic food shortages, erupted into open revolt, forcing the abdication of Nicholas II (1868-1918), the last Russian czar. Just months later, the newly installed provisional government was itself overthrown by the more radical Bolsheviks, led by Vladimir Lenin (1870-1924).

Russian Revolution : Background

- By 1917, most Russians had lost faith in the leadership ability of Czar Nicholas II. Government corruption was rampant, the Russian economy remained backward, and Nicholas repeatedly dissolved the Duma, the Russian parliament established after the 1905 revolution, when it opposed his will. However, the immediate cause of the February

Revolution—the first phase of the Russian Revolution of 1917—was Russia’s disastrous involvement in World War I (1914-18). Militarily, imperial Russia was no match for industrialized Germany, and Russian casualties were greater than those sustained by any nation in any previous war. Meanwhile, the economy was hopelessly disrupted by the costly war effort, and moderates joined Russian radical elements in calling for the overthrow of the czar.

February Revolution : 1917

- The February Revolution (known as such because of Russia’s use of the Julian calendar until February 1918) began on March 8, 1917 (or February 23 on the Julian calendar), when demonstrators clamoring for bread took to the streets in the Russian capital of Petrograd (now called St. Petersburg). Supported by huge crowds of striking industrial workers, the protesters clashed with police but refused to leave the streets. On March 10, the strike spread among all of Petrograd’s workers, and irate mobs destroyed police stations. Several factories elected deputies to the Petrograd Soviet, or council, of workers’ committees, following the model devised during the 1905 revolution.
- On March 11, the troops of the Petrograd army garrison were called out to quell the uprising. In some encounters, regiments opened fire, killing demonstrators, but the protesters kept to the streets and the troops began to waver. That day, Nicholas again dissolved the Duma. On March 12, the revolution triumphed when regiment after regiment of the Petrograd garrison defected to the cause of the demonstrators. The soldiers subsequently formed committees that elected deputies to the Petrograd Soviet.

- The imperial government was forced to resign, and the Duma formed a provisional government that peacefully vied with the Petrograd Soviet for control of the revolution. On March 14, the Petrograd Soviet issued Order No. 1, which instructed Russian soldiers and sailors to obey only those orders that did not conflict with the directives of the Soviet. The next day, March 15, Czar Nicholas II abdicated the throne in favor of his brother Michael (1878-1918), whose refusal of the crown brought an end to the czarist autocracy.

Bolshevik Revolution : 1917

- In the aftermath of the February Revolution, power was shared between the weak provisional government and the Petrograd Soviet. Then, on November 6 and 7, 1917 (or October 24 and 25 on the Julian calendar, which is why this event is also referred to as the October Revolution), leftist revolutionaries led by Bolshevik Party leader Vladimir Lenin launched a nearly bloodless coup d’état against the provisional government. The Bolsheviks and their allies occupied government buildings and other strategic locations in Petrograd, and soon formed a new government with Lenin as its head.
- Lenin became the virtual dictator of the first Marxist state in the world. His government made peace with Germany, nationalized industry and distributed land, but beginning in 1918 had to fight a devastating civil war against anti-Bolshevik White Army forces. In 1920, the anti-Bolsheviks were defeated, and in 1922 the Union of Soviet Socialist Republics (USSR) was established.

World War I : Timeline

1914

- **June 28** - Archduke Franz Ferdinand, prince to the Austria-Hungary throne, is assassinated in Sarajevo by a Serbian named Gavrilo Princip.

- **July 23** - Austria-Hungary makes demands on Serbia for retribution. Serbia does not meet demands.
- **July 28** - Austria-Hungary declares war on Serbia. Russia begins mobilizing its troops.
- **August 1** - Germany declares war on Russia.
- **August 3** - Germany declares war on France as part of the Schlieffen Plan.
- **August 4** - Germany invades Belgium. Britain declares war on Germany.
- **August 23 to 30** - The Battle of Tannenberg is fought between Germany and Russia. The Germans defeat the Russian Second Army.
- **September 5 to 12** - The advancing German army is stopped before Paris by the British and French at the First Battle of the Marne. The Germans dig in and four years of trench warfare begins.
- **October 19 to November 22** - The Allies defeat the Germans at the First Battle of Ypres.
- **November 2** - The British begin a naval blockade of Germany.
- **November 11** - The Ottoman Empire declares war on the Allies.
- **December 24** - An unofficial truce is declared between the two sides at Christmas.

1915

- **February 4** - The Germans begin to use submarines against Allied merchant ships around the island of Britain.
- **April 25** - The Allies attack the Ottoman Empire at the Battle of Gallipoli. This campaign will last over eight months and will end as a victory for the Ottomans and the retreat of the Allies.
- **May 7** - The Lusitania, a luxury British passenger ship, is sunk by a German submarine. 1,195 civilians were killed. This act sparks international outrage and contributes to the United States joining the war against Germany.

- **October 14** - Bulgaria enters the war by declaring war on Serbia.

1916

- **February 21** - The Battle of Verdun begins between France and Germany. This battle will last until December of 1916 and will finally result in a French victory.
- **May 31** - The largest naval battle of the war, the Battle of Jutland, is fought between Britain and Germany in the North Sea.
- **July 1** - The Battle of the Somme begins. Over 1 million soldiers will be wounded or killed.

1917

- **January 19** - The British intercept the Zimmerman Telegram in which Germany tries to convince Mexico to join the war. This will result in the United States declaring war on Germany.
- **March 8** - The Russian Revolution begins. Tsar Nicholas II is removed from power on March 15.
- **April 6** - The United States enters the war, declaring war on Germany.
- **November 7** - The Bolsheviks, led by Vladimir Lenin, overthrow the Russian government.
- **December 17** - The Russians agree to peace with the Central powers and leave the war.

1918

- **January 8** - President Woodrow Wilson issues his "Fourteen Points" for peace and an end to the war.
- **March 21** - Germany launches the Spring Offensive hoping to defeat the Allies before reinforcements from the United States can be deployed.
- **July 15** - The Second Battle of the Marne begins. This battle will end on August 6 as a decisive victory for the Allies.
- **November 11** - Germany agrees to an armistice and the fighting comes to an end at 11am on the 11th day of the 11th month.

1919

- **June 28** - The Treaty of Versailles is signed by Germany and World War I comes to an end.

Allied Powers

- World War I was fought between two major alliances of countries: the Allied Powers and the Central Powers. The Allied Powers were largely formed as a defense against the aggression of Germany and the Central Powers. They were also known as the Entente Powers because they began as an alliance between France, Britain, and Russia called the Triple Entente.

Countries

- **France** - Germany declared war on France on August 3, 1914. France had been preparing for war after Germany and Russia went to war. The majority of the fighting along the Western Front took place inside of France.
- **Britain** - Britain entered the war when Germany invaded Belgium. They declared war on Germany on August 4, 1914. British troops joined French troops on the Western Front to stop the advance of Germany across Western Europe.
- **Russia** - The Russian Empire was an early entry into the war. Germany declared war on Russia on July 31, 1914. They expected that Russia would defend Serbia against the invasion of Serbia by Germany's ally Austria-Hungary. The Russian Empire also included Poland and Finland. After the Russian Revolution, Russia left the Allied Powers and signed a peace treaty with Germany on March 3, 1918.
- **United States** - The United States tried to remain neutral during the war. However, it entered the war on the side of the Allied Powers on April 6, 1917 when it declared war on Germany. Around 4,355,000 American troops were mobilized during the war with around 116,000 losing their lives.

- Other Allied countries included Japan, Italy, Belgium, Brazil, Greece, Montenegro, Romania, and Serbia.

Leaders

- **France: Georges Clemenceau** - Clemenceau was Prime Minister of France from 1917 to 1920. His leadership helped hold France together during the most difficult times of the war. His nickname was "The Tiger." Clemenceau represented the French at the peace talks and advocated for harsh punishment for Germany.
- **Britain: David Lloyd George** - Lloyd George was the Prime Minister of Britain during much of the war. He was an advocate of Britain entering the war and kept the country together during the war.
- **Britain: King George V** - King of Britain during the war, George V was a figurehead with little power, but often visited the front to inspire the British troops.
- **Russia: Tsar Nicolas II** - Tsar Nicholas II was leader of Russia at the start of World War I. He entered the war in defense of Serbia. However, the war effort was disastrous in the eyes of the Russian people. The Russian Revolution occurred in 1917 and Nicolas II was removed from power. He was executed in 1918.
- **United States: President Woodrow Wilson** - President Woodrow Wilson was re-elected on the platform that he kept America out of the war. However, he was given little choice and declared war on Germany in 1917. After the war, Wilson advocated less harsh terms on Germany, knowing that a healthy German economy would be important for all of Europe.

Central Powers

- World War I was fought between two major alliances of countries: the Allied Powers and the Central Powers. The Central Powers began

as an alliance between Germany and Austria-Hungary. Later the Ottoman Empire and Bulgaria became part of the Central Powers.

Countries

- **Germany** - Germany had the largest army and was the primary leader of the Central Powers. Germany's military strategy at the start of the war was called the Schlieffen Plan. This plan called for the quick takeover of France and Western Europe. Then Germany could concentrate its efforts on Eastern Europe and Russia.
- **Austria-Hungary** - World War I essentially began when Archduke Ferdinand was assassinated. Austria-Hungary blamed the assassination on Serbia and subsequently invaded Serbia setting off a chain of events that resulted in the war.
- **Ottoman Empire** - The Ottoman Empire had strong economic ties to Germany and signed a military alliance with Germany in 1914. The entrance into the war led to the eventual downfall of the Ottoman Empire and the formation of the country of Turkey in 1923.
- **Bulgaria** - Bulgaria was the last major country to join the war on the side of the Central Powers in 1915. Bulgaria claimed land held by Serbia and was eager to invade Serbia as part of the war.

Leaders

- **Germany: Kaiser Wilhelm II** - Wilhelm II was the last Kaiser (emperor) of the German Empire. He was related to both the King of England (George V was his first cousin) and the Tsar of Russia (Nicholas II was his second cousin). His policies were largely the cause of World War I. He eventually lost the support of the army and held little power by the end of the war. He abdicated the throne in 1918 and fled the country.

- **Austria-Hungary: Emperor Franz Josef** - Franz Joseph ruled the Austrian Empire for 68 years. When the heir to his throne, Archduke Ferdinand, was assassinated by a Serbian nationalist, he declared war on Serbia beginning World War I. Franz Joseph died during the war in 1916 and was succeeded by Charles I.
- **Ottoman Empire: Mehmed V** - Mehmed V was Sultan of the Ottoman Empire during World War I. He declared war on the Allies in 1914. He died just before the end of the war in 1918.
- **Bulgaria: Ferdinand I** - Ferdinand I was Tsar of Bulgaria during World War I. He gave up his throne at the end of the war to his son Boris III.

World War II : Timeline

- World War II lasted from 1939 to 1945. There were several major events leading up to the war and then during the war. Here is a timeline listing some of the major events:

Leading up to the War

- **1933 January 30** - Adolf Hitler becomes Chancellor of Germany. His Nazi Party, or the Third Reich, takes power and Hitler is essentially the dictator of Germany.
- **1936 October 25** - Nazi Germany and Fascist Italy form the Rome-Berlin Axis treaty.
- **1936 November 25** - Nazi Germany and Imperial Japan sign the Anti-Comintern Pact. This was a pact against communism and Russia.
- **1937 July 7** - Japan invades China.
- **1938 March 12** - Hitler annexes the country of Austria into Germany. This is also called the Anschluss.

World War II

- **1939 September 1** - Germany invades Poland. World War II begins.
- **1939 September 3** - France and Great Britain declare war on Germany.
- **1940 April 9 to June 9** - Germany invades and takes control of Denmark and Norway.

- **1940 May 10 to June 22** - Germany uses quick strikes called blitzkrieg, meaning lightning war, to take over much of western Europe including the Netherlands, Belgium, and northern France.
- **1940 May 30** - Winston Churchill becomes leader of the British government.
- **1940 June 10** - Italy enters the war as a member of the Axis powers.
- **1940 July 10** - Germany launches an air attack on Great Britain. These attacks last until the end of October and are known as the Battle of Britain.
- **1940 September 22** - Germany, Italy, and Japan sign the Tripartite Pact creating the Axis Alliance.
- **1941 June 22** - Germany and the Axis Powers attack Russia with a huge force of over four million troops.
- **1941 December 7** - The Japanese attack the US Navy in Pearl Harbor. The next day the US enters World War II on the side of the Allies.
- **1942 June 4** - The US Navy defeats the Japanese navy at the Battle of Midway.
- **1942 July 10** - The Allies invade and take the island of Sicily.
- **1943 September 3** - Italy surrenders to the Allies, however Germany helps Mussolini to escape and set up a government in Northern Italy.
- **1944 June 6** - D-day and the Normandy invasion. Allied forces invade France and push back the Germans.
- **1944 August 25** - Paris is liberated from German control.
- **1944 December 16** - The Germans launch a large attack in the Battle of the Bulge. They lose to the Allies sealing the fate of the German army.
- **1945 February 19** - US Marines invade the island of Iwo Jima. After a fierce battle they capture the island.

- **1945 April 12** - US President Franklin Roosevelt dies. He is succeeded by President Harry Truman.
- **1945 March 22** - The US Third Army under General Patton crosses the Rhine River.
- **1945 April 30** - Adolf Hitler commits suicide as he knows Germany has lost the war.
- **1945 May 7** - Germany surrenders to the Allies.
- **1945 August 6** - The United States drops the Atomic Bomb on Hiroshima, Japan. The city is devastated.
- **1945 August 9** - Another atomic bomb is dropped on Nagasaki, Japan.
- **1945 September 2** - Japan surrenders to US General Douglas MacArthur and the Allies.

The Allied Powers

- World War II was fought between two major groups of nations. They became known as the Axis and Allied Powers. The major Allied Powers were Britain, France, Russia, and the United States.
- The Allies formed mostly as a defense against the attacks of the Axis Powers. The original members of the Allies included Great Britain, France and Poland. When Germany invaded Poland, Great Britain and France declared war on Germany.

Russia becomes an Ally

- At the start of World War II, Russia and Germany were friends. However, on 22 June 1941 Hitler, the leader of Germany, ordered a surprise attack on Russia. Russia then became an enemy of the Axis Powers and joined the Allies.

The US Joins the Allied Powers

- The United States had hoped to remain neutral during World War II. However, the US was attacked by surprise at Pearl Harbor by the Japanese. This attack united the

country against the Axis Powers and turned the tide of World War II in the favor of the Allies.

Leaders of the Allied Powers:

- **Great Britain: Winston Churchill** - Prime Minister of Great Britain during most of World War II, Winston Churchill was a great leader. His country was the last country fighting against the Germans in Europe. He is known for his famous speeches to his people when the Germans were bombing them during the Battle of Britain.
- **United States: Franklin D. Roosevelt** - One of the greatest presidents in the history of the United States, President Roosevelt led the country out of the Great Depression and through World War II.
- **Russia: Joseph Stalin** - Stalin's title was General Secretary of the Communist Party. He led Russia through terrible and devastating battles with Germany. Millions and millions of people died. After winning the war, he set up the Eastern Bloc of Soviet led communist states.
- **France: Charles de Gaulle** - Leader of the Free French, de Gaulle led the French resistance movement against Germany.

The Axis Powers

- World War II was fought between two major groups of nations. They became known as the Axis Powers and the Allied Powers. The major Axis Powers were Germany, Italy, and Japan.

The Forming of the Axis Powers

- The alliance began to form in 1936. First, on October 15, 1936 Germany and Italy signed a friendship treaty that formed the Rome-German Axis. It was after this treaty that Italian dictator Benito Mussolini used the term Axis to refer to their alliance. Shortly after this, on November 25, 1936, Japan and Germany both signed the Anti-Comintern Pact,

which was a treaty against communism.

- An even stronger alliance was signed between Germany and Italy on May 22, 1939 called the Pact of Steel. This treaty would later be called the Tripartite Pact when Japan signed it on September 27, 1940. Now the three main Axis Powers were allies in the war.

Leaders of the Axis Powers

- The three main member countries of the Axis Powers were ruled by dictators. They were:
- **Germany: Adolf Hitler** - Hitler became Chancellor of Germany in 1933 and Führer in 1934. He was a ruthless dictator who hated Jewish people. He wanted to purge Germany of all weak people. He also wanted to take control of all of Europe.
- **Italy: Benito Mussolini** - Mussolini was supreme dictator of Italy. He founded the concept of a fascist government where there is one leader and one party that has total power. He was an inspiration to Adolf Hitler.
- **Japan: Emperor Hirohito** - Hirohito reigned as Emperor of Japan from 1926 until 1989. He remained Emperor after the war. The first time his subjects heard his voice was when he announced Japan's surrender on the radio.

Most Important Facts

Evolution of Man

- **First Fossil : Male - Ramapithecus**
Female : Shivapithecus
(10-14 million years ago)
- These fossils were found in Shivalik and Salt range.
- **Homo erectus** : Found in Hathnora (Lower Palaeolithic) 10 lakh B.C.
- **Homo sapiens** : Found in Upper Palaeolithic Regions
- First broken skull specimen of Homo Erectus is discovered from Hathnora (Narmada basin) (Lower Palaeolithic age)

- Bhimbetaka caves: 200 rock shelters and caves are located on Bhimbetka hills having thousands of paintings. **(Middle Palaeolithic & Upper Palaeolithic Age)**
 - **Mehargah** : Earliest Farming community in India (Neolithic age).
 - **Neolithic age** : Invention of wheel, Invention of Fire, Boat making, spinning cotton and wool.
 - **Chirand** : Evidence of first pottery in India.
 - Koldihwa (near Allahabad): First evidence of rice cultivation.
- Indus Valley Civilization:**
- A Kushana period Stupa has been found from Mohenjo-daro.
- Largest Harappan site in India is situated in Haryana Rakhigarhi, second largest is Dholavira in Gujarat.
 - Major Harappan cities that acted as ports : Lothal, Balakot, Suktagendor and Allahdin (Pakistan)
 - The Harappan city with most impressive drainage system : Mohenjo-daro
 - Harappan script is regarded as pictographic since its signs represent birds, fish and a variety of human forms. The script was boustrophedon. written from right to left in one line and then from left to right in the next line. The number of signs of the Harappan script is known to be between 400 and 600. The language of the Harappans is still unknown and must remain so until the Harappan script is deciphered.
 - Seals, Most commonly made of steatite (soft stone). The technique of cutting and polishing these seals with white luster was a unique invention of the Harappans. Unicorn is the animal most frequently represented on the seals.
 - Harappa-Great granary, 40 % of total seals found here; Seals usually made of steatite depicting elephant, bull, unicorn, rhinoceros; figurines - torso
 - **Mohenjodaro** - "Mound of the dead"; largest of all cities; Great Bath; granary; city was flooded occasionally, figurines of yogi, bronze dancing girl, seal bearing Pashupati.

Name of Sites	Year of Excavation	Excavators	Region/River	Features
Harappa	1921	Daya Ram Sahni	Montgomery district of Punjab (Now in Pakistan) on the left bank of Ravi	<ol style="list-style-type: none"> 1. City followed grid planning 2. Row of six granaries 3. Only place having evidences of coffin burial 4. Evidence of fractional burial and coffin burial 5. Cemetery-H of alien people.
Mohenjodaro	1922	R.D. Banarjee	Larkana district in Sind on the right bank of Indus (Now in Pakistan)	<ol style="list-style-type: none"> 1. City followed grid planning 2. A large granary and Great bath a college 3. A piece of woven cotton along with spindle whorls and needles 4. Town was flooded more than seven times.
Chanhudaro	1931	N. Gopal Majumdar, Mackey	Situated in Sind on the bank of Indus	<ol style="list-style-type: none"> 1. The city has no citadel 2. Famous for bead makers shop 3. A small pot, possibly an inkpot 4. Foot prints of a dog chasing a cat
Kalibangan	1953	A. Ghosh	Situated in Rajasthan on the Bank of Ghaggar	<ol style="list-style-type: none"> 1. Show both Pre Harappan and Harappan phase 2. Evidence of furrowed land 3. Evidence of seven fire altars and camel bones 4. many houses had their own well

				5. kalibangan stand for black bangles
Lothal	1953	S.R. Rao	Situated in Gujarat on Bhogava river near Gulf of Cambay	<ol style="list-style-type: none"> 1. A tiled floor which bears intersecting design of circles 2. Remains of rice husk 3. A ship designed on a seal 4. Beads & trade ports 5. An instrument for measuring angles, pointing to modern day compass
Banwali	1974	R.S. Bist	Situated in Hissar district of Haryana	<ol style="list-style-type: none"> 1. Mother Goddess Terracotta Figurine 2. Good quantity of barley found here
Surkotada	1964	J.P. Joshi	Situated in Kutch (Bhuj) district of Gujarat	<ol style="list-style-type: none"> 1. Bones of horses
Sutkagendor	1927	Stein, R.L.	Situated in Baluchistan on Dast River	<ol style="list-style-type: none"> 1. Trade point between Harappa and babylon, belong to mature phase
Amri	1935	N.G. Majumdar	Situated in Sind on the Bank of Indus	<ol style="list-style-type: none"> 1. Evidence of antelope
Dholavira	1985-90	R.S. Bisht	Situated in Gujarat in Rann of Kutch	<ol style="list-style-type: none"> 1. Seven cultural stages 2. Three parts of city 3. Unique water management
Rangpur	1953	M.S. Vats, B.B. Lal & S.R. Rao	Situated on the bank of Mahar in Gujarat	<ol style="list-style-type: none"> 1. Rice was cultivated
Kot Diji	1953	Fazal Ahmed	Situated on the bank of Indus	<ol style="list-style-type: none"> 1. Stone 2. house, knowledge of metallurgy, artistic toysetc.
Ropar	1953	Y.D. Sharma	Situated in Punjab of the banks of Sutlej	<ol style="list-style-type: none"> 1. Evidence of burying a dog below the human burial
Balakot	1963-76	George F Dales	Situated on the Arabian Sea	<ol style="list-style-type: none"> 1. The mounds rise to the height of about 9.7 mts and are spread 2.8 sq. hectare of area
Alamgirpur	1958	Y.D. Sharma	Situated on Hindon in Meerut	<ol style="list-style-type: none"> 1. Usually considered to be the eastern boundary of the Indus culture

Vedic age:

- **Marut as Agriculturist** - Satpatha Brahmana
- **Transmigration of Soul (punrjanm)**- Brahadaranyka Upanishada
- **Conversion between Yam & Nachiketa** - Katha Upanishada
- **Origin of Indian Music** - Samveda
- **Mention of Word 'Shudra'** - Rigveda 10th Mandala
- **Gayatri Mantra (For Savit)**- Rigveda
- **Battle of Ten kings (Parushani River)**- Rigveda (10th Mandala)
- **Mention of four Ashrams** - Jabala Upanishada

- **Four fold division of Society** - Rigveda 10th Mandala
- **Satyameva Jayate** - Mundaka upanishada
- We notice the practice of levirate(niyog partha) and widow remarriage in the Rig Veda.
- The institution of gotra appeared in later Vedic times(Atharvaveda).
- **II, III, IV, V, VI & VII are oldest mandalas of Rigveda.**
- **Puranas** - Divided into sarga, pratisarga, manvantar, vamsa (genealogical list of kings) &
- **vamsanucharita. 18 main puranas & 18 subsidiary puranas.**
- **Vedas** - Meaning “knowledge”. Rigveda (hymns), Yajurveda (sacrificial formulae), Atharvaveda (magical charms & spell), Samveda. Vedas are called aparushya (not created by man) & nity.
- Upanishads-About 200 in number. Deal with philosophy. Oldest & most important are Chhandogya & Brihadaranyaka. Other important are Kathak, Isa, Mundaka, Prasna etc. Do not believe in sacrificial ceremonies.
- Brahmanas-Talks about vedic hymns, their application, stories of their origin. Each Brahmana is associated with one of the four VedasAitareya brahmana is associated with Rig Veda & Satapatha Brahmana with Yajur veda.
- Aranyakas-Meaning ‘the forest books’. They discuss philosophical meditation & sacrifice.
- Vedangas-Evolved for proper understanding of the Vedas. Six in

all: Siksha (phonetics), Kalpa (rituals), Vyakarna, Nirukta (Etymology) Chhanda (metrics) & Jyotisha.

Regions and Kings

Eastern King	Samrat
Western King	Suvrat
Northern King	Virat
Southern King	Bhoja
King of middle country	Raja

Some Jaina Sects

- **Yapaniyan** - Karnataka, impact of Tantricism Came out of Svetambara.
- Finds mention in inscription of Vikramaditya VI.
- **Pujiramat** - came out of Svetambara.
- **Terapainthi** - Came out of Svetambara
- **Sammiya** - Came out of Digambara.
- **Bispanthi** - Came out of Digambara. Supported idol worship

The Important Buddhist Writers

- **Asvaghosha** : Contemporary of Kanishka. He was poet, dramatist, musician, scholar and debator.
- **Nagarjuna** : He was a friend of contemporary of Satvahana king Yajnasri Gautamiputra of Andhra.
- **Asanga and Vasubandhu** : Two brothers who flourished in the Punjab region in the fourth century A.D. Asanga was the most important teacher of Yogachara or Vijnanavada school founded by his guru Maitreyanatha. Vasubandhu's greatest work, Abhidharmakosa is still considered an important encyclopaedia of Buddhism.
- **Buddhaghosa** : Who lived in the fifth

century A.D. was a great Pali scholar.

- **Dinnaga** : The last mighty intellectual of the fifth century, also well known as the founder of the Buddhist logic.
- **Dharmakirti** : Lived in the seventh century A.D.; was another great Buddhist logician, a subtle philosophical thinker and dialectician.

Arthashastra

- Written by Chanakya/Vishnugupta/ Kautilya
- Divided in 15 Adhikarnas and 180 Prakarnas
- Is related to money and politics
- Is divided into 15 parts
- 6000 sholakas
- Comment-Pratipada Panchika commented by-Bhataswamy
- Manuscript discovered by Arya Sharma Shastri in 1904.

Asoka's Hellenistic Contemporaries	
Antiochus II Theos	Syria
Ptolemy II Philadelpus	Egypt
Magas	Cyrne
Antigonos Gonatas	Macedonia
Alexander	Epirus
Various Names Epithets Of Asoka	
Devanamkpiya	Monarchial Epithet
Ashokavardnan	Purana
Piyadassiraja	Barabar cave inscription
Ashoka Maurya	Junagarh Inscription
Piyadasi	Kandhar inscription

Asoka’s Epic and Inscriptions and they are subject			
First	First major rock edict	Prohibition on animal slaughter	
Second	Second major rock edit	Mention of places of Cholas, Pardayans. Satayaputras and Keralputras	
Third	Third major rock edit	Directions to Predeshikas. Yuktas and Rajukas for propagation of .Dhamma	
Forth	Forth major rock edit	Impact of Dhamma on society.	
Fifth	Fifth major rock edit	Appointments of Dhammamahamatras.	
Sixth	Sixth major rock edit	Welfare majors.	
Seventh	Seventh major rock edit	Propagation of peace, balance of mind and faith	
Eighth	Eighth major rock edit	Details of visit to Bodhi tree.	
Ninth	Ninth major rock edit	Stress on ceremony of Dhamma	
Tenth	Tenth major rock edit	Asoka’s desire to gain popularity for Dhamma	
Eleventh	Eleventh major rock edit	Appraisal of Dhamma	
Twlevth	Twlevth major rock edit	Promotion to religion of different faiths	
Thirteenth	Thirteenth major rock edit	Largest of all, victory over Kalinga’s destruction of war, mention of Greek rulers	
Fourteenth	Fourteenth major rock edit	Nature of all other rock edictsInclusion of Asoka into Sangha It is bilingual. It tells that fishermen and hunters gave up hunting Faith of ruler and kingdom in Dhamma.	
The Three Sangam Kingdoms			
Kingdoms	Capital	Emblems	Famous sport
Cholas	Uraiyur, later Puhar	Tiger	Puhar(Kaveripattam)
Cheras	Vanji or Karur	Bow	Muzris, Tondi, Bandar
Pandyas	Madurai	Carp (Fish)	Korkai, Saliyur
Famous Temples of The Got the Age			
Vishnu Temple		Tigawa(Jabalpur)	
Shiva Temple		Bhumara(Nagaud)	
Parvati Temple		Nachria Kuthara	
Dasavtar Temple		Deogarh(Jhansi)	
Shiva Temple		Koh(Nagaland)	
Bhitragaon Temple		Bhitragaon	
Lakshman Temple		Kanpur(Brick made)	
Lakshman Temple		Sirpur (Raipur)	
Mukund Darra Temple		Kota	
Dhammekh Temple		Sarnath	
Jarasangh’s Sitting		Rajgrih (Bihar)	
Chandragupta II’s Nine Gems			
Person	(Field)	Famous works	
Amarsimha	Lexicography	Amarkosha	
Dhanvantri	Medicine	Ayurveda	
Harisena	Poetry	Allahabad Inscription	
Kalidesa		Abhijananashakuntalam	
Kahapanaka	Drama and Poetry	Jyothisyashastra	
Sanku	Astrology	Shilpashastra	
Varahamihira	Architecture	Brihadsamhita	
Vararuchi	Grammer	Vyakarana	
Vetalabhatta	Magic	Mantrashastra	

Ancient Books & Authors:

- **Mudrakshasha, Devichandra-guptam-** Vishakhadatta
- Malavikagnimitram (Pushyamitra Sunga): Kalidas
- Gudavaho (Yasovarman of Kannauj): Vakpati
- Vikramanadevacharita (Chalukya king Vikramaditya) Bilhana
- **Kumarapalacharita** : Jayasimha
- Navashasankacharita: Padmagupta
- **Prithvirajcharita** : Chandrabardai
- Meghaduta, Raghuvamsa, Kumara-sambhava, Vikramorvasiyam, Abhijnanashakuntalam (Drama) : Kalidas
- **Mrichakatika** : Sudraka
- **Uttarama-Charita, Malati Madhava:** Bhavbhuti
- **Si-yu-Ki** : Hiuen Tsang
- **Dasakumaracharita** : Dandin
- **Astanga-Sangraha, Astanga-Hridaya - Samhita** : Vagabhatta
- Panchsiddhantika, Suryasiddhanta, Brihatsamhita Varahamihira
- Karpuramanjari, Bala Ramayana, Bala Bharata, Kavyamimamsa, Bhuvana Kosha; Haravilasa : Rajshekhar
- Adinathacharita (Jaina Narrative): Vardhamana
- Shantinathacharita (Jaina Narrative): Devachandra
- Parsvanathacharita (Jaina Narrative): Devabhadra
- Prithviraja Vijay : Jayanka
- Harikeli Nataka : Visaladeva
- Prasannaraghava : Jayadeva
- Siddhanta Shiromani [4 parts – Lilavati, Bijaganita, Grahaganita & Gola (on Astronomy)] Bhaskaracharya
- Rajmariganka (On Astronomy) : King Bhoja
- Mitakasara : Vijnanaeshvara
- Sushruta Samhita (encyclopedia on surgery) : Sushruta
- Charaka Samhita (Teachings of Atreya) : Charaka
- Buddhacharita, Suandarananda : Asvaghosha
- Mahabhasya : Patanjali
- Harshacharita, Kadambari: Banabhatta
- Ravan Vadha : Bhattin

Famous Inscriptions

Inscription	King	Aspect
Junagarh Rock	Rudradaman (Saka)	Sanskrit. Says that a dam on the sudarshana lake was constructed by Pushyagupta a governor of Chandragupta Maurya
Allahabad Pillar	Samudragupta	Sanskrit. Composed by Harisena
Aihole Inscription	Pulakeshin II	Mentions Harsha defeat by Pulakeshin II. Composed by Ravikriti Vishnuvardan son of King.
Gwalior Inscription	Bhoja	Most famous Pratihara king.
Hathigumpha	Kharvela	---
Uttamerur	Chola Period	Chola village assemblies
Besnagar Inscription	Near Vidisa (MP)	Mentions Heliodorus the ambassador of king Antialcidas called himself Bhagvata & erected garudadhvaja in his honour of Vasudev.

- Charvaka-Believes only in materialism. No life beyond death, no soul no god.

Jaina

The names of two tirthankaras, Rishabhanath & Arishthanemia finds mention in Rig Veda. Twenty third was Parsva, son of Ishvaku king Asvasena. Said to have flourished 300 yrs before Mahavira. Mahavira, the last Tirthankara born in Kundagrama near Vaisali. His father Siddhartha was the head of gyatrika clan & mother Trisala was the sister of Chetaka, a Lichchhavi noble. Chetaka's daughter was married to

Bimbisara the king of Magadha. Mahavira was married to Yasoda. Left home at 30 & attained Kaivalya at 42. He accepted 4 doctrines of Parsava & added celibacy to it. Chandragupta Maurya patronized it. Passed away at Pawapuri.

Buddha

Gautama (known as Siddhartha as prince) was born in Lumbini near Kapilvastu to Suddhodhana, the king of Sakya republic & Mayadevi who died seven days after his birth. Gautama was married to Yasodhara from whom he had a son Rahul. 6 years of meditation led to enlightenment. First sermon in Sarnath

known as 'Set in motion the wheel of law'. Eight fold paths. Buddhism denies efficacy of vedic rituals & superiority of brahmanas. Followers were upasakas & bhikshus. Died at the age of 80 in Kushinagar.

Forms of marriage

- **Brahma** - Duly dowered girl to a man of the same class
- **Daiva** - Father gives daughter to a sacrificial priest as a part of his fee
- **Arsa** - A token bride price of a cow & a bull is given in place of the dowry

- **Prajapatya** - Father gives girl without dowry & without demanding the bride price
- **Gandharva** - Love Marriage
- **Asura** - In which bride was bought from her father
- **Rakshasa** - Marriage by capture, practiced especially by warriors.
- **Paishacha** - Marriage by seduction

Buddhist Councils

- I Buddhist Council at Rajgaha-Ajatsatru. Presided by Mahakasyapa
- II Buddhist Council at Vaishali - Kalasoka
- III Buddhist Council at Pataliputra Ashoka-Presided by Moggaliputta Tissa
- IV Buddhist Council-Kashmir-Kanishka-Presided by Vasumitra & Asvaghosha. Division into Hinayana & Mahayana.

Mahajanapadas:

Kasi	Varanasi
Kosala	Sravasti
Kuru	Indraprastha
Kamboja	Rajput
Anga	Champa
Avanti	Ujjayini & Mahishmati
Ashmaka	Potana
Malla	Kusinagar & Pawa
Magadha	Rajgriha or Giriraj
Matsya	Virat Nagari
Vajji	Vaisali
Vatsa	Kausambhi
Surasena	Mathura
Panchala	Aichhatra
Chhedi	Shuktimati
Gandhara	Taxila & Pushkalavati

The four Agnikula Rajputs Clans

- **The Parihara** : Also known as Pratihara, based themselves in southern Rajasthan.

- **The Chauhans** : Helped Pratihara against Arabs, based in eastern Rajasthan.
- **The Solankis** : Also called Chalukyas of Gujarat, based in Kathiwar.
- **The Pawars of Parmars** : Established their control in Malwa with their capital at Dhar near Indore.

Rajputs Paintings : The Rajputs

paintings are divided into the Rajput School of Art and the Pahari School of Art. The Rajasthani School flourished in Mewar, Bikanar, Jaipur, Jodhpur and Jaisalmer and specialized in depicting scenes from Krishna Lila, Nayika Veda and Ritu Charita. The Pahari School was patronized by the rulers of Himalayan states especially in the regions of Basoli, Mandi, Jammu, Kangra and Garhwal.

Dynasties and their Capitals

Name of State	Location	Capital
Maithrakas	Gujarat	Vallabhi
Yashodhrama	Malwa	Mondasar
Mukharis	Kanauj	Kanauj
Gurjaras	Jodhpur	Jodhpur
Gurjaras	Nandipur	Naandoda
Samantha guptas	Magadha	Patalipura
Gowdas	Bengal	Rangmati
Lichavis	Nepal	Kathmandu
Varmas	Kamarupa	Pragjyothishyapura
Manas	Orrisa	Padmakoti
Huns	Punjab	Sialkot
Vakatakas	Vidharba	Parverapura
Kadambas	Goa	Panaji
Kadambas	Hanagal	Hanagal
Nolambas	Hemavati	Hemavati
Gangas	Kalinga	Kalinga City
Trikutas	Aparantha	Anirudapura
Shilaharas	Konkan	Balipattana
Kalabras	Kodumbalur	Kodumbalur
Satyaputras	Konganadu	Konganadu
Vishnu Kundis	Vinukonda	Vinukonda
Solankis	Vengi	Venipura
Anands	Guntur	Kundapur
Brihadphalyanas	Mashipotam	Mashipotam
Ikshwakus	Nagarjunakonda	Nagarjunakonda
Cholas	Uraiyur	Uraiyur
Pallavas	Kanchi	Kanchi
Pandyas	Madurai	Madurai
Ganges	Talkad	Kuvalala
Alupas	Udyavara	Udyavara
Alupas	Barakur	Barakur
Cheras	Kondangallur	Kondangallur

Attacks of Muhmud of Ghazni:

Dynasties (Regions)	King/Kings
Hindu Shahi (Kabul and Punjab)	Jayapala, Anandapal
Lohar (Kashmir)	Rani Didda, Sangam Raj
Tomar (Delhi)	Angapal
Pratihara (Kannauj)	Rajyapala
Paramara (Malwa)	Sindhuraj
Chaulkya (Gujarat)	Chamundaran, Durlabharaj
Chandellas (Bundelkhand)	Vidyadhara
Kalachuri (Tripuri)	Kokkal II, Gangeyadeva
Pala (Bengal)	Mahipala
Chalukyas of Kalyani (Maharashtra)	Jaisimha II

Raids of Muhammad Ghori

Ist Raid	1175 AD	Over Multan and Uchha
IIrd Raid	1178 AD	Over Abu and Anilwar
IIIrd Raid	1179 AD	Over Punjab (Peshawar)
IVth Raid	1185 AD	Over Sialkot
Vth Raid	1186 AD	Defeated Malik Khusoro of Lahore and captured Punjab
VIth Raid	1191 AD	Ist Battle of Tarain
VIIth Raid	1192 AD	IIrd Battle of Tarain
VIIIth Raid	1194 AD	Against Kannauj, defeated Jaichand
IXth Raid	1205, 1206 AD	Against Khokkar (A tribe of Punjab)

Important Battles Fought By Babur

- Battle Of Panipat (1526) : He defeated Ibrahim Lodhi. This was his fifth expedition in India in which he was successful.
- Battle of Khanwa (1527) : He defeated Rana Sanga of Mewar.
- Battle of Chanderi (1528) : Babur defeated Medini Rai. He was the first to entitle himself as the 'Padshah'. After the Kushanas, he was the first to bring Kabul and Kandahar into the Indian Empire.
- Battle of Ghaghra (1529) : He fought against the Allied forces of Afghans in Bihar and Bengal. Sultan Nusrat Shah of Bengal faced crushing defeat.

Architectural development by Akbar

- Building built by Akbar are : Agra Fort (1565), Lahore Palace (1572), Fatehpur Sikri, Buland Darwaza and Allahabad fort (1583)
- The architecture at Fatehpur Sikri is an excellent blending of Persian,

Central Asia and various Indian (Bengal and Gujarat) styles. It is also known as Epic Poem in Red Sandstone.

- Two unusual buildings at Fatehpur Sikri are Panch Mahal and Diwan-i-Khas.
- Panch Mahal has the plan of Buddhist Vihara.
- The Jodhabai's Palace, Diwan-i-Aam and Diwan-i-Khas are Indian in their plan.
- Buland Darwaza (built after Gujarat victory) formed the main entrance to Fatehpur Sikri. It is built in the Iranian Style of half dome portal.
- He built the Jahangiri Mahal in Agra fort according to Hindu design based on Man Mandir
- He also began to build his own tomb at Sikandara which was later completed by Jahangir

Highlights of Aurangzeb's reign

- The second coronation of Aurangzeb took place when he

defeated Dara (1659).

- He took the title of Alamgar in 1659. He was also called as Zinda Pir the living saint.
- In 1662, Mir Jumta, Aurangzeb's ablest general, led the expedition against Ahoms.
- He forbade inscription of Kalma on the coins.
- He ended the celebration of Navroz Festival.
- He forbade music in the court.
- He ended Jarokha Darsha, use of almanacs and weighing of the emperor.
- Aurangzeb compiled Fatwa-i-Alamgir.
- Jaziya was reintroduced. However the Hindu mansabdars maintained their high proportion during his rule.
- The Mughul conquest reached a climax during his reign, as Bijapur and Golconda were annexed in 1686 and 1687 respectively.

The story Of Kohinoor Diamond

After the battle of Panipat, Babur ordered his son Humayun to secure the treasures at Agra, which had been the capital of the Lodhi dynasty since 1502.

When Babur joined Humayun at Agra, Humayun presented him a magnificent diamond. It has always been a matter of some disputes, but it seems almost certain that his splendid gem was Kohinoor (mountain of light), making its first appearance in history. The Kohinoor was given to Humayun by the family of the Raja of Gwalior, whom he had given protection. Humayun later gave the diamond to Shah Tahmasp of Persia. The Shah sent it as a present to Nizam Shah in the Deccan. Somehow, the gem returned during the 17th century into the treasury of the Mughal emperor, Shah Jehan. When Nadir Shah plundered Delhi in 1739, he seized the diamond along with the other Moghul jewels and named it Koh-i-noor. The Kohinoor passed through several hands before finally resting in the Tower of London, where it remains on display.

Siraj-ud-Daula (1756-57)

- He seized the English factory at Kasim bazar on 20th June 1756. Fort William surrendered but Robert Clive recovered Calcutta
- On 2nd January 1757, Treaty of Alinagar was signed, whereby Siraj conceded practically all the demands. British then captured Chandernagore, the French settlement, on March 1757.

- Battle of Plassey was fought on 23 June 1757, Owing to the conspiracy, the Nawab was defeated.

The following betrayed the Nawab :

- Mir Jafar – Mir Bakshi
- Manikchand – Officer in charge of Calcutta
- Aminchand – Rich Sikh merchant
- Jagat Seth – Biggest banker of Bengal
- Khandim Khan – Commanded a large number of Nawab's Troops
- "Black hole Tragedy" is associated in the Sirajudaulah.

Mir Jafar (1757-60)

- The Company was granted undisputed right to free trade in Bengal, Bihar and Orrisa. It received the Zamindari of 24 Parganas. Mir Jafar, however, fell into arrears and was forced to abdicate in favour of his son-in-law Mir Qasim

Mir Qasim (1760-64)

- Mir Qasim ceded Burdwan, Midnapore and Chittagong. He shifted his capital from Murshidabad to Monghyr.
- Mir Qasim soon revolted as he was angry with the British for misusing the dastaks (free duty passes.) However, having been defeated by the British, he fled to Awadh, where he formed a confederacy with Shuja-ud-daulah and Shah Alam.
- Battle of Buxar (1764) Shauja-u-Daulah, Shah Alam and Mir Qasim were defeated by Munro.

- Mir Jafar (1763) was again placed on the throne.

Nizam-ud-Daulah (1765-72)

- On Mir Jafar's death, his son Nizam-ud-daulah was placed on the throne and signed a treaty on 20th February, 1765 by which the Nawab was to disband most of his army and to administer Bengal through a Deputy Subahdar nominated by the Company.
- Clive concluded two separate treaties of Allahabad with Shuja-ud-daula and Shah Alam II
- Dual system of government started in Bengal. The Company acquired both Diwani and Nizamat rights from Najam-ud-Daula (1765-66), the new nawab of Bengal. But the Company did not take over direct administration and revenue collection. Warren Hastings ended the Dual system of Government in 1772.

Acquisitions of Indian States in British Empire

- Under Subsidiary Alliance: Hyderabad (1798), Mysore (1799), Awadh (1801m), Peshwa (1802), Bhonsle and Scindia (1803), Udaipur, Jodhpur and Jaipur (1818).
- Under Doctrine of Lapse: Satara (1848), Jhansi, Sambhalpur of Orrisa (1849), Baghat (1850), Jaipur of Bundelkhand (1849), Udaipur in Rajputana (1852), Jhansi (1853) and Nagpur (1854).

Anglo Maratha Treaties At a Glance

Treaty of Surat, 1775	was signed by Raghunath Rao wherein he promised to hand over Bassein and Salsette and a few islands near Bombay to the British.
Treaty of Purandhar, 1776	was signed by Madhav Rao II. The company got a huge was indemnity and retained Salsette.
Treaty of Wadgoan, 1779	was signed by British and Bombay government to relinquish all territories acquired by the Bombay office of the East India Company since 1773.
Treaty of Salbai, 1782	was signed by Mahadji Scindia whereby the British influence in Indian politics and mutual conflicts increased amongst the Marathas.
Treaty of Bassein, 1802	was signed between Baji Rao II. This treaty gave effective control of not only Maratha but also Deccan regions to the Company.
Treaty of Deogaon, 1803	by Bhonsle assured British supremacy over the Maratha Kingdom.
Treaty of Surji-Arjangaon, 1803	by Daulat Rao Scindia assured the same.

A Brief Survey of the Major Centres of the Revolt of 1857

Centre	Leaders	British Officials who suppressed the Revolt	Fate of the Leader
Delhi	Bahadur Shah, General Bakht Khan of Bareilly regiment	Nicholson, Lt Wiloughby, Lt Hudson	Bahadur Shah deported to Rangoon, Bakht Khan died in battlefied.
Lucknow	Befum Hazrat Mahal of Avadh	Colin Campbell	Escaped to Nepal
Kanput	Nana Saheb, Tantia Tope, Azimullah	Colin Campbell, Henry Havelock, Henry Lawrence	Nana Saheb escaped to Nepal, Tantia tope was hanged, Azimullah died of illness.
Jhansi	Lakshmibai	Hugh Rose	Died in battlefield.
Arrah	Kunwar Singh	William Tyler and Eyre	died of wound sustained in the fight

Pre-Congress Nationalist Organisations

Organisation	Founder (S)	Year	Place
Landholder's Society	Dwarkanath Tagore	1830	Calcutta
Bangabhasha Prakasika Sabha	—	1836	Calcutta
Zamindari Association	Landholder's Society	1837	Calcutta
Poona Sarvajani Sabha	Justice Ranade and others	1870s	Poona
British India Society	William Adam	1839	London
Bengal British India Society	—	1843	Calcutta
British India Association (Result of the merger of first two organisations)	Devendranath Tagore	1851	Calcutta
Madras Native Association	—	1852	Madras
Bombay Association	Jagannath Shankeshet	1852	Bombay
East India Association	Dadabhai Naroji	1866	London
National Indian Association	Mary Carpenter	1867	London
Poona Sarvajani Sabha	Justice Ranade and others	1870	Poona
Indian society	Ananda mohan Bose	1872	London
India League	Babu Sisir Kumar Ghosh	1875	Calcutta
Indian Association	Anandamohan Bose and S.N. Banerji	1876	Calcutta
Madras Mahajan Sabha	G.S Aiyer, M Viraraghavachari, Anandacharlu, P Rangayya Naidu	1884	Madras
Bombay Presidency Association	Pherozechah Mehta K T Telang ,	1885	Bombay
	Braduddin Tyabji etc		

Leaders of the Swadeshi movement beyond Bengal

Punjab Delhi Madras Maharashtra Andhra	Lala Lajpat Rai and Ajit Singh Syed Haider Raza Chidambaram Pillai Lokmanya Bal Gangadhar Tilak Harisarvottam Rao
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Year	Residents	Venue
1885	W.C. Bannerjee	Bombay
1886	Dadabhai Naoroji	Calcutta
1887	Badruddin Tyabji	Madras
1888	George Yule	Allahabad
1889	Sir William Wedderburn	Bombay
1890	Pherozshah Mehta	Calcutta
1891	P. Ananda Charlu	Nagpur
1892	W.C. Bannerjee	Allahabad
1893	Dadabhai Naoroji	Lahore
1894	Alfred Webb	Madras
1895	S.N. Banerjea	Poona
1896	Rahimtulla M Sayani	Calcutta
1897	C. Sankaran nair	Amravati
1898	Ananda Mohan Bose	Madras
1899	R.C Dutt	Lucknow
1900	N.G. Chandavarkar	Lahore
1901	D.E. Wacha	Calcutta
1902	Hasan Imam, S.N Bonerjea	Bombay, Ahmedabad
1903	Lal Mohan Ghose	Madras
1904	Sir Henry Cotton	Bombay
1905	G.K Gokhale	Benaras
1906	Dadabhai Naoroji	Calcutta
1907	Dr Rash Behari Ghosh(suspended)	Surat
1908	Dr Rash Behari Ghost	Madras
1909	Pandit Madan Mohan Malviya	Lahore
1910	Sir William Wedderburn	Allahabad
1911	Pandit B.N Dar	Calcutta
1912	R.N. Mudholkar	Bankipore
1913	Nawab Syed Mohammed Bahadur	Karachi
1914	Bhupendra Nath Basu	Madras
1915	Lord Satyendra Prasad Singha	Bombay
1916	Ambica Charan Majumdar	Lucknow
1917	Dr. Annie Besant	Calcutta
1918	Hassan Imam (special session)	—
1918	Pandit Madan Mohan Malviya	Delhi
1919	Motilal Nehru	Amritsar
1920	Lala Lajpat Rai (suspended)	Calcutta Nagpur
	C. Vijayraghavachariar (annual)	
1921	C.R Das (in prison) Hakim Ajmal Khan(acting)	Ahmedabad
1922	Desbhandu Chittaranjan Das	Gaya
1923	Maulana Abul Kalam Azad (suspended)	Kakinada
	Muaulana Mohammad Ali(annual)	
1924	Mahatma Ghandi	Belgaum
1925	Mrs Sarojini naida	Cawnpore

1926	S. Srinivasa Iyengar	Guwahati
1927	Dr. M A Ansari	Madras
1928	Pandit Motilal Nehru	Calcutta
1929	Jawaharlal Nehru	Lahore
1930	(no session) but Independence Day Pledge was adopted on 26th January 1930.	—
1931	Sardar Vallabhabhai Patel	Karachi
1932	R. Amritlal (session was banned)	—
1933	Mrs. J. M Sen Gupta (session was banned)	Calcutta
1934	Dr Rajendra Prasad (continued again for 1935)	Bombay
1936	Jawaharlal Nehru	Lucknow
1937	Jawaharlal Nehru	Faizpur
1938	S.C Bose	Haripur
1939	S.C Bose (re-elected for 1939)	Tripuri
1940	Maulana Abul Kalam Azad	Ramgarh
1941-45	(No session caused by arrest and Jailing)	—
1946	Acharya J. B kripalani	Merrut
1948	B. Pattabhi Sitamayya	Jaipur

- The Ghadar Movement :** It was in America that the Ghadar Movement have taken its birth on November 1, 1913 when Lala Hardayal had set up the Ghadar Party at San Francisco. Sohan Bhakhna was the first President of this party. Lala Hardayal himself was elected as its General Secretary and Kashiram as its treasurer. A paper by the name of Ghadar was also brought out. Ghadar used to be sent to many countries to spread the muscles of a revolution.
- Komagatu Maru Incident :** One Baba Gurdit Singh, a public-spirited Sikh, who had settled in Singapore chartered a Japanese ship Komagata Maru for Vancouver along with some Sikhs. It sailed from Hong Kong on Travel four, 1914. After it reached Vancouver, the Canadian authorities refused permission to the ship to land and the ship returned to Budge, Calcutta on 27 September, 1914. The inmates of the ship and many Indians believed that the British government has inspired the Canadian authorities. The Government of India ordered all the passengers to be carried directly by train to Punjab. The inmates however refused to board the Punjab bound crime. In this battle 22 persons died.
- Home Rule Movement:** In 1916, two Home Rule Movements were launched in the country: one under the leadership of Bal Gangadhar Tilak and the other under Annie Besant.
- Tilak's Rule League :** Tilak setup the Home Rule League at the Bombay Provincial conference held at Belgaum in April 1916. The Tilak's League who was to work in Maharashtra (including Bombay city), Karnataka, the central Provinces and Berar. Tilak's League was organised into six branches.
- As soon as the Tilak's movement for Home Rule began to gather momentum, the government hit back. On July 8 23, 1916, Tilak's 60th birthday, government sent a notice to Tilak asking him to show cause why he should not be bonded over for good behaviour. Tilak moved the High Court against the notice and was defended by a team of lawyers led by Mohammad Ali Jinnah. Tilak won the case.
- In September 1916, Besant announced the formation of Home Rule League, with George Arundale, her Theosophical follower, as the organising secretary. Jamnadas Dwarkadas, Shankarlal Banker, Indulal Yagnik, George Arundale, L.P. Ramaswamy Lyer were among the prominent members of Besant's League.

Importance Of The Year 1919

- The year 1919 constitutes an important landmark in the history of British India.
- The Rowlatt Bills and the reign of terror in Punjab culminated in Jallianwala Bagh Massacre.
- The emergence of M. K. Gandhi- Development Pan-Islamism as a force of Indian politics.
- The passing of Government of India Act, 1919 on the basis of Montagu-Chelmsford Report.
- Gandhiji experimented the weapon Satyagraha for the first time in South Africa in September 1906 to protest against the Asiatic Ordinance issued against the Indians in Transval.

- Gandhiji's first imprisonment was in 1908 at Johannesburg in South Africa.
- Champaran Satyagraha: Gandhiji's first great experiment in Satyagraha came in 1917, in Champaran, in Bihar. Accompanied by Babu Rajendra Prasad, Mazharul-Huq, J.B. Kripalani, and Mahadev Desai Gandhiji reached Champaran in 1917 For conducting a detailed enquiry into the condition of the peasantry.
- Ahmedabad Mill Strike : Ambalal Sarabhai's sister, Anasuya Behn, was one of the main lieutenants of Gandhiji in this struggle in which her brother and Gandhiji's friend was one of the main advisories.
- Kheda Satyagraha: In 1918, Gandhiji organised Satyagraha and asked the cultivators not to pay land revenue till their demand for remission was met. Sardar Vallabhbhai Patel was one of the many young persons who became Gandhiji's follower during the Kheda peasant struggle.
- Rowlatt Satyagraha: In March 1919, the government passed the Rowlatt Act even though every single Indian member of the Central Legislature Council opposed it. This act authorised the government to imprison a person without trial and conviction Endicott of law. Gandhiji suggested that a Satyagraha to be launched against the Rowlatt Act. A Satyagraha Sabha was formed in 1919 in Mumbai.
- Jallianwala Bagh Tragedy: In protest to the Rowlatt Act, Amritsar observed hartal peacefully both on 30th March and sixth of April 1919. The government decided to made the popular protest with repression. On April 10, 1919, Dr Satyapala and Dr Kitchlew, two popular leader of the province, were deported from Amritsar. The public meeting was announced for 13 April, 1919 at 4:30 PM in Jallinwalla Bagh. Without giving any warning to the people to

disperse, Gen Dyer ordered the troops to fire. Officially 379 people were killed. The Government pointed a Committee of Enquiry (consisting of four British entry Indian members) under the chairmanship of Lord Hunter to enquire into the Jaliahwalabagh.

- Khilafat Movement: The Muslims like the Ali brothers, Muhammad Ali Hasrat Mohani and Shaukat Ali and Maulana, Abul Kalam Azad had organised a Khilafatparty. October 17, 1919 was observed asKhilafat Day. Gandhiji was elected President of the All-India Khilafat Conference which met at Delhi on November 23, 1919.

Significance Of The Non-Corporation Movement

- The Non-Corporation Movement was of great historical importance because.
- It converted the National Movement into a mass movement.
- It used unique methods hitherto unparalleled in the annals of history:
- It cut across religious and caste lines and bound the nation in a common bond.
- It further strengthened the Hindu-Muslim unity.
- The Indian masses displayed immense courage and spirit of sacrifice.
- It gave political training to thousands of people who in later movements came to the forefront

C.R. Das and Motilal Nehru resigned from congress

- On 31 December, 1922 and founded the Swaraj Party on 1st January 1923.
- The Simon Commission paid two visits to India (Feb.- March 1928 and Oct. 1928 - April 1929); published its report on May 27, 1930 .
- Lala Lajpat Rai was severely wounded in a police lathi charge and died while protesting against the Commission.

To avenge the death of Lala Lajpat Rai, Bhagat Singh shot dead General Saunders.

- On Feb. 12, 1928 Gandhiji had decided to resume. Satyagraha' in Bardoli which was abandoned after Chauri - Chaura Massacre, this Satyagraha was led by Vallabai Patel and Abbas Tyabji. Vallabhai Patel was honoured with the popular title "Sardar".
- Some major recommendation of the Nehru Report were (a) Dominion Status to India. (b) Freedom of consciousness, Professing and practice of one's religion. (c) the lower houses in the centre and provincial legislature consists of members elected by joint mixed electorates with reservation of seats to the Muslims (d) adult universal suffrage and (e) Fundamental Rights.
- He started his Salt Satyagraha or the Dandi March on the morning of 12 March 1930 with a band of 78 volunteers.
- It was 385km (240 miles) Journey from Sabarmati Ashram at Ahmedabad to Dandi on the West Coast. On April 5, at 6 in the morning Gandhiji and his volunteers picked up Salt lying on the sea-shore. (Sarojini Naidu, at this hailed Gandhiji as "Law breaker")
- The Communal Award was announced on August 16, 1932 by British Prime Minister Ramsay MacDonald.
- The Poona Pact was signed on 25 September 1932 at Bombay. By this the separate electorate for depressed classes was abolished. Provincial Autonomy was established on April 1, 1937. Burma was separated from India in 1937 and made it a Cram Colony.
- The Lahore Session of the Muslim League adopted the PAKISTAN (Pakistan) Resolution on March 23. P- Punjab, A-Afghanistan, K-Kashmir, S-Sind, TAN- Baluchistan.

The League demanded the partition of India through a Resolution. Gandhiji called the Cripps Mission (1942) "a postdated Cheque of a drowning bank". On 8th August the govt. charged that the congress was preparing for unlawful, dangerous and violent activities. On 9th August, the Police arrested Gandhiji, Kasturba, Sarojini Naidu etc; from the Birla House, Bombay and was taken to Agakhan Palace at Poona. In Bombay Congress Radio broadcasts were made by Usha

Mehta and friends for few months. In Satara a parallel govt. was setup by Nana Patil. In Tamluk, a national Govt. was installed.

- The idea of Indian National Army was first conceived by Mohan Singh at Malaya, an officer in British Indian Army. Subash Chandra Bose set up two INA headquarters at Rangoon and Singapore. C. Rajagopalachari evolved, in 1944, a formula called the CR Formula to end the struggle between the Congress and Muslim League. n Lord Wavell

(1943-47): Wavell Plan, Shimla conference Congress represented by Maulana Azad, RIN Mutiny (1946), Interim Government was formed (September 2, 1946), Prime Minister of Britain Clement Atlee announced to give independence to India by July 1948., Cabinet Mission 1946., 16th August 1946, Muslim League begins 'Direct Action day

- Lord Mountbatten (1947-48): His plan to make India free on August 15 1947 is also known as June 3rd Plan.



- Usually **candles** are made from a mixture of paraffin wax or some other slow-burning substance like tallow (**stearic acid**).
- **Soaps** are sodium or potassium salts of long chain organic acids (called fatty acids) like stearic acid and palmitic acid.
- Sodium or potassium salts of these sulphonic acids are known as detergents. Detergents can be manufactured in solid form (for washing powders) or in liquid form (for shampoos and liquid soaps).
- The head of **matchstick** consists of a mixture of **potassium chlorate and antimony trisulphide** bound together by glue. The striking surface on the matchbox is a mixture of red phosphorus and powdered glass held by glue.
- The basic raw materials needed for making **glass** are: Washing soda which is sodium carbonate, Limestone which is calcium carbonate, Sand which is silica. **Soda-lime glass** or soft glass: It is used for manufacture of bottles ordinary crockery, ordinary laboratory glass apparatus like soda glass test tubes etc. **Hard glass**: If instead of sodium carbonate, potassium carbonate is used for making glass another variety of glass known as hard glass is produced. It can withstand very high temperatures. It is used for making hard glass laboratory apparatus like hard glass test tubes, beakers, conical flasks etc. **Coloured glass**: It is made by adding small quantities of oxides of different metals to basic ingredients. Blue glass contains traces of cobalt or copper oxide, green glass contains chromium ferrous oxide, red glass contains selenium oxide. **Fibre glass**: It is produced by passing molten glass through rotating spinners when it gets converted into fine threads. It is used as an insulating material for heat, electricity and sound in different equipment like electric ovens, geysers, refrigerators, etc. It is also used for reinforcing plastics and rubber to make bodies of cars and scooters and safety helmets. **Flint or optical glass**: It is used for making lenses, prisms, spectacles, etc. because of its excellent optical properties. It is composed of alkalis, lead oxide and silica. It is also known as **flint glass**. A superior variety of optical glasses is made by adding cerium oxide. It cuts harmful ultra violet rays that are harmful to eyes. It is known as **Crooke's glass**. **Borosilicate glass /Pyrex.:** It is sodium aluminium borosilicate. It can withstand rapid heating and cooling without breaking. It is used for making kitchenware and laboratory apparatus. It is sold under the trade names Borosil and Pyrex.
- **Balloons are filled with ? helium**
- **The gas used to extinguish fire, is?** carbon dioxide
- **Gobar gas contains mainly?** methane
- **Which of the following is used in beauty parlours for hair setting?** Sulphur
- **"Metal used to make wires for safety fuses must have"? high resistivity and low melting point**
- **"Which one among the following polymers is used to make personal armour such as combat helmets, ballistic face masks, and ballistic vests?"** Kevlar
- **"The pungent smell of garlic is due to"?** a sulphur compound
- **"The light emitted by firefly is due to"?** burning of phosphorus
- **Which one among the following metals is used in fireworks to make a brilliant white light?** Magnesium
- **A polymer which is used for making ropes and carpet fibres is?** polypropylene
- **Which one among the following salts causes hardness to the water?.** Calcium bicarbonate
- **Why is the meat preserved in the brine solution is not spoil as quickly as fresh meat?** The bacteria will fall victim to osmosis and shrivel up and die
- **Phenol is used for the manufacture of bakelite?** Reason (R) Bakelite is heat resistant thermosetting plastic used for making electric switches and switch board.
- **"Which one of the following is used as a mordant in dyeing and tanning industry?"** Magnesium sulphate
- **Which one of the following is the reason for keeping the chloroform in brown-tinted glass containers?** With UV-rays and O₂, it forms poisonous gas phosgene
- **The flavour of apple is mainly due to which one of the following?** Ethanol
- **KO₂ (Potassium superoxide) is used in oxygen cylinders in space and submarines because it?**

- absorbs CO₂
- **Which one among the following is the chief compound used in Pepper spray, a riot control agent?**
Capsaicin
- **Which one among the following polymers is re-synthesised from the naturally occurring polymer?**
Rayon
- **Which one of the following chemical compounds is responsible for the stimulation of tear glands by the onion?**
A sulphide compound
- **“Many communities put salt on their roads after a snowfall, Why?”**
- To keep the melted snow from refreezing
- **Why hard water does not give lather with soap?** “pH of hard water is less
- **A pale blue gas with a fish-like odour restores the colour of a blackened lead painting. The gas is also used as rocket fuel. It is?**
Ammonia
- **The rusting of iron nail?**
increases its weight
- **Which one of the following pollutants contains in water due to modern agricultural practices lead to ‘methemoglobinemia’ when combines with our blood haemoglobin?**
Nitrates
- The common refrigerents are Ammonia and Freon.
- Non stick kitchen vessels are coated with Teflon.
- Teflon is chemically Tetra fluoroethylene
- Photographic films are coated with Silver Bromide.
- Artificial rain is done by using Silver Iodide.
- Phosphine has the smell of rotten fish.
- Hydrogen sulphide gas has the smell of rotten egg.
- Bleaching Powder is chemically calcium chloride hypochlorite
- Egg shell, Marble, Limestone etc contain Calcium Carbonate.
- Coral reefs are made of calcium carbonate.
- Green house effect is created by Carbon dioxide, methane, water vapour etc.
- Dry ice is solid Carbon dioxide.
- Zinc Phosphide and Arsenic sulphide are used as Rat poison (rodenticide)
- Laughing gas is Nitrous Oxide. Benzyl chloride is used as tear gas.
- Sodium peroxide is used as air purifier in Submarines.
- Tin Amalgam (Sn + Hg) is used to coat on mirror.
- Paper is chemically cellulose.
- The most abundant carbohydrate (organic compound) present in nature is cellulose.
- Cellulose is not absorbed by human body, due to the absence of cellulase in body.
- Rust is chemically hydrated ferric oxide.
- Freezing mixture contains calcium chloride and sodium chloride.
- The gas responsible for Bhopal gas tragedy was methyl isocyanate (MIC).
- Fluorosis is due to the excess intake of Fluoride salts along with drinking water.
- Copper oxy chloride is used as fungicide in pepper plants.
- Silver iodide is used to make artificial rain
- Acid rain is caused by the pollution of environment due to nitrogen oxide and sulphur dioxide.
- Aluminium is used to make CDs.
- Aspirin is called **Wonder Drug**.
- Aspirin is chemically Acetyl Salicylic Acid.
- Ordinary Portland Cement (OPC) contains the major component Calcium oxide (Lime)
- White paints are made by using Titanium dioxide.
- The whitest compound ever known is Titanium dioxide.
- Titanium is referred as **wonder metal**. Titanium is used to make Air Crafts.
- Nitrous oxide is used as an anaesthetic
- Tranquilizers are chemicals used as medicine for mental disorders.
- Barbituric Acid and its salts are used as Tranquilizers.
- Sodium compound used in respiratory equipments and submarine is sodium peroxide.
- Sweetest sugar is Fructose (present in Fruits).
- Honey contains Glucose and Fructose
- Rocket propellant contains fuel and oxidiser.
- Rocket fuel is liquid Hydrogen. (LHG)
- Fuel of the future is Hydrogen.
- The element which is used to coat the photocopying drum of Xerox is selenium.
- Silicon, Germanium etc used in the manufacture of transistors and IC chips due to their semi conductivity.
- Water gas a mixture of Carbon monoxide and Hydrogen is used as Industrial fuel.
- Producer gas a mixture of Carbon monoxide and Nitrogen is used as ‘Industrial Fuel’.
- Coke is the refined form of coal (contains the element carbon)
- Bathing salt is sodium carbonate used to reduce the hardness of water.
- Baking Powder is mixture of sodium bicarbonate and Tartaric Acid salt.
- Hydrogen sulphide is a gas with the smell of rotten egg.
- Coral reefs are made of calcium carbonate.
- Impure sodium carbonate obtained in the industrial process is called black ash.

- Flint glass contains lead chromate.
- Lead chromate is used as pigments called chrome yellow.
- Rising of dough in the process of manufacture of bread is through the action of carbon dioxide.
- The gas responsible for green house effect is carbon dioxide.
- Ferr omagneti c powder i s coated in tape recorders.
- Dry ice is solid carbon dioxide.
- Carbon dioxide is used in fire extinguishers.
- Cryolite is a double fluoride of aluminium and sodium.
- Silver halides are used in photographic plates because they are readily reduced by light.
- Rat poison is zinc phosphide.
- The aluminium compound used in fire extinguishers is alum.
- Calcium compound used in freezing mixture is calcium chloride.
- The chemical used as a 'fixer' in photography is sodium thiosulphate.
- Liquid sodium is employed as a coolant in nuclear reactors.
- Diffusion of light in the atmosphere takes place due to water vapour.
- Ferrous sulphate crystals are known as 'Green vitriol'.
- The main constituents of pearl are calcium carbonate and magnesium carbonate.
- The metal which regulates Blood Pressure in human beings is sodium.
- The metal related to arthritis is Potassium.
- The metal present in Insulin is zinc.
- Zinc is concentrated on the eyes of human beings.
- The most common halide by weight in ear th's cr ust is Fluoride.
- Liquid metals at room temperature are Mercury, Gallium, Caesium, Francium.
- Liquid non-metal at roomtemperature is Bromine.
- The non-metal, which shows electric conductivity Graphite (Carbon)
- The natural element having highest atomic weight is Uranium.
- The el ement with highest mel t i ng point i s Car bon (diamond) (4000K)
- The metal with highest melting point is **Tungsten**. (3868K)
- The most harmful metal to human beings is Lead.
- Lead has poorest electrical conduct i v i t y, si l v e r has highest electrical and thermal conductivity.
- The l i g h t e s t and simplest element (gas) - hydrogen.
- Metals kept under kerosene ar e Sod i u m, Pot assi u m, Caesium etc.
- Iodine is also kept under kerosene.
- The l i g h t e s t metal element lithium
- The heaviest gaseous element - radon
- The heavi est (densest) element - osmium
- Most stable element - Lead
- Lithium is kept by covering with paraffin wax.

Metal	Ore
1. Aluminium	Bauxite
2. Iron	Haematite, Magnetite, Iron pyrites
3. Copper	Copper pyrites, copper glance, malachite
4. Zinc	Zinc blend, calamine
5. Uranium	Pitch blend, Carnotite
6. Thorium	Monozite
7. Lead	Galena, Litharge, Cerussite
8. Magnesium	Magnesite
9. Sodium	Rock salt (Halite)
10. Antimony	Stibnite
11. Manganese	Pyrolusite
12. Chromium	Chromite
13. Nickel	Garnierite, pentlandite
14. Titanium	Rutile
15. Silver	Argentite, Pyrargyrite, Stephanite, Born silver
16. Mercury	Cinnabar
17. Lithium	Petalite, Lepidolite
18. Potassium	Carnallite, Sylvine kainite
19. Calcium	Gypsum, Limestone, Dolomite, Fluorspar
20. Barium	Barite
21. Zinc	Zincite, Sphalerite
22. Tin	Cassiterite

- The hardest metal is *chromium*.
- Heaviest metal occuring in nature iss *uranium*.
- The fir st known super conductor is *mercury*.
- Metals like gold and copper are mostly found in old igneous rocks.
- The metal whi ch is least affected by the exposure to the atmosphere is *tin*.
- Radium is used in the dials of clocks.
- Cobalt is useful in making rust resistant alloys.
- 'King of metal' is *gold*.
- Silver, platinum and gold are known as noble metals.
- Platinum metal occurs in its pure form in earth's crust.
- Mercury flows so easily and rapidly

that it is sometimes called quick silver.

- Metal present in the bath soap is potassium.
- Metals usually combine with oxygen to form basic oxides.
- The first metal to be used by man is *copper*.
- Some metals react with water. Sodium reacts violently even with cold water for forming sodium hydroxide and hydrogen. Gold does not react even with steam.

- Some metals react with acid and replace the hydrogen atom in their molecules. Gold, Copper and silver are unaffected with hydrochloric acid.
- Wrought iron is the purest type of iron that contains least amount of carbon.
- When iron rusts, its weight increases.
- Aluminium is the most abundant Metal in the earth's crust.
- Extraction of metals from their ores

and refining them for use is called metallurgy.

- Titanium is the metal of future.
- Sparkling and colour after the blast of fire cracker is due to the presence of strontium.
- Iron coated with zinc is called galvanised iron and with tin is called tin-plate.
- Element extracted from monozite sand is thorium.
- White phosphorous is a strong poison.

	Alloys	Constituent Metals Uses
1.	Steel	Iron (Fe), Carbon (C) Construction of ships, tanks, railway lines, bridges and machinery.
2.	Aluminium	Bronze Aluminium (Al), Copper (Cu) To make coins, statues.
3.	Invar Iron	(Fe), Nickel (Ni) To make clock pendulum.
4.	Bronze	Copper (Cu) Tin (Sn) Statues, Ornaments, coins, cooking utensils, (Bell metal) bells and medals.
5.	Alnico	Aluminium (Al), Nickel (Ni), To make magnets Cobalt (CO), Iron (Fe)
6.	Nichrome	Nickel (Ni), Chromium (Cr), To make heating elements Iron (Fe)
7.	Manganese	Iron (Fe), To make rock driller, plates, Steel Manganese (Mn) rails, protecting shields etc.
8.	Constantan	Copper (Cu), Nickel (Ni) To make electrical instruments.
9.	Brass Copper	(Cu), Zinc (Zn) Utensils, parts of machinery, wires, musical instruments, Ornamental objects.
10.	Duralumin	Aluminium (Al), Copper (Cu), aircraft parts Magnesium (Mg), Manganese (Mn)
11.	Magnesium	Aluminium (Al), Magnesium (Mg) external parts of trolley, steamer etc.
12.	Phosphor	Copper (Cu), Tin (Sn), Springs and suspension Bronze Phosphorous (P) filament in electrical instruments.
13.	Silumin	Aluminium (Al), Silicon (Si) engine parts
14.	Type metal	Copper (Cu), Lead (Pb), To make types in printing Tin (Sn), Antimony (Sb)
18.	Chrome Steel	Iron (Fe), Springs, Chromium (Cr) tools etc
19.	Gun metal	Copper (Cu), Zinc (Zn) Tin (Sn) barrels of gun
20.	Nickel	steel Iron (Fe), Nickel (Ni) drills crankshaft bearings
21.	German	Copper (Cu), Utensils, resistance wire etc
22.	Stainless	Iron (Fe), Cooking utensils Steel Chromium (Cr), Nickel (Ni) Cutlery, surgical instruments.
23.	Solder	Lead (Pb), Tin (Sn) Electrical connections

- The major acid present in grapes is **Tartaric Acid**.
- Oil of vitriol is sulphuric acid.
- The acid present in vinegar is **acetic acid**.
- Oranges and lemons contain **citric acid**.
- Curd contains **lactic acid**.
- Old name of hydrochloric acid (HCl): **muratic acid**.
- Tamarind contains **tartaric acid**.
- Tea contains **tannic acid**.
- Urine contains **uric acid**.
- Ants contain **formic acid** in their body.
- Sulphuric acid is called the '**King of Chemicals**.'
- Sulphuric acid is mainly manufactured by *contact process*.
- The chemical name of aspirin is **acetylsalicylic acid**.
- The acid used in lead storage batteries is *sulphuric acid*.
- Earliest known acid is **acetic acid**.
- To purify gold, it should be treated with concentrated nitric acid.
- The acid that can be used as a hypnotic is **barbituric acid**
- Vitamin C is chemically ascorbic acid

- Dilute phenol is called Carbollic Acid.
- Weakest (inorganic) acid is **Hydrocyanic Acid**.
- The acid functions as digesting agent in our body is hydrochloric acid.
- The acid which fumigates when exposed to air is **nitric acid**.
- Apple contains ascorbic acid and malic acid.
- Pure milk contains no acid but sour milk contains lactic acid.
- Boric acid is a mild antiseptic, used as a eye-lotion
- Cola contains phosphoric acid.
- Ordinary soda water is chemically Carbonic Acid.
- Sulphuric acid is used in the manufacture of dynamite (explosive).
- The acid used in tanning and printing industry is hydrochloric acid.
- Old name of nitric acid is Aquafortis.
- The acid which fumes in air is nitric acid.
- Benzoic acid is used for food preservation.
- Gastric juice contains hydrochloric acid
- Potassium hydroxide is used in alkaline batteries, sodium hydroxide in the manufacture of soap, calcium hydroxide in softening of hard water.
- **Nylon**: Nylon is a polymer of small monomeric units called amide (-CO-NH-) i.e. it is a polyamide. It is prepared by reaction of adipic acid and hexamethylenediamine. **Terylene** is crease resistant, durable and is not damaged by insects like moths and by mildew (fungi that form a white growth on plants and materials like cloth and paper).
- **Polysters**: Polyesters are another category of polymers. One important member of this family is dacron which is also known as terylene. It

is prepared by reaction between terephthalic acid and ethylene glycol. It is crease resistant, durable and is not damaged by insects like moths and mildew. Therefore, it is suitable for making garments because they can be set into permanent creases and pleats. It has also been used to repair or replace segments of blood vessels. In the form of thin sheets it is used for manufacture of **adhesive tapes and recording tapes**.

- **Antacids**: Antacids are used to treat acidity in stomach. Digene, ranitidine and omeprazole are some examples of antacids.
- **Antipyretics** are the medicines which are used to bring down body temperature in high fever. Common examples are aspirin, paracetamol, analgin and phenacetin.
- **Antibiotics**
Antibiotics are medicines which are used to kill bacteria, fungi and moulds. The first antibiotic discovered was penicillin which is very effective for pneumonia, bronchitis, sore throat, etc. Ampicillin is a slight modification of penicillin. It has wider applications. Other commonly used antibiotics are streptomycin, tetracycline and chloramphenicol.
- **Analgesics**
- Analgesics are used for relieving pain. Aspirin, paracetamol, morphine are some examples of analgesics. They must be used only under medical supervision.
- **Anaesthetics**
Anaesthetics are drugs which produce a loss of sensation and consciousness. **General anaesthetics** result in loss of sensation and consciousness in the entire body. Examples are divinyl ethers, cyclopropane, etc. They are used during major surgical operations. Some anaesthetics like Novocain and Xylocaine which show their effect in a limited area are called **local**

anaesthetics. They are used during small surgical operations and tooth extraction.

- **Polythene** is a soft plastic, which softens on heating. It is used for making **bottles, buckets**, and pipes, as **covering for electrical wires** and cables and as film for making bags.
- **Polyvinyl chloride (PVC)** is used for making **rain coats**, handbags, toys including dolls, **electrical goods** and as a covering of electrical wires.
- **Bakelite (Phenol-formaldehyde resin)** is hard and quite a strong material. It is used for making combs, **electrical switches, and plugs** and for making handles of many **kitchen utensils** and electrical appliances like pans, pressure cookers, electric irons, kettles, and toasters.
- **Synthetic rubber** is made from the monomer **butadiene**. It has particularly good resistance to wear and tear, which makes it especially useful for making tyres. Some Other types of synthetic rubbers are also made by mixing other monomers like **styrene and chloroprene** (commonly known as **neoprene**) with butadiene.
- **Natural rubber** is chemically poly-cis-isoprene which is formed from the monomer **isoprene**. It comes from the sap of the Para rubber tree, Hevea brasiliensis.
- Rubber is made **elastic** by heating it with a small amount (1 to 3%) of **sulphur**. This process is known as **vulcanization**. **Carbon black** is added to make it stronger, flexible and more resistant to wear and tear. For making **car tyres**, 2 parts of rubber are mixed with 1 part carbon black. If flexibility is not important fillers, such as **clay or chalk**, are added to make rubber hard and stiff. Rubber for **floor tiles and mats** contains fillers of this type.
- Copper + Zinc = Brass
Copper + Lead = Bronze
Copper + Gold = Rolled Gold

• **Classification of Animals:**

Platozoa	–	Single species identified as Trichoplax adherens.
Porifera	–	Sponges
Coelenterata (cnidaria)	–	Coral, hydra, jellyfish, Portuguese man-of-war, sea anemone
Platyhelminthes	–	Flatworms, flukes, tapeworms
Nematoda or Aschelminthes	–	Ascarids, vinegar eels, cyst nematodes, Pinworms, roundworms hookworms
Annelida	–	Lugworms, earthworms, leeches
Arthropoda	–	Crustaceans: prawn, shrimp ,Insects: butterfly, housefly, mosquito, cockroach Arachnids: Scorpion, wolf spider, King Crab Myriapods: Centipede, Millipede
Mollusca	–	Chitons, oysters, snails, clams, squid
Echinodermata	–	Star fish, brittle stars, sea urchins, sand dollars, sea cucumbers

20. Types of Vertebrates

Jawless fishes (Agnatha)	–	Hagfish, Lamprey
Cartilaginous fishes	–	Sharks
Bony fishes	–	Sturgeon, herring,
Amphibians	–	Frogs and Toads, salamanders
Reptiles	–	Snakes, crocodiles, alligators, lizards, turtles, tortoises
Aves	–	Penguin , flamingo, eagle, parrot
Mammals	–	Platypus, Kangaroo, Bat, Lion, Mouse, Seal, antelope, dolphin, whale , monkey, human

• **Possible Combinations of Blood Groups:**

Male	Female	Blood group of Children not possible
A	A	B & AB
A	B	-
A	AB	O
A	O	B or AB
B	B	A, AB
B	AB	O
B	O	A, AB
AB	AB	O
AB	O	O, AB
O	O	A, B, AB

• **Elements/Compounds & Their Uses:**

Potassium Dichromate	:	Used in breath analyzer for detecting alcohol . Safe limit is < .1 %.
Xenon	:	High speed photographic tubes. Electric valves & t.v. tubes
Krypton	:	Incandescent bulb. Airfield lights because of characteristic red colour.
Lithium	:	Deoxidizer and to remove unwanted gases during the manufacture of metals.
Beryllium	:	X-ray (transparent) window. Moderator in nuclear reactions around the core.
Neon	:	Neon lights. Cryogenics
Hopsalite	:	Mixture of oxides of manganese, cobalt, copper & silver – Anti pollution
Ammonia	:	Refrigerant, fertilizers

Yttrium	:	Used in TVs to produce red colour
Bismuth	:	Joined with iron to make it malleable
Sodium	:	Street lamp
Gadolinium	:	CDs. Aluminium is sometimes used to coat the disc.
Cesium	:	Atomic clocks
Tellurium	:	Tint glass (one way visibility used in cars).
Technetium	:	Superconductor at -262 degree Celsius.
Paraformaldehyde	:	Common disinfectant & contraceptives

- **Types of Colloidal Systems :**
- **Solid Sol**-Some Coloured Glasses
- **Sol**-Muddy water
- **Gel**-Cheese, Butter, jellies
- **Emulsion**-Milk, Hair Cream
- **Solid Foam**-Pumice stone, foam rubber
- **Foam**-Froth, whipped cream
- **Ninhydrin, silver nitrate & fuming iodine are all used in fingerprinting.**
- **Carbon tetrachloride is used in fire extinguishers.**
- **Standard Units:**

Viscosity	—	Pascal Second
Power	—	Diopetre
Luminous intensity	—	Candela
Inductance	—	Henry
Loudness	—	Phon
Magnetic Inductance	—	Tesla
Magnetic Flux	—	Weber
Electric Charge	—	Farad, Coulomb

- **Select Measuring Instruments**

Magnetron	Produces microwave. Used in ovens.
Actinometer	Used to measure intensity of electromagnetic radiation
Altimeter	Aneroid barometer for measuring altitude.
Bolometer	For measuring heat radiation
Dasymeter	Measuring density of gas
Galvanometer	Used for detecting small electric currents.
Gyroscope	Determine orientation in aircraft, ships etc.
Katharometer	Measuring thermal conductivity
Manometer	Measuring the pressure of a gas.
Nethoscope	Determining the speed of celestial bodies.
Rectifier	Converts AC into DC.
Tonometer	Measures pitch of sound
Venturimeter	Measures rate of flow of fluids
Udometer	Rain guage.

- **Rainbow is formed by dispersion & total internal reflection .**
- Red + Green = Yellow. Red + Blue = Magenta & Green + Blue = Cyan. Two colours which when mixed give white are known as secondary colours like blue & yellow.
- Hypermetropia is treated by converging lens & myopia by diverging lens.
- An inverter converts DC into AC. In domestic AC supplies 220 V is the effective value. The peak value of voltage is 311 V. The frequency is 50 Hz. A Fuse is made of tin-lead alloy. A fluorescent tube contains mercury vapours at low pressure. Infra red signals are used in TV.
- In fission Uranium (235) splits into Barium (56) & Krypton (36) & ejects 3 neutrons. Graphite or Heavy water is used as moderator. Boron or Cadmium is used as controlling rods.
- One mile = 1.6 km. One nautical mile

= 1.85 km. One gallon = 4.5 litres. 1 mm Hg = 133.3 pascal. One ounce (oz) = 31.1 grams. Parsec = 3.26 light years.

- Isotones are nuclei having same number of neutrons but different number of protons. Isotopes have same number of protons but different neutrons. Isobars are nucleides with the same mass number.

Vitamin Names	Deficiency Diseases
Vitamin A (retinol)	– Xerophthalmia Lachrimal glands stop producing tears leading to blindness.
Thiamine (Vitamin B1)	– Beriberi
Riboflavin (Vitamin B2)	
Niacin (Nicotinamide)	– Pellagra
Cobalamin (Vitamin B12)	– Pernicious or Megaloblastic Anemia
Vitamin C (Ascorbic acid)	– Scurvy
Vitamin D (cholecalciferol)	– Rickets, Osteomalacia
Vitamin E (Tocopherol)	
Vitamin K (Phylloquinone)	
Potassium Deficiency Disease Hypokalemia	– Rise in heart beat rate. Kidney damage.
Sodium Deficiency Disease	– Hyponatremia Low blood pressure.
Proteins Deficiency Disease	– Kwashiorkor Potbelly due to retention of water by the cells (Oedema).

ORGANISATIONS

- CBRI Central Building Research Institute Roorkee (Uttarakhand)
- CCMB Centre for Cellular and Molecular Biology Hyderabad
- CDRI Central Drug Research Institute Lucknow
- CECRI Central Electro Chemical Research Institute Karaikudi (T.N.)
- CEERI Central Electronics Engineering Research Institute Pilani (Raj)
- CFRI Central Fuel Research Institute Dhanbad
- CFTRI Central Food Technological Research Institute Mysore
- CGCRI Central Glass and Ceramic Research Institute Kolkata
- CIMAP Central Institute of Medicinal and Aromatic Plants Lucknow
- CLRI Central Leather Research Institute Chennai
- CMERI Central Mechanical Engineering Research Institute Durgapur (W.B.)
- CMRI Central Mining Research Institute Dhanbad

- CRRI Central Road Research Institute New Delhi
- CSIO Central Scientific Instruments Organization Chandigarh
- CSIR Council of Scientific and Industrial Research New Delhi
- IHBT Institute of Himalayan Bioresource Technology Palampur (H.P.)
- CSMCI Central Salt and Marine Chemicals Research Institute Bhavnagar (Guj.)
- ERDA Electronics Research and Development Association Vadodara
- IICB Indian Institute of Chemical Biology Kolkata
- IICT Indian Institute of Chemical Technology Hyderabad
- IIP Indian Institute of Petroleum Dehradun
- IMT Institute of Microbial Technology Chandigarh
- INSDOC Indian National Scientific Documentation Centre New Delhi
- ITRC Industrial Toxicology Research Centre Lucknow

- NAL National Aerospace Laboratory Bangalore
- NBRI National Botanical Research Institute Lucknow
- NCL National Chemical Laboratory Pune
- NEERI National Environmental Engineering Research Institute Nagpur
- NGRI National Geophysical Research Institute Hyderabad
- NIO National Institute of Oceanography and Development Studies Panaji, Goa
- NISTADS National Institute of Science, Technology and New Delhi

Development Studies

- NML National Metallurgical Laboratory Jamshedpur
- NPL National Physical Laboratory New Delhi
- PID Publication and Information Directorate Delhi
- RRL Regional Research Laboratory Bhopal, Jorhat,

TES Tocklai Experimental Station

- SERC Structural Engineering Research Centre Chennai Thiruvananthapuram, Jammu, Bhubaneswar
- Vivek Darpan** : Project Vivek Darpan (PVD) is designed to demonstrate and propagate the use of the audio visual media as a more cost effective

method for dissemination of socioeconomic information/ knowledge in rural areas as compared to traditional methods/ media.

World's TOP 10 Supercomputers

- Tianhe-2 (MilkyWay-2)
- Titan
- Sequoia

- K computer
- Mira
- Stampede
- JUQUEEN
- Vulcan
- SuperMUC
- Tianhe-1A

Technologies	Scientific Principal(s)
Steam engine Nuclear reactor Radio and television Computers Lasers Production of ultra-magnetic fields Rocket propulsion Electric generator Hydroelectric power Aeroplane Particle accelerator Sonar	Laws of thermodynamics Nuclear fission Propagation of electromagnetic waves Distal logic Light amplification by stimulated emission of radiation (population inversion) Superconductivity Newton's law of motion Faraday's Laws of electromagnetic induction Conversion of gravitational potential energy into electric energy Bernoulli's principle in fluid dynamics Motion of charged particles in electromagnetic fields Reflection of ultrasonic waves

Names	Major Contribution/Discoveries	Country of Origin
Isaac Newton	Universal Law of gravitation; Laws of Motion; Reflecting Telescope	U.K
Galileo Galilei	Law of Inertia	Italy
Archimedes	Principle of Buoyancy; Principle of the lever	Greece
James Clerk Maxwell	Electromagnetic theory; Light and electromagnetic wave	U.K.
W.K. Roentgen	X-rays	Germany
Marie Sklodowska Curie	X-rays	Poland
Albert Einstein	Law of Photoelectricity; Theory of relativity	Germany
S.N. Bose	Quantum Statistics	India
James Chadwick	Neutron	U.K.
Niels Bohr	Quantum Model of Hydrogen atom	Denmark
Ernest Rutherford	Nuclear model of atom	Denmark
C. V Raman	Inelastic scattering of light by molecules	India
Christian Huygens	Wave theory of light	Holland
Michael Faraday	Laws of electromagnetic Induction	U.K
Edwin Hubble	Expanding Universe	U.S.A
Homi Jehangir Bhabha	Cascade process in cosmic radiation	India
Abdus Salam	Unification of weak and electromagnetic interactions	Pakistan
R.A. Millikan	Measurement of electronic charge	USA
Ernest Orlando Lawrence	Cyclotron	U.S.A

Wolfgang Pauli	Quantum Exclusion Principles	Austria
Louis victor de Broglie	Wave Nature of matter	France
J.J. Thomson	Electron	UK
S. Chandrasekhar	Chandrasekhar limit, structure and evolution of stars	India
Lev Davidovich Landau	Theory of condensed matter; Liquid Helium	Russia
Heinrich Rudolf Hertz	Electromagnetic waves	Germany
J.C. Bose	Ultra short radio waves	India
Hideki Yukawa	Theory of Nuclear forces	Japan
Werner Heisenberg	Quantum Mechanics; Uncertainty Principles	Germany
Victor Francis Hess	Cosmic Radiation	Austria
M.N. Saha	Thermal Ionization	India
G.N. Ramachandran	Triple Helical Structure of Proteins	India

- **The most slippery substance in the world** — **polytetrafluoroethene** (PTFE, or Teflon)
- Gallium is a metal which melts on palm of the hand, due to its low melting point (29.76 °C).
- Gold and Copper are the only two non-white metals.
- The average speed of sneeze is around 160 km (100 mi) per hour.
- One inch (2.5 cm) of rain is equal to 10 inches (25 cm) of snow.
- Water expands by about 10% as it freezes.
- If you slowly pour a handful of salt into a totally full glass of water it will not overflow. In fact, the water level will go down.
- A bee sting is acidic and a wasp sting is alkali. To treat a sting by one of these you should use the opposite type of chemical.
- The burning sensation we get from chilli peppers is because of a chemical called Capsaicin.
- The lighter was invented before the match (in 1816 by J.W. Dobereiner).
- Copper is the only metal that is naturally antibacterial.
- Osmium is the densest known stable element on Earth.
- The eight 'Noble metals' — ruthenium, rhodium, palladium, silver, osmium, iridium, platinum and gold — do not rust.
- **The element Californium is often called the most expensive substance in the world** (as much as \$68 million for one gram.)
- **Hot water freezes faster than cold water** (the Mpemba effect.)
- **Chalk is made of trillions of microscopic skeleton fossils of plankton** (a tiny sea creature.)
- **Talc is the softest known substance.**
- **An average adult body contains around 250 g (1/2 lb) of salt.**
- **The metal with the highest melting point is tungsten, at 3410 degrees Celsius (6170F).**
- **Air becomes liquid at about minus 190 degrees Celsius.**
- **The lizard Tuatara has a third eye for ultraviolet light** (called a parietal eye.)
- The water animal Hydra never gets old, and can live forever.
- **The Barbados Threadsnake is the smallest snake in the world.**
- **A kangaroo rat** (genus dipodomys) **can spend its entire life without drinking water.**
- Dolphins and whales don't drink water.
- The catfish father keeps the eggs in his mouth until they are ready to be hatched.
- Corneas are the only tissues that don't require blood.
- The lightest organ in the human body is the lung.
- While only 2% in weight, the human brain requires 15% of the body's heart work, 20% of oxygen and 25% of all glucose.
- The adult heart pumps about 7,500 litres of blood every day.
- In seahorses, it's the male who gives birth to the young.
- The human eye blinks an average of 4,200,000 times each year.
- **A fish never closes its eyes.**
- **Bacterial Diseases in Humans**
- Disease Causative Pathogen Mode of Transmission Incubation
- **Septic Sore throat Streptococcus Sp. Bacteria infect throat and nasal membranes by droplets 3-5 days and direct contact.**
- **Diphtheria Irregular rod (Coryne-Bacteria infect respiratory tract by carrier, direct contact, 1-7 days bacterium diphtheriae) droplets and food.**
- **Pneumonia Diplococcus Bacteria transmitted to respiratory tract, including the lungs variable pneumoniae by droplet infection.**
- **Tuberculosis Irregular rod (Mycoba- Bacteria transmitted to lungs, bones and other organs by variable bacterium tuberculosis) direct contact, droplet infection, food and milk.**
- Plague or Bubonic Short rod Rat flea spreads disease from rat to man 2-10 days plague (Yersinia pestis)
- Tetanus or lock-jaw Clostridium

tetani Bacteria in soil, enter through wound 2-40 days

- Typhoid Salmonella typhi Flies, food, faeces, water and carriers 10-14 days
- Cholera Vibrio Cholerae Flies, food, stools, water and carriers 1-2 days
- Whooping cough Bordetella pertussis Droplets projected during coughing and sneezing 7-14 days
- Gonorrhoea (Clap) Diplococcus Sexual intercourse 2-8 days
- Syphilis Treponema pallidum Direct contact, chiefly sexual intercourse 10-90 days
- Leprosy Mycobacterium leprae Long and close contact with infected persons. —
- Botulism Clostridium botulinum Organism produces poison in food 18-66 hrs.

Some Useful Bacteria

Name Use

- Lactobacillus Curding of milk
- Rhizobium and Clostridium Nitrogen fixation in soil
- Streptomyces griseus Streptomycin
- Streptomyces venezullae Chloromycetin
- Streptomyces remosus Terramycin

Viral Diseases in Humans

- Disease Causative Pathogen Mode of Transmission Incubation
- Small Pox Variola virus Direct contact (droplets), indirect by infected articles 12 days
- Chicken Pox Varicella virus Direct contact (droplets), indirect by infected objects 12-16 days

- Common Cold Rhinovirus Contact 2-5 days
- Influenza/Flu Orthomixovirus Contact (droplets), virus transmitted through discharge from respiratory 1-2 days tracts of persons infected with disease
- Measles Measles virus Direct contact, virus transmitted through air by droplets 10-14 days (Paramyxovirus) during talking Coughing and sneezing.
- Mumps Mumps virus Direct contact, virus in saliva & secretion of nose invades salivary glands 12-21 days
- Viral Encephalitis virus Some domestic animals reservoir of virus, transmitted by 4-21 days encephalitis (arbovirus) mosquito bite to man
- Poliomyelitis Poliovirus Contact, houseflies, fleas, food and water 7-14 days
- Rabies Rabies virus Bite of a mad (rabid) dog 2-16 days
- Dengue fever Dengue virus Mosquito (Aedes) bite 4-8 days
- Herpes simplex Herpes virus simplex Contact, Saliva, stools, contaminated articles.
- Herpes Zoster Herpes virus zoster Contact droplets 7-14 days
- Acquired Immuno Human T-cell Leukaemia - Via blood and sperm among homosexuals, heterosexuals, 2 months
- Deficiency Syndrome virus (HTLV-III); intravenous drug users, haemophiliacs, promiscuous to 10 yrs. (AIDS) also called LAV individuals and prostitutes



Some Useful Algae

- Product Secreted by
- Iodine Laminaria (brown algae)
- Agar and Carrageen Red algae
- Alginic Acid Brown algae
- Soil Fertilizer Blue green algae
- Edible forms Volva, porphyra, Chlorella

HUMAN DIGESTIVE ENZYMES & THEIR ACTION

- Parts Digestive juice Enzyme present Enzyme act on Changed into
- Mouth Saliva Ptyalin Starch Dextrin Maltose
- Stomach Gastric Juice (a) Pepsin+HCl Proteins Simpler Polypeptides
- (b) Rennin Milk Curdled into Casein
- (c) Gastric Lipase Fat Fatty acids and Glycerol

Liver Bile juice No enzyme

- Pancreas Pancreatic juice
- (a) Trypsin Simpler Polypeptides Tri, Di & Mono peptides
- (b) Amylase Starch Maltose
- (c) Pancreatic Emulsified fat Fatty acids & Glycerol

Small Succus

- (a) Peptidases Poly, Tri & Amino acids

Intestine entericus Dipeptides

- (b) Invertase Sucrose Glucose & fructose
- (c) Lipase Fat emulsions Fatty acids and glycerol
- (d) Maltase Maltose Glucose
- (e) Lactase Lactose Glucose + Galactose

EQUALITY

MEANING

- Equality, like liberty, is an important pillar of democracy. In common parlance the term equality is used for identity of treatment and identity of rewards. However, this is not a correct use of the term because absolute equality is not possible. Like liberty, equality has also been assigned both negative and positive meaning. In the negative sense, equality means the absence of special privileges. It implies the absence of special privileges. It implies the absence of barriers like birth, wealth, caste, color, creed, etc. In the positive sense, equality means provision of adequate opportunities for all the members of the society. It may be observed that adequate opportunities do not mean equal opportunities. Therefore, equality really means the provision of adequate opportunities to all citizens without any discrimination. Nobody should be debarred from certain facilities simply because of his status, caste, creed, etc. In short, equality implies the following things. First, all persons should be provided with adequate opportunities for the development of the personality. Second, no class or caste or group enjoys special privileges that are not available to other members of the society. Third, there should not be any discrimination among members of society and if there is any discrimination it should be based on reasonable grounds. Fourth, rights are equally distributed among all and all have equal access to opportunities leading to authority.

DIMENSIONS OF EQUALITY

- The concept of equality is dynamic one and has kept on changing according to times. Accordingly different scholars have suggested different dimensions or kinds of equality. Laski mentions only two kinds of equality – political and economic. Lord Bryce refers to four kinds of equality – civil, political, social and natural.
- Civil Equality**
 - Civil equality implies equality of all before law. All citizens irrespective of their status and position should be treated at par and no distinction should be made on the basis of caste, creed, sex, political opinion, social status, place of birth, etc. The laws of the state should be passed for the benefit of all and should not be used as instrument for the promotion of interest of a particular section of population. Equal rights should be available to all the persons and nobody should be denied enjoyment of any right.
 - Political Equality**
 - Political equality means that all the citizens have the right to participate in the affairs of the state without any discrimination on ground of caste, color, creed, sex, etc. All the avenues of authority should be open equally to all the citizens and they should enjoy right to vote, right to contest election, right to criticize the government, right to hold public office, etc. The doctrine of political equality is based on twin principles of universal adult franchise and human dignity.
 - Social Equality**
 - It assumes that there should not be any discrimination among various

citizens on the basis of social status, color, caste, creed, rank, etc. It is opposed to the grant of special privileges to any person on the basis of his social status or caste, religion, etc. It may be observed that social equality cannot be established through law alone. It can be achieved only through regulation of social habits and institutions. Education can also play a significant role in bringing social equality.

4. Economic Equality

- In modern times scholars have attached great importance to economic equality and consider it as vital to the existence of other types of equality. Economic equality does not imply that there should be equal distribution of wealth. On the other hand it means that there should not be concentration of wealth in few hands only and certain minimum standards of income should be assured to all.

5. Natural Equality

- The concept of natural equality rests on the principle that nature has created every one as equal. Nature has not bestowed all human beings with the same qualities. Interpreted in this sense the idea of natural equality is a myth.

6. Legal Equality

- Here equality means that all people are alike in the eye of the law and that they are entitled for its equal protection. Thus the principle of equality implies equal protection of life and liberty for everyone under the law, and equal penalties on everyone violating them. In a strictly technical sense, the principle of equality implies equal protection of

law to all denying discrimination on any artificial ground whatsoever. Viewed in a wider perspective it also means justice at a low cost at the earliest practicable time so that everyone irrespective of his social or economic status may get it according to the established procedure of the land.

7. International Equality

- It means the extension of the principle of equality to the international sphere. All nations of the world should be treated equally irrespective of their demographic, geographical, economic or military compositions. That is the principle of internationalism requires that all nations of the world should be treated on identical terms whether they are big or small in terms of their size, location, natural resources, wealth, military potential and the like. It also implies that international disputes should be settled through pacific means in which every nation has right to discuss matters in a free and frank manner and that the use of force, or a threat of this type, is ruled out from consideration.

Liberty and Equality

- The relationship between liberty and equality has been a matter of controversy that has two sides; the negative view is that liberty and equality are incompatible terms. Lord Acton and F. A. Hayek argue that bringing about a condition of equality has in practice led to inequality and tyranny. The positive view takes liberty and equality as compatible terms. In fact both are necessarily connected with the supreme worth and dignity of human personality and the spontaneous development of its capacities.

Liberal Versus Marxist Interpretations

- The liberal doctrine of equality stands on the premise of the 'equality of adequate opportunities' available to every member of the

society. That is all people have liberty to compete in the midst of equal opportunities with the result that those who can make best use of their chances may go ahead of others. Inequalities in the midst of equal opportunities are thus a valid affair. But the Marxist view of equality always associates with class war. Equality cannot exist in a society ridden with class contradictions. All kinds of class distinctions can be eliminated through the dictatorship of proletariat. A classless society is necessary for the liberty and equality

Liberty Meaning

- The theme of liberty is integrally connected with the theme of rights. It is the provision of rights with their due enforcement by the state that ensures freedom to a citizen and thereby enables him to seek the best possible development of his personality. The term 'liberty' comes from the Latin word 'liber' that means 'free'. The meaning of liberty generally taken a wrong way as it is identified with the absence of restraints and limitations. No man can be absolutely free. In the sense of unrestrained freedom liberty is not possible in society. Thus viewed, liberty means man's right to do what he wants for the sake of making the best possible development of his personality. Social life is regulated by a set of principles or norms that make man's life civilized. These restraints lay down the line of distinction between good and bad, right or wrong, moral and immoral, legal and illegal. In fine, the real meaning of liberty should be understood with this point in view that the liberty of an individual is relative to that of others. Liberty is defined by Mahatma Gandhi as follows, "liberty does not mean the absence of restraint but it lies in development of liberty." According

to John Seeley, "liberty is the opposite of over-government". The meaning of liberty has two dimensions negative and positive. In a negative sense, it implies the absence of restraints as far as possible. Negative liberty meant that there should not be any hindrance in the path of one's actions. Here the point of stress is that restraint is bad, because it effects curtailment of individual freedom. J. S. Mill and F. A. Hayek, John Locke, Thomas Hobbes, Adam Smith, Jeremy Bentham are exponents of negative liberty. Mill maintained that there should not be any hindrance in the path of man. Hayek says that every individual has some assured area of personal freedom with which others cannot interfere. The negative view of liberty is not appreciated in the present times. Now individual liberty is sought to be reconciled with state authority. Restraints are essential if the state desires to achieve the goal of public welfare. The positive concept of liberty admits that there must be compulsion if liberty is to have a practical meaning. It is a contribution of T.H. Green. He defines it as a positive power of doing something that is worth enjoying in common with others. Since man is social creature, his life should be regulated by certain social bonds. Hegel, Rousseau, Herder, Marx, H. J. Laski, Barker are other advocates of positive liberty.

Liberal Versus Marxist Views

- The Marxist interpretations regarding real meaning and nature of liberty hinge mainly on the nature and scope of economic liberty available in the pattern of social life. The liberals define liberty as a bundle of rights that enable a man to seek the best possible development of his personality. They do not bother for the kind of

social life of man. On the other hand, the Marxist view of liberty covers the case of man's life in the society he lives and the conditions he is subjected to. It follows that in the Marxist view, there can be no real freedom unless the capitalist system is replaced with the socialist system. The Marxist concept of liberty rejects the case of 'free will' as the ingredient of liberty. Man is not only a social creature who can understand the pattern of his social existence and then change it by means of his conscious revolutionary social activity. It is quite obvious that Marxist view of liberty cannot be appreciated by the liberal thinkers who identify liberty with constitutional government, political democracy and orderly administration based on common law system. They are, Milton Freidman, Louis Fischer and Arthur Koestler.

Dimensions or Kinds of Liberty

- Simply stated, liberty implies a condition of freedom especially opposed to political subjection, imprisonment or slavery. In a wider sense, it is a multiple concept having these important varieties.
- 1. Natural Liberty**
 - It implies complete freedom for a man to do what he wills. It means no restraint to any kind whatsoever on the doing of a man. Just as all creatures live according to their will in the world of nature, so should be the pattern of man's life. Let a man do what he wills. But liberty in modern society is within restraints. So the idea of natural liberty is therefore an errant nonsense. As a social creature man should lead a life regulated by social restraints.
 - 2. Social Liberty**
 - Social liberty relates to man's freedom in his life as a member of social organization. As such it refers to a man's right to do what he wills

in compliance with the restraints imposed on him in the general interest. This kind of liberty consists in the rights and privileges in the society, which is protected by the state. Thus social liberty liberates a man from the fear of arbitrary aggression.

3. Personal Liberty

- Personal liberty means the availability of those conditions in which the individual can act without being under any type of arbitrary restraint. Every individual has the right not to permit any other individual to interfere in his personal affairs. Every individual should have the liberty to dress, food, standard of living, marriages, education of children, etc. Personal liberty stands for the personal security, personal freedom in movement, and enjoyment of personal property. The state should not interfere in the personal matters of the individual. Such liberty is essential for the free development of human society.

4. Political Liberty

- Political liberty refers to the power of the people to be active in political affairs of the state. Thus it is integrally connected with the life of man as a citizen. It requires two things – political education and free supply of news. By political liberty Laski means the freedom of the individual to participate in the affairs of the state. Political liberty includes liberty to vote, to contest in elections, to hold public office, to express political views and criticize government, to have free and fair election, freedom for public opinion, etc.

5. Economic Liberty

- Economic liberty allows individuals to be engaged in some gainful occupation. It means liberty to earn one's own daily bread. In simple words, every individual regardless of caste, color, creed, place of birth, sex and religion should have liberty

to earn money through some occupation. The individual should be free from the constant fear of unemployment and insufficiency that perhaps more than any other inadequacies affect the whole strength of the personality.

6. Domestic Liberty

- It is by and large a sociological concept that takes the discussion of liberty to the spheres of man's family life. It implies that of all associations within the state, the miniature community of family is the most universal and of the strongest independent vitality. There was a time when the authoritarian state was reflected in the authoritarian family. Thus with the advent of democracy, liberty pervaded the sphere of family life as well. It intends the freedom enjoys in a family to have respectable relations with others.

7. National Liberty

- It is synonymous with national independence. As such it implies that no nation should be under the subjection of another. It stands for national independence, freedom from imperialism, etc. Like individuals nations also think in terms of liberty. As a matter of fact national liberty is another name for national sovereignty. Every nation wishes to remain free. And without independence the progress of the nation or the state is not possible. In a slave country people cannot enjoy the comforts of life. For this love for national liberty is identified with patriotism.

8. International Liberty

- The ideal of liberty covers the world as a whole. Thus in the international sphere, it means that renunciation of war, reduction in arms production and abandonment of use of force and pacific settlement of international disputes. It also desires adequate curbs on the strength of military force so that it

may not crush the liberties of the local people or people of a different country.

9. Moral Liberty

- It stands for the freedom of the individual to act as per his rational self. Every individual should have the liberty to develop his personality according to his will. This type of freedom is contained in the idealistic interpretations of thinkers from Plato and Aristotle in the ancient to Rousseau, Kant, Hegel and Green in modern times.

Conditions of Liberty

- Every state guarantees liberty in its own way. Liberty can be safeguarded in the following ways.
- 1. Enunciation of Fundamental Rights**
 - The constitution defines the powers of the government and sets a limit to its action. The basic rights of the citizen are clearly enlisted in the constitution and the violation of it leads to punishment.
 - 2. Separation of judiciary from executive**
 - Judiciary should be separated from the executive and it should be impartial also. Montesquieu regarded separation of powers as an essential safeguard of liberty. If the people cannot secure speedy and impartial justice, liberty is in danger.
 - 3. Decentralization of power**
 - Decentralization of power also safeguards liberty. Centralization of power may lead to despotism.
 - 4. Political Party System**
 - A well-organized party system always protects liberty by preventing despotism and misuse of power.
 - 5. Rule of Law**
 - Rule of law implies equality before law and ends up discrimination. It upholds the maxim that all are equal before law including the ruling class.
 - 6. Free Press**
 - Laski considers the provision of an honest and straight-forward supply

of news is a necessary condition of liberty. If the facts are not presented in their true aspects and are deliberately perverted, the judgment will be unrelated to truth.

7. Eternal vigilance

- The most important safeguard of liberty is popular vigilance. It has been said that 'eternal vigilance is the price of liberty'.

Justice Meaning

- The concept of justice occupies a prominent position in political theory. Different people attached different meanings to the term justice at different times and places. The word justice is derived from the Latin word 'justitia' that means joining of fitting. In the words of Rafel "the idea of justice is plainly concerned with the general ordering of the society." Plato interpreted justice in terms of functions and Aristotle interpreted justice in the sense of fairness and equality. The idea of justice is a dynamic affair. As such, its implications change with the passage of time. What was justice in the past may be injustice today or vice versa.

Attributes of Justice

- First, the concept is related to dealings amongst human beings. Second, it implies impartiality in the treatment of various persons and requires that no discrimination should be made amongst the various members of religion, caste, sex, place of birth, family, etc. Third, justice does not essentially mean doing away with all types of discrimination. It permits some sort of discrimination on reasonable grounds. For example, the special treatment promised to the backward classes under the Indian Constitution does not violate the concept of justice. Fourth, it emphasizes the importance of personal dignity and all those actions, which restrict the rights,

and freedom of the individuals as derogatory or unjust. However, this doesn't preclude imposition of restrictions on the freedom of the individual in larger interest of the members of society. Fifth, the concept of justice is intimately connected with the concept of equality. Absence of equality is considered as a violation of the principle of justice. For example, legal justice implies the existence of a feeling of fraternity among the members of society. Finally, justice implies due consideration of the natural limitations. In short, justice tries to reconcile the individual rights with the social good.

Dimensions of Justice

- The concept of justice has four-fold dimensions – legal, political, social and economic. It shall be desirable to deal with these dimensions of justice in some details.

Legal Dimensions of Justice

- The legal dimension of justice has been emphasized by the writers of the analytical school, John Austin, Hobbes, etc. They assert that law is the chief instrument of justice and in its absence there can be no justice. It implies the existence of rational law, customary law, statutory law, etc. Each individual is entitled to the protection of law and the violation of the law is punished in accordance with the law. In short, it implies 'equality before law' and 'equal protection of laws.' Secondly, for the enforcement of the law there must be courts or other semi-judicial bodies that can decide the disputes in accordance with the existing laws. Sometimes the courts decide the cases on the basis of equity and natural law to meet the requirements of justice. Thirdly, justice is intimately connected with punishment. A consensus exists that more serious crimes must be severely punished so that it acts as a deterrent for others. Fourthly, legal

justice demands that equal rights should be made available to all the members and no discrimination should be made on the basis of caste, color, creed, sex, place of birth, etc.

Political Dimensions of Justice

- Political dimensions of justice imply that the people should be given a chance of fair and free participation in the political life of the country. This generally finds outlet in the grant of universal adult franchise so that all the people may be able to participate in the election of their representatives. People are granted equal rights and opportunities to influence the policies of the government. Recruitment to public services is made without discrimination. In short, people are given a fair chance to determine the policies of the government in keeping with the prevailing requirements. The political parties, the pressure groups, etc. play a vital role in giving concrete shape to the political justice. In short, political justice is concerned with the actual implementation of the principles of legal justice.

Social Dimensions of Justice

- The concept of social justice has very wide dimensions and covers practically everything that promotes the general welfare of the members of the community. It lays emphasis on the elimination of all kinds of discrimination and privileges based on caste, color, creed, sex, birth, etc. It also enjoins upon the state the duty to make concerted effort to improve the lot of the weaker sections of the community. It also implies the doing away of social evils prevailing in the society. In case of conflict between the social and individual interest the former prevails. It is not worthy that social justice cannot be forced on the people by the state through rigid rules alone. The social habits and

social institutions play a vital role in its accomplishment.

Economic Dimensions of Justice

- In recent years the economic dimensions of justice has assumed great importance. It is asserted that there cannot be any social or political justice without economic justice. Economic justice means that the basic needs of all the members of the state must be met and the national economy should be so shaped that the benefits are shared by the maximum number of people. There should not be wide economic disparities and the principle of equal pay for equal work should prevail.

Theories of Justice

- Regarding the nature of justice different theories emerged with different arguments. The Natural Theory of justice stipulates that man should follow the principles of a moral life as sanctioned by the law of nature. With the advent of Christianity law of nature became law of God. Critics say that the idea of natural or divine justice is a matter of myth. It is too abstract and metaphysical in nature.
- The Legal Theory of justice identifies the whole idea of justice with that of courts. They believe that the legislature has the authority to make laws and the judiciary has the power to adjudicate. The advocates of imperative theory of jurisprudence like Hobbes, Bentham, Austin and Dicey fully support this view. The Marxian Theory of justice is identified with class domination. According to Marxists justice prevails in a classless society. It shows that the liberal interpretation of justice is quite flexible that places judiciary in an impartial and independent position, the Marxist notion desires its committed form.

Rights Meaning

- Rights, liberty and equality are three inter-related themes; possession

and enjoyment of rights without any distinction makes liberty and equality meaningless. In order to live, man must have some rights; in order to develop his personality to the best possible extent, he must have some particular rights. If state is the first condition of a civilized life, the civilized life requires a set of special rights that a man must have. According to Laski, "rights are those conditions of social life without which no man can seek to be himself at his best." A proper definition of right has three ingredients. First, it is a claim of the individuals. However, not every claim can be a right; the claim should be of a common interest or something which is capable of universal application. Secondly, a claim of the individual must receive social recognition. For instance, an individual's claim that receives social recognition only if every individual wishes in the same direction. Finally, we come to the point of political recognition. Rights are, like moral declarations, until they are protected by the state. The state translates socially recognized claims of moral rights into terms of law and thereby accords them legal recognition. It, therefore, acts like a coercive agency to prevent the operation of selfish wills of the individuals.

Dimensions or Kinds of Rights

- Rights are of different kinds. A watertight classification of rights is not possible because of its interrelated nature. Laski puts rights into two categories – general and particular. But Barker divides them into three main heads relating to fraternity, equality and liberty. For convenience we? pected by his students. But the difficulty with such rights is that they cannot be enforced by rules, their enforcement depends upon the good sense of the community. When moral rights

are converted into legal rights, they become enforceable by the action of the state.

3. Civil Rights

- These rights relate to the person and property of the individuals. They are called civil or social as they relate to the essential conditions of a civilized life. This broad category includes a number of rights like those relating to life, personal liberty, thought and expression, property, religion and the like. Of all the civil rights, right to life is most important, since enjoyment of all other rights depends on it. It implies that no person can take the life of another. Allied to this is the right to personal liberty. It includes right to live like a free citizen. Right to think and express also comes under this category.

4. Political Rights

- These rights relate to a man's participation in the affairs of the state.
- This category includes right to vote, right to contest in elections, right to public employment, right to public opinion, etc. In other words, these rights enable a person to send petitions to the government for the redressal of certain wrongs, following a particular policy, making or unmaking a particular law and expressing views for the creation of a healthy public opinion. Democracy is regarded as the best form of government for the obvious reason that it ensures all these rights.

5. Economic Rights

- These rights relate to a man's vocation, his engagement in a gainful employment for livelihood. It implies right to earn money through proper means. Right to work falls within this category. Allied to this is the right to rest and leisure so that a person may take relief for the sake of maintaining and increasing efficiency. So the workers

must have a right to form unions and associations for protecting and promoting their interests.

- The socialists go to the extent of including right to social insurance and self-government in industry in this category.

6. Human Rights

- Human rights are commonly understood as inalienable fundamental rights to which a person is inherently entitled simply because she or he is a human being. Human rights are those rights which are inherent in the mere fact of being human. The concept of human rights is based on the belief that every human being is entitled to enjoy her/his rights without discrimination. The modified version of natural rights coupled with civil rights has assumed a significance of its own since the formulation of the Universal Declaration of Human Rights (UDHR) by UN in December 1948.

7. Fundamental Rights

- By fundamental rights we mean those rights which form the essential conditions of good life and which constitute the essentials of human progress. In the absence of these rights the growth and development of human personality is not possible. In order to make them inviolable they are enshrined in the constitutions of democratic countries. People are ensured fundamental rights through constitutions in India, Japan, USA, France, Switzerland, etc. If any of the fundamental rights is violated, the person concerned can go to the court and seek help.

Theories of Rights

- From time to time, various interpretations regarding the origin and nature of rights were born which lead to the emergence of different theories.

- **The Natural Theory of rights** argues that nature is the author of certain rights that have a universal character. Ancient philosophers and Thomas Hobbes agree to this view point. John Locke treats right life, liberty and property as natural rights. The UDHR invokes the spirit of this theory when it declares, "all human beings are born free and equal in dignity and rights".

- When we come to the **Legal Theory of rights**, it holds that right is a creation of law. If there is no law there is no right. Hobbes, Bentham and Austin are the advocates of this theory. But critics say that people have so many rights because of the force of custom behind them.

- **The Historical Theory of right** takes the factor of time in the creation of rights. Every right is based on the force of long observance. The essential sanction behind a right is for this reason, is a tradition or a custom. Sociologists like MacIver and Edmund Burke are the advocates of this theory. Thus legal theory and historical theory are opposing each other.

- In **Idealistic point of view** rights are highly moral in nature. Rights are rooted in the minds of man. Thus they believe human consciousness postulates rights and liberty. The objective of this theory is the 'best possible development of human personality'. An ardent advocate of this theory is T. H. Green.

- **The Marxian Theory of rights** links up the case of rights with that of the prevailing economic system in a society. The dominant class creates the rights for their sake. Thus rights will be safeguarded only in a socialist system.

Protection of Rights

- Following are the measures for protection of the rights.
 1. Rights should be enshrined in the constitution.

2. Rule of Law should prevail
3. Free and honest press.
4. Decentralization of powers.
5. Independent and impartial judiciary
6. Associations and organizations
7. Eternal vigilance.

Duties

- As a member of society or the state a man must behave in a way which is good for all and which is helpful in promoting the welfare of society. Society calls upon the individuals to follow certain norms. These are obligations or duties. Thus a duty is an obligation. As a member of society or state, the individual has to observe these obligations of society. A man is said to have a duty in any matter when he is under an obligation to do or not do something. My right of living involves any duty to allow others the same condition of life. What is a right in regards to one's self is a duty in regard to others. Rights and duties are the two sides of a same coin. If one looks at them from one's own standpoint, they are rights; one look at them from the standpoint of others, they are duties. They are the same conditions seen from different angles. In the absence of duties, rights become insignificant and duties are fruitless in the absence of rights. A valid claim is both a duty and right. If we have right to enjoy our rights, it is our cardinal duty to perform our duties. If the state guarantees the enjoyment of certain rights to us, the state at the same time wants us to perform certain duties also. Otherwise we are punished. Important duties of a citizen are allegiance to the state, to obey laws, payment of taxes, honest exercise of franchise and, holding a public office, assistance in maintenance of law and order, etc. Besides we have certain moral duties to perform and certain legal duties that we are bound to perform.

The terms duty and obligation are used in a situation in which a person has no choice but to carry out or to abstain from carrying out an action. In these cases we say that a person has the duty of paying the price stipulated in the contract or the duty to help a person injured. There is a clear difference between people who carries out an action in threat. Although the concept of duty can be seen in relationship among individuals and diverse spheres such as of families, church, etc. in this entry duty will only be studied from a moral and political perspective.

1. Moral Duties

- Moral duties are those obligations that we should observe but we are not legally bound to observe them. It is our moral duty that we should serve our parents, teachers, brothers and sisters and the relatives. It is our moral duty of every one that one should lend a helping hand to the poor and down-trodden. It is our moral duty that we should serve our village, our province, nation and the world to all possible extents.
 - The reason why we have moral duties has been one of the central discussions of western philosophy for centuries. Two great political traditions have arisen from this discussion. The first of them argues that moral duty is an essential characteristic of human condition because individuals are moral agents. In consequence, duties should be fulfilled simply because of their existence, regardless of whether or not they serve the attainment of a certain end. The second of these traditions, by contrast, explains the existence of duties insofar as they are part of the fulfillment of a certain superior end.
- #### 2. Legal Duties
- There is marked difference between legal duties and moral duties. It

depends entirely on the conscience of the individual to perform moral duties or not to perform them. But an individual is legally bound to perform legal duties. If he does not perform them, he will be punished by the state. It is the legal duty of every citizen to show obedience to the constitution, commands of law and pay taxes regularly and honestly. It is our legal duty to remain loyal to our country. Traitors are tried by the judiciary and are punished by the state.

3. Positive and Negative Duties

- Duties are classified into positive and negative according to their fulfillment. If a duty requires an action, then it is positive duty and if a duty requires an omission then it is a negative duty. In addition, duties can be general or special. General duties are those whose fulfillment can benefit anybody, as the duty not to kill. Special duties are those duties that benefit people who have a concrete relationship with the person who is obligated by the duty. Positive duties are usually special duties, whereas negative duties are usually general duties. While negative duties are easy to fulfill because they are omissions, positive duties demand an effort that can be more or less stringent, but they cannot have a limitless character.

United Nations Charter

- **October 24, 1945** - The official United Nations Charter is ratified by China, France, the Soviet Union, the United Kingdom, the United States and a majority of countries.
- The U.N. Charter states that the purposes of the U.N. are to: "Maintain international peace and security..."
- "To develop friendly relations among nations..."
- "To achieve international co-operation in solving international problems..."

- “To be a centre for harmonizing the actions of nations in the attainment of these common ends.”
- The main bodies of the U.N. are: the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat.
- There are 193 Member States in the U.N. (see list of entry dates below)

Secretary-General

- The Secretary-General is the head of the Secretariat, which carries out the work of the U.N. as directed by the General Assembly, the Security Council and other U.N. bodies.
- The Secretary-General is “appointed by the General Assembly on the recommendation of the Security Council.”
- The Secretary-General serves a five-year term, which is renewable.
- Ban Ki-Moon is the eighth Secretary-General of the United Nations. He is from South Korea.
- Ban’s first term began on January 1, 2007. He was confirmed to a second term on June 21, 2011.

General Assembly:

- “Main deliberative, policymaking and representative organ” of the U.N.
- The decisions of the General Assembly have no legal binding force.
- Made up of representatives from each Member State. Each Member State has one vote in the General Assembly.
- Decisions on major issues such as peace or security issues, new Member admissions or budget issues require a two-thirds majority. Other decisions require only a majority vote.
- The Presidency of the General Assembly rotates among five groups of Member States: African, Asian, Eastern European, Latin American/Caribbean, and Western European and other Member States.

- A new president, 21 vice-presidents, and the chairmen of the six Main Committees of the General Assembly are elected at the start of each regular session.
- The General Assembly’s regular sessions begin on the third Tuesday in September. They continue until the third week of December, but can also go on year-round.
- The General Assembly also may meet in special sessions if so requested by the Security Council or if a majority of the Member States requests it.
- An emergency special session may be called within 24 hours if any of the nine members of the Security Council request it or if a majority of the Member States request it, or if one Member State requests it and the majority concur.

Member States - 193 members.

- **What is the role of the United Nations for the monitoring of human rights?**
- At the international level, various bodies within the United Nations system monitor the compliance of states with their human rights obligations. A short overview:
- These are in particular the so-called **treaty bodies**, but also the Human Rights Council, the General Assembly and the Security Council. International human rights NGOs are likewise essential for monitoring human rights practices. On the regional level, the organs of the European, Inter-american, and African human rights protection system are important since the rulings of regional human rights courts are binding for the member states.
- **Treaty bodies in the international system of human rights protection**
 - ò The treaty bodies are expert panels created on the basis of the respective human rights treaty. They examine and evaluate the **state**

reports about states’ implementation of treaty obligations and subsequently issue their comments in so-called **Concluding Observations**. (see question:” **What are Concluding Observations**”). Most treaty bodies also decide upon **individual complaints** and some may take the initiative to initiate themselves **inquiries** into human rights violations.

The Human Rights Council

- The **Human Rights Council (HRC)** is the most important political human rights body of the United Nations. Its 47 members are elected by the UN General Assembly. Since 2006, the Human Rights Council is tasked with the regular examination of the human rights situation within all UN member states (**Universal Periodic Review**) In addition, the Council follows up on the situation in individual countries - in the form of country reports and resolutions. It also appoints **Special Rapporteurs** for specific topics.
- **The UN High Commissioner for Human Rights, General Assembly and Security Council**
- The **UN High Commissioner for Human Rights (OHCHR)** is in charge of the coordination of human rights work within the system of the United Nations. Besides the head office in Geneva, it maintains regional and country offices and offers technical support for the implementation of human rights.
- The **UN General Assembly (GA)** adopts human rights treaties by resolution. Furthermore, the General Assembly discusses and decides on many human rights issues.
- Last but not least, the **UN Security Council (SC)** can impose political, economical or military sanctions against states that systematically violate human rights, as it has done in 2011 against Libya in **Resolution 1970**.

Parts of the Constitution		
Part	Articles	Areas
I	1-4	The Union & its Territories
II	5-11	Citizenship
III	12-35	Fundamental Rights
IV	36-51	Directive Principles of State Policy
IVA	51A	Fundamental Duties (42nd Amendment)
V	52-151	The Union Government
VI	152-237	The State Government
VII	238	Dealt with states in Part B of the First Schedule. Repealed in 1956 by the Seventh Amendment.
VIII	239-241	Union Territories. Article 242 repealed.
IX	243 A-O	The Panchayats
IX-A	243 P-ZG	The Municipalities
X	244-244 A	The Scheduled & Tribal Areas
XI	245-263	Relations between the Union & the States
XII	264-300A	Finance, Property, Contracts & Suits
XIII	301-307	Trade, Commerce & Intercourse within the territory of India
XIV	308-323	Services under the Union & the States
XIVA	323A-323B	Administrative Tribunals (42nd Amendment 1976)
XV	324-329	Elections
XVI	330-342	Special Provisions (Reservations of SC, ST, Anglo Indian etc)
XVII	343-351	Official Language
XVIII	352-360	Emergency Provisions
XIX	361-367	Miscellaneous Provisions (Immunity of President, Legislature etc)
XX	368	Amendment of the Constitution
XXI	369-392	Temporary, Transitional & Special Provision
XXII	393-395	Short Title, Commencement, Authoritative

Schedules of the Constitution	
Schedule I	Deals with territories of the 28 states & 7 union territories
Schedule II	Salaries allowances of president, V.P, Speaker, Judges, CAG etc.
Schedule III	Various forms of Oaths & affirmation which various incumbents have to take.
Schedule IV	Seats allotted to various states & UTs in the Rajya Sabha (Council of States)
Schedule V	Administration & Control of scheduled areas.
Schedule VI	Administration of tribal areas in Assam, Meghalaya & Mizoram
Schedule VII	Subjects in the three lists – Union, State & Concurrent
Schedule VIII	List of 22 regional languages
Schedule IX	Certain acts & regulations dealing with land reforms & zamindari system abolition. ((Added by first constitutional amendment).
Schedule X	Disqualifications on grounds of defection. (52nd Amendment)
Schedule XI	29 subjects on which panchayats can legislate. (73rd Amendment)
Schedule XII	18 subjects on which municipalities have control. (74th Amendment)

Indian Constitution Borrowed Features	
1. British Constitution	Parliamentary form of Government, Rule of Law, Law making procedure, Single Citizenship; Institution of Speaker.
2. American Constitution	Judicial System, Fundamental Rights,
3. Canadian Constitution	Federal System with a strong central authority; Residual powers, Centre State Relation.
4. Irish Constitution	Directive Principles, Election of the President of India
5. Australian Constitution	Concurrent list; Freedom of Trade & Service within country
6. Weimar Constitution	Emergency Provision
7. Soviet Constitution	Five Year Plans; Fundamental duties
8. Govt of India Act 1935	Office of the governor, powers of the federal jury.
9. South African	Amendment of Constitution.

Parliamentary Terms

- **Censure Motion** : At least 50 members support it & speaker should admit it. If the motion is passed in the Lok Sabha, the council of ministers have to resign.
- **Adjournment Motion** : Moved to draw the attention to a recent matter of urgent public importance. Only if 50 members support it & speaker grants permission.
- **Question Hour** : First hour of every sitting in the two houses of the parliament is devoted to asking & answering questions known as Question hour. The questions consist of starred (oral), unstarred (written) & short notice question.
- **Zero Hour** : The hour after the question hour. There is no mention of zero hour in the rules of the parliamentary procedure & the term was coined by press in the early 1960's. Members raise matters which cannot brook any delay.
- **Cut Motion** : Motions to reduce the amount of demand for grants. They are of 3 types: Disapproval of policy cut, Economy cut, Token Cut.
- **Guillotine** : When the discussion cannot be completed within stipulated time, the speaker can put the matter to vote even without concluding discussion.

Lists

- **Union List (99)** : Defence, Foreign affairs, currency, banking, communication, inter-state trade, commerce, atomic energy, railways, highways, aerodromes. (Originally 97 items – one deleted, 3 added).
- **State List (61)** : Health, sanitation, public order, agriculture, prisons, local government, liquor, transportation, relief of disabled, sales tax & octroi, taxes on entertainment & wealth. (Originally 66 items out of which 5 transferred to concurrent list).

- **Concurrent list (52)** : Criminal law, electricity, factories, forests, education, marriage & divorce, drugs, newspapers, books & printing press, social insurance, trade unions, preventive detention, stamp duties. (Originally 47 but 5 items transferred to this list from state list).

President

Disputes in connection with the election of President are decided by **Supreme Court**.

Oath by Chief justice of India

- MLAs & members of both house of the parliament vote in the election.
- The president submits his resignation to the Vice President.
- Impeachment can be initiated by either house of parliament (2/3 majority). Nominated members can also participate but they do not participate in the election of president. MLAs do not participate in impeachment. In case the office becomes vacant fresh elections within 6 months. The president enjoys suspensive veto powers & it applies only to the non money bills.
- With regards to constitutional amendments president has no veto powers. President can promulgate ordinances when the parliament is in recess only on matters in the union & concurrent list.
- The ordinances must be approved by parliament within 6 weeks.
- All money bills originate on the recommendation of the President. Appoints finance commission. If there is no party with clear cut majority the president can use his discretion. He cannot declare any emergency on his own. Can summon both houses separately.
- **Vice President**: More than 35 years of age. Elected by the members of Lok Sabha & Rajya Sabha at a joint meeting. Oath before the president or some other person appointed by him. Can act as president for a

maximum 6 months period. Not a member of Rajya sabha only an ex-officio chairman.

- **Prime Minister** : If the prime minister is taken from Rajya Sabha he cannot part in voting when a vote of no confidence is under consideration. In the event of his death the council of ministers stand automatically dissolved.
- **Deputy PM**: Position not known to the constitution although 7 persons have occupies this post. Vallabhbhai Patel, Morarji Desai, Charan Singh, Jagjivan Ram, Y.B Chavan, Devi Lal & L. K. Advani have served the office.
- **Council of Ministers**: Should be a member of either house or do so within 6 months. Vote of no confidence against any minister leads to resignation of entire council. Present the budget before the parliament. Collectively responsible to parliament but individual ministers responsible to President.
- **Lok Sabha**: Strength of Lok Sabha fixed at 543 plus 2 nominated members of Anglo-Indian community. Minimum 25 years of age. No candidate can contest elections from more than 2 constituencies. Oath before president or some person appointed by him. Can vacant seat by writing to speaker. Seat vacant if absents from meetings for 60 days without intimation. The speaker continues in the house even after the dissolution of the Lok Sabha till a newly elected Lok Sabha meets. The joint session is called if a bill passed is rejected by other house or no action is taken. Speaker presides over joint sessions.
- **Rajya Sabha** : 238 elected & 12 nominated. Minimum 30 years of age. Elected by members of state legislative assemblies on the basis of proportional representation through a single transferable vote.

It is not subjected to dissolution. In the event of dissolution of Lok Sabha, any bill pending in the Rajya Sabha but not passed by Lok Sabha does not lapse.

- **Governor:** Oath before chief justice of high court of that state. 35 years of age. Addresses first session of state legislature after elections. Appoint one sixth members of legislative council. Nominates one member of Anglo Indian community to the legislative assembly. Makes laws through ordinances. Can grant pardon but not in case of death sentence. Reserve a bill for president's consideration. He is permitted to act without the advice of the council of ministers unlike president. Ordinance issued by him remains in force for a maximum 6 months. The constitution does not contain any provision for his impeachment.

Important Cases of the Constitution

- **Berubari Case:** Preamble not a part of the constitution
- **Golaknath Case 1967:** Supreme court held that the Parliament had no power to amend any of the provisions of Part III (Fundamental rights) The Indira Gandhi government in 1971 carried out the 24th Amendment with a view to assert the right of the parliament to amend any part of the constitution.
- **Keshvanada Bharti Case:** Preamble was a part of the constitution & can be amended by Parliament under Article 368. Parliament can also amend the fundamental rights (Against Golaknath case) but ruled that the parliament cannot destroy the basic structure of the constitution.
- **Minerval Mills Case 1980:** The 42nd amendment carried out in 1976 gave asserted that parliament had unlimited powers to amend the constitution & tried to accord precedence to Directive principles over fundamental rights. But in the

Minerva Mills Case the Supreme court struck down those provisions.

- **Maneka Gandhi Vs Union of India:** Right to live is not merely confined to physical existence but includes within its ambit the right to live with human dignity.

Commissions/committees & their Purpose:

- **S.K Dhar committee :** Reorganization of states on linguistic basis
- **JVP committee :** Jawahar, Vallabh, Pattabhi Sitaramayya (same as above)
- **Shah Commission :** Punjab Reorganization Act
- **Tarkunde Committee :** Electoral Reforms. Voting age to be reduced to 18 years (61st amendment). Voter councils to be formed.
- **Dinesh Goswami Committe :** Electoral Reforms. To save the security candidates should secure at least 1/4th of valid votes.
- **Balwant Rai Mehta Committee :** Recommendations approved by NDC. Rajasthan first adopted 3 tier structure, followed by Andhra Pradesh & Bihar.
- **Ashok Mehta Committee :** Working of panchayati raj institutions.
- **Rajamannar Commission :** Recommended abolition of IAS & the IPS.
- **National Emergency :** The proclamation of emergency should be approved by both houses within one month of the date of issue & passed by 2/3rd majority otherwise ceases to operate in one month. Once it has been approved it remains in force for a period of 6 months. The life of Lok Sabha can be extended upto one year at a time & up to the period not exceeding beyond six months after the proclamation ceases to operate. Fundamental rights except guaranteed in article 20 & 21 cannot be suspended. Emergency was form 1962-68 & 1971-78. However

according to 44th amendment, national emergency cannot be declared on grounds of internal disturbances.

- **Emergency** due to constitutional failure in state: Ceases to be in operation after the expiry of two months unless approved by each house. After approval valid for 6 months. It can be extended by parliament for a further period of 6 months. To extend further election commission should certify & still maximum period is 3 years. Declared more than 100 times, first time in Punjab. The court can strike down emergency if found unconstitutional & revive the dissolved state assembly.
- **Financial Emergency :** Remains in force for a period of 2 months unless approved. After approval 6 months. The maximum period is 3 years. President can reduce salary of judges of all courts & ask all money bills passed by state legislature to be reserved.
- **Parliamentary Committees:**
- **Estimates Committee :** 30 members. Examines Annual Estimates & suggests alternative policies
- **Public Accounts Committee :** 22 members. 15 LOKSABHA & 7 R.S. Assisted by Comptroller & Auditor general. It acts as a watch dog of expenditure.
- **Committee on Public Undertakings :** 15 members. 10 M.Ps & 5 R.S. Examines working of public undertakings
- **Business Advisory Committee :** 15 members. Speaker is chairman
- **Committee on Private Members Bills & Resolutions :** 15 members. Deputy Chairman is chairman. Classifies bills according to importance.
- **Rules Committee :** 15 members. Speaker is head. Rules of House
- **Committee on Privileges :** 15 members. Violation of Privileges of M.P

- **Committee on Welfare of Scheduled Castes & Scheduled Tribes** : 30 Members. 20 L.S. & 10 R.S.
- The right to property (Article 31) eliminated from the list of fundamental rights by 44th amendment in 1978. Now it is a constitutional right.
- The administrators are known as lieutenant governors (Daman & Pondicherry), Chief commissioners (Andamans & Chandigarh) & as administrators (Lakshadweep).
- The government of India instituted Bharat Ratna & Padma Shri under Article 18 of the constitution.
- The procedure of election of the President can be modified through an amendment passed by two-thirds majority by both the houses & be ratified by legislatures of at least half of the states.
- The salary & emoluments of the president are exempt from income tax. This is not the case with chief justice of India & election commissioner.
- Only war & external aggression can lead to suspension of fundamental rights under article 19. Armed rebellion does not cause the suspension.
- U.K has no written constitution. New Zealand was the first country to grant franchise to women.
- **Fundamental Rights**
- The Fundamental Rights, embodied in Part III of the Constitution, guarantee civil rights to all Indians, and prevent the State from encroaching on individual liberty while simultaneously placing upon it an obligation to protect the citizens' rights from encroachment by society. Seven fundamental rights were originally provided by the Constitution– right to equality, right to freedom, right against exploitation, right to freedom of religion, cultural and educational rights, right to property and right to

constitutional remedies. However, the right to property was removed from Part III of the Constitution by the 44th Amendment in 1978.

- The purpose of the Fundamental Rights is to preserve individual liberty and democratic principles based on equality of all members of society. They act as limitations on the powers of the legislature and executive, under Article 13, and in case of any violation of these rights the Supreme Court of India and the High Courts of the states have the power to declare such legislative or executive action as unconstitutional and void. These rights are largely enforceable against the State, which as per the wide definition provided in Article 12, includes not only the legislative and executive wings of the federal and state governments, but also local administrative authorities and other agencies and institutions which discharge public functions or are of a governmental character. However, there are certain rights – such as those in Articles 15, 17, 18, 23, 24 – that are also available against private individuals. Further, certain Fundamental Rights – including those under Articles 14, 20, 21, 25 – apply to persons of any nationality upon Indian soil, while others – such as those under Articles 15, 16, 19, 30 – are applicable only to citizens of India.
- The Fundamental Rights are not absolute and are subject to reasonable restrictions as necessary for the protection of public interest. In the Kesavananda Bharati v. State of Kerala case in 1973, the Supreme Court, overruling a previous decision of 1967, held that the Fundamental Rights could be amended, subject to judicial review in case such an amendment violated the basic structure of the Constitution. The Fundamental Rights can be enhanced, removed

or otherwise altered through a constitutional amendment, passed by a two-thirds majority of each House of Parliament. The imposition of a state of emergency may lead to a temporary suspension any of the Fundamental Rights, excluding Articles 20 and 21, by order of the President. The President may, by order, suspend the right to constitutional remedies as well, thereby barring citizens from approaching the Supreme Court for the enforcement of any of the Fundamental Rights, except Articles 20 and 21, during the period of the emergency. Parliament may also restrict the application of the Fundamental Rights to members of the Indian Armed Forces and the police, in order to ensure proper discharge of their duties and the maintenance of discipline, by a law made under Article 33.

Right to Equality

- The Right to Equality is one of the chief guarantees of the Constitution. It is embodied in Articles 14–16, which collectively encompass the general principles of equality before law and non-discrimination, and Articles 17–18 which collectively further the philosophy of social equality. Article 14 guarantees equality before law as well as equal protection of the law to all persons within the territory of India. This includes the equal subjection of all persons to the authority of law, as well as equal treatment of persons in similar circumstances. The latter permits the State to classify persons for legitimate purposes, provided there is a reasonable basis for the same, meaning that the classification is required to be non-arbitrary, based on a method of intelligible differentiation among those sought to be classified, as well as have a rational relation to the object sought to be achieved by the classification.

- Article 15 prohibits discrimination on the grounds only of religion, race, caste, sex, place of birth, or any of them. This right can be enforced against the State as well as private individuals, with regard to free access to places of public entertainment or places of public resort maintained partly or wholly out of State funds. However, the State is not precluded from making special provisions for women and children or any socially and educationally backward classes of citizens, including the Scheduled Castes and Scheduled Tribes. This exception has been provided since the classes of people mentioned therein are considered deprived and in need of special protection. Article 16 guarantees equality of opportunity in matters of public employment and prevents the State from discriminating against anyone in matters of employment on the grounds only of religion, race, caste, sex, descent, place of birth, place of residence or any of them. It creates exceptions for the implementation of measures of affirmative action for the benefit of any backward class of citizens in order to ensure adequate representation in public service, as well as reservation of an office of any religious institution for a person professing that particular religion.
- The practice of untouchability has been declared an offence punishable by law under Article 17, and the Protection of Civil Rights Act, 1955 has been enacted by the Parliament to further this objective. Article 18 prohibits the State from conferring any titles other than military or academic distinctions, and the citizens of India cannot accept titles from a foreign state. Thus, Indian aristocratic titles and titles of nobility conferred by the British have been abolished. However, awards such as the Bharat Ratna

have been held to be valid by the Supreme Court on the ground that they are merely decorations and cannot be used by the recipient as a title.

Right to Freedom

- The Right to Freedom is covered in Articles 19–22, with the view of guaranteeing individual rights that were considered vital by the framers of the Constitution, and these Articles also include certain restrictions that may be imposed by the State on individual liberty under specified conditions. Article 19 guarantees six freedoms in the nature of civil rights, which are available only to citizens of India. These include the freedom of speech and expression, freedom of assembly, freedom of association without arms, freedom of movement throughout the territory of India, freedom to reside and settle in any part of the country of India and the freedom to practice any profession. All these freedoms are subject to reasonable restrictions that may be imposed on them by the State, listed under Article 19 itself. The grounds for imposing these restrictions vary according to the freedom sought to be restricted, and include national security, public order, decency and morality, contempt of court, incitement to offences, and defamation. The State is also empowered, in the interests of the general public to nationalise any trade, industry or service to the exclusion of the citizens.
- The freedoms guaranteed by Article 19 are further sought to be protected by Articles 20–22. The scope of these articles, particularly with respect to the doctrine of due process, was heavily debated by the Constituent Assembly. It was argued, especially by Benegal Narsing Rau, that the incorporation of such a clause would hamper social legislation and cause

procedural difficulties in maintaining order, and therefore it ought to be excluded from the Constitution altogether. The Constituent Assembly in 1948 eventually omitted the phrase “due process” in favour of “procedure established by law”. As a result, Article 21, which prevents the encroachment of life or personal liberty by the State except in accordance with the procedure established by law, was, until 1978, construed narrowly as being restricted to executive action. However, in 1978, the Supreme Court in the case of *Maneka Gandhi v. Union of India* extended the protection of Article 21 to legislative action, holding that any law laying down a procedure must be just, fair and reasonable, and effectively reading due process into Article 21. In the same case, the Supreme Court also ruled that “life” under Article 21 meant more than a mere “animal existence”; it would include the right to live with human dignity and all other aspects which made life “meaningful, complete and worth living”. Subsequent judicial interpretation has broadened the scope of Article 21 to include within it a number of rights including those to livelihood, clean environment, good health, speedy trial and humanitarian treatment while imprisoned. The right to education at elementary level has been made one of the Fundamental Rights under Article 21A by the 86th Constitutional amendment of 2002.

- Article 20 provides protection from conviction for offences in certain respects, including the rights against ex post facto laws, double jeopardy and freedom from self-incrimination. Article 22 provides specific rights to arrested and detained persons, in particular the rights to be informed of the grounds of arrest, consult a lawyer of one’s own choice, be produced before a

magistrate within 24 hours of the arrest, and the freedom not to be detained beyond that period without an order of the magistrate. The Constitution also authorises the State to make laws providing for preventive detention, subject to certain other safeguards present in Article 22. The provisions pertaining to preventive detention were discussed with skepticism and misgivings by the Constituent Assembly, and were reluctantly approved after a few amendments in 1949. Article 22 provides that when a person is detained under any law of preventive detention, the State can detain such person without trial for only three months, and any detention for a longer period must be authorised by an Advisory Board. The person being detained also has the right to be informed about the grounds of detention, and be permitted to make a representation against it, at the earliest opportunity.

Right against Exploitation

- The Right against Exploitation, contained in Articles 23–24, lays down certain provisions to prevent exploitation of the weaker sections of the society by individuals or the State. Article 23 provides prohibits human trafficking, making it an offence punishable by law, and also prohibits forced labour or any act of compelling a person to work without wages where he was legally entitled not to work or to receive remuneration for it. However, it permits the State to impose compulsory service for public purposes, including conscription and community service. The Bonded Labour system (Abolition) Act, 1976, has been enacted by Parliament to give effect to this Article. Article 24 prohibits the employment of children below the age of 14 years in factories, mines and other hazardous jobs. Parliament has enacted the Child

Labour (Prohibition and Regulation) Act, 1986, providing regulations for the abolition of, and penalties for employing, child labour, as well as provisions for rehabilitation of former child labourers.

Right to Freedom of Religion

- Any person can change their religion according to their wish no person can force a person to change his/her religion. The Right to Freedom of Religion, covered in Articles 25–28, provides religious freedom to all citizens and ensures a secular State in India. According to the Constitution, there is no official State religion, and the State is required to treat all religions impartially and neutrally. Article 25 guarantees all persons the freedom of conscience and the right to preach, practice and propagate any religion of their choice. This right is, however, subject to public order, morality and health, and the power of the State to take measures for social welfare and reform. The right to propagate, however, does not include the right to convert another individual, since it would amount to an infringement of the other's right to freedom of conscience. Article 26 guarantees all religious denominations and sects, subject to public order, morality and health, to manage their own affairs in matters of religion, set up institutions of their own for charitable or religious purposes, and own, acquire and manage property in accordance with law. These provisions do not derogate from the State's power to acquire property belonging to a religious denomination. The State is also empowered to regulate any economic, political or other secular activity associated with religious practice. Article 27 guarantees that no person can be compelled to pay taxes for the promotion of any particular religion or religious institution. Article 28 prohibits religious instruction in a wholly State-funded educational

institution, and educational institutions receiving aid from the State cannot compel any of their members to receive religious instruction or attend religious worship without their (or their guardian's) consent.

Cultural and Educational Rights

- Every person has the right to get education no person can discriminate against going to school. The Cultural and Educational rights, given in Articles 29 and 30, are measures to protect the rights of cultural, linguistic and religious minorities, by enabling them to conserve their heritage and protecting them against discrimination. Article 29 grants any section of citizens having a distinct language, script culture of its own, the right to conserve and develop the same, and thus safeguards the rights of minorities by preventing the State from imposing any external culture on them. It also prohibits discrimination against any citizen for admission into any educational institutions maintained or aided by the State, on the grounds only of religion, race, caste, language or any of them. However, this is subject to reservation of a reasonable number of seats by the State for socially and educationally backward classes, as well as reservation of up to 50 percent of seats in any educational institution run by a minority community for citizens belonging to that community.
- Article 30 confers upon all religious and linguistic minorities the right to set up and administer educational institutions of their choice in order to preserve and develop their own culture, and prohibits the State, while granting aid, from discriminating against any institution on the basis of the fact that it is administered by a religious or cultural minority. The term "minority", while not defined in the

Constitution, has been interpreted by the Supreme Court to mean any community which numerically forms less than 50% of the population of the state in which it seeks to avail the right under Article 30. In order to claim the right, it is essential that the educational institution must have been established as well as administered by a religious or linguistic minority. Further, the right under Article 30 can be availed of even if the educational institution established does not confine itself to the teaching of the religion or language of the minority concerned, or a majority of students in that institution do not belong to such minority. This right is subject to the power of the State to impose reasonable regulations regarding educational standards, conditions of service of employees, fee structure, and the utilisation of any aid granted by it.

Right to constitutional remedies

- Right to constitutional remedies empowers the citizens to move to a court of law in case of any denial of the fundamental rights. For instance, in case of imprisonment, the citizen can ask the court to see if it is according to the provisions of the law of the country. If the court finds that it is not, the person will have to be freed. This procedure of asking the courts to preserve or safeguard the citizens' fundamental rights can be done in various ways. The courts can issue various kinds of writs. These writs are habeas corpus, mandamus, prohibition, quo warranto and certiorari. When a national or state emergency is declared, this right is suspended by the central government.
- **Directive Principles of State Policy:**
- The Directive Principles of State Policy, embodied in Part IV of the Constitution, are directions given to the State to guide the establishment of an economic and social

democracy, as proposed by the Preamble. They set forth the humanitarian and socialist instructions that were the aim of social revolution envisaged in India by the Constituent Assembly. The State is expected to keep these principles in mind while framing laws and policies, even though they are non-justiciable in nature. The Directive Principles may be classified under the following categories: ideals that the State ought to strive towards achieving; directions for the exercise of legislative and executive power; and rights of the citizens which the State must aim towards securing.

- Despite being non-justiciable, the Directive Principles act as a check on the State; theorised as a yardstick in the hands of the electorate and the opposition to measure the performance of a government at the time of an election. Article 37, while stating that the Directive Principles are not enforceable in any court of law, declares them to be “fundamental to the governance of the country” and imposes an obligation on the State to apply them in matters of legislation. Thus, they serve to emphasise the welfare state model of the Constitution and emphasise the positive duty of the State to promote the welfare of the people by affirming social, economic and political justice, as well as to fight income inequality and ensure individual dignity, as mandated by Article 38. s, in order to ensure equitable distribution of land resources.
- Article 39 lays down certain principles of policy to be followed by the State, including providing an adequate means of livelihood for all citizens, equal pay for equal work for men and women, proper working conditions, reduction of the concentration of wealth and means of production from the hands of a

few, and distribution of community resources to “subserve the common good”. These clauses highlight the Constitutional objectives of building an egalitarian social order and establishing a welfare state, by bringing about a social revolution assisted by the State, and have been used to support the nationalisation of mineral resources as well as public utilities. Further, several legislations pertaining to agrarian reform and land tenure have been enacted by the federal and state governments, in order to ensure equitable distribution of land resources.

- Articles 41–43 mandate the State to endeavour to secure to all citizens the right to work, a living wage, social security, maternity relief, and a decent standard of living. These provisions aim at establishing a socialist state as envisaged in the Preamble. Article 43 also places upon the State the responsibility of promoting cottage industries, and the federal government has, in furtherance of this, established several Boards for the promotion of khadi, handlooms etc., in coordination with the state governments. Article 39A requires the State to provide free legal aid to ensure that opportunities for securing justice are available to all citizens irrespective of economic or other disabilities. Article 43A mandates the State to work towards securing the participation of workers in the management of industries. The State, under Article 46, is also mandated to promote the interests of and work for the economic uplift of the scheduled castes and scheduled tribes and protect them from discrimination and exploitation. Several enactments, including two Constitutional amendments, have been passed to give effect to this provision.
- Article 44 encourages the State to secure a uniform civil code for all citizens, by eliminating

discrepancies between various personal laws currently in force in the country. However, this has remained a “dead letter” despite numerous reminders from the Supreme Court to implement the provision. Article 45 originally mandated the State to provide free and compulsory education to children between the ages of six and fourteen years, but after the 86th Amendment in 2002, this has been converted into a Fundamental Right and replaced by an obligation upon the State to secure childhood care to all children below the age of six. Article 47 commits the State to raise the standard of living and improve public health, and prohibit the consumption of intoxicating drinks and drugs injurious to health. As a consequence, partial or total prohibition has been introduced in several states, but financial constraints have prevented its full-fledged application. The State is also mandated by Article 48 to organise agriculture and animal husbandry on modern and scientific lines by improving breeds and prohibiting slaughter of cattle. Article 48A mandates the State to protect the environment and safeguard the forests and wildlife of the country, while Article 49 places an obligation upon the State to ensure the preservation of monuments and objects of national importance. Article 50 requires the State to ensure the separation of judiciary

from executive in public services, in order to ensure judicial independence, and federal legislation has been enacted to achieve this objective. The State, according to Article 51, must also strive for the promotion of international peace and security, and Parliament has been empowered under Article 253 to make laws giving effect to international treaties.

Relationship between the Fundamental Rights, Directive Principles and Fundamental Duties

- The Directive Principles have been used to uphold the Constitutional validity of legislations in case of a conflict with the Fundamental Rights. Article 31C, added by the 25th Amendment in 1971, provided that any law made to give effect to the Directive Principles in Article 39(b)–(c) would not be invalid on the grounds that they derogated from the Fundamental Rights conferred by Articles 14, 19 and 31. The application of this article was sought to be extended to all the Directive Principles by the 42nd Amendment in 1976, but the Supreme Court struck down the extension as void on the ground that it violated the basic structure of the Constitution. The Fundamental Rights and Directive Principles have also been used together in forming the basis of legislation for social welfare. The Supreme Court, after

the judgment in the Kesavananda Bharati case, has adopted the view of the Fundamental Rights and Directive Principles being complementary to each other, each supplementing the other’s role in aiming at the same goal of establishing a welfare state by means of social revolution. Similarly, the Supreme Court has used the Fundamental Duties to uphold the Constitutional validity of statutes which seeks to promote the objects laid out in the Fundamental Duties. These Duties have also been held to be obligatory for all citizens, subject to the State enforcing the same by means of a valid law. The Supreme Court has also issued directions to the State in this regard, with a view towards making the provisions effective and enabling a citizens to properly perform their duties.

- **Art. 3:** Formation of new States & alteration of areas, boundaries or names of existing States
- **Art. 12 :** General Definition (For the word “ theState”)
- **Art. 39 A :** Equal justice (Equal Pay for Equal Work)& free legal aid.
- **Art. 371 :** Special provision with respect to the States of Maharashtra and Gujarat.
- **Art. 371 A :** Special provision with respect to the State of Nagaland.
- **Art. 371 B :** Special provision with respect to the State of Assam.
- **Art. 371 C :** Special provision with respect to the State of Manipur.



GEOGRAPHY AND ENVIRONMENTAL STUDIES

Most Important Facts

LAKES:

- Fresh water lakes e.g. the great lakes of U.S.A.
- Saline lakes e.g. great salt lake of Utah, Caspian sea, dead sea, lake van etc.
- Fluvial lakes e.g. Wular lake, Marigot lake, Mayeh lake
- Lakes formed by volcanic Activity: Crater and Caldera Lakes- Lake Oregon (USA), Lakes Toba (Sumatra)
- Lakes formed by earth movements:
- Tectonic Lakes: - Lake Titicaca (Andes), (highest Lake of world), Caspian Sea (Largest Lake of the world).
- Rift valley Lakes:- Tanganyika, Malawi, Rudolf, Edward, Albert, Dead Sea (1256 ft below mean sea level the world's Lowest Lakes)
- **Lakes formed by deposition:**
- Due to river deposits – Ox-bow Lakes
- Due to marine deposits – Lagoons, Delta
- **Lakes formed by Erosion:**
- Karst Lakes – Lake Scutari (Yugoslavia)
- Wind – deflated Lakes (Salt Lakes & Pla-yas)
- Lakes formed by Glaciations:
- Cirque Lakes of Tarns – Lake Red Tarn (U.K.)
- Kettle Lakes – Orkney (Scotland)
- Rock-hollow Lakes – Lakes of Finland (the land of lakes)
- Lake due to Moraines – Lake Windermere (U.K.)
- Lakes due to deposition of glacial drifts-North Ireland.

Moraines

- A valley glacier carries a large amount of rock waste called moraine. The moraine forming along the sides of a glacier is called lateral moraine; that along the front of a glacier is called terminal moraine; that at the bottom of a glacier is the ground moraine.

Drumlins

- The swarms of rounded hummocks resulting from the deposition of glacial till are called drumlins. They look like inverted boat or spoon.

Cirque

- Cirques are the most common of landforms in glaciated mountains. The cirques quite often are found at the heads of glacial valleys.

Stalactites, Stalagmites and Pillars

- Stalactites hang as icicles of different diameters. Normally they are broad at their bases and taper towards the free ends showing up in a variety of forms. Stalagmites rise up from the floor of the caves. In fact, stalagmites form due to dripping water from the surface or through the thin pipe, of the stalactite, immediately below it. Stalagmites may take the shape of a column, a disc, with either a smooth, rounded bulging end or a miniature crater like depression. The stalagmite and stalactites eventually fuse to give rise to columns and pillars of different diameters.

Delta

- Deltas are built from primarily river-borne sediment. It forms when the amount of sediment delivered at the mouth of a river exceeds the amount removed by waves and tidal currents

• Important Isopleths:

Isogones	Equal magnetic declination
Isohel	Equal amount of sunlight.
Isobront	Thunderstorm at the same time
Isocheim	Same mean winter temperature
Isothere	Same mean summer temperature
Isanomal	Isopleth of Anomaly
Isochrones	Equal travel time from a common center.
Isonif	Amount of Snow
Isophene	Isopleths of seasonal phenomena
Isopotential	Surface to which artesian water can rise
Isorymes	Equal frost
Isarithm	A line representing continuous value on map
Isoneph	Equal cloudiness
Isopach	Equal thickness of geological strata
Isotach	Same wind speed
Isotherombrose	Equal ratio of summer rainfall to annual rainfall
Isochasm	Equal frequency of aurorae
Isodynamic	Equal magnetic intensity
Isogen	Equal birthrates
Isokeraunic	Equal occurrence of thunderstorms

• Important Tribes of the World:

- **Gauchos** : Cowboys of the pampas of Argentina & Uruguay

- **Maory** : New Zealand
- **Punan** : Borneo
- **Pygmies** : Congo basin – Zaire, Congo, Gabon
- **Masai** : East Africa – Kenya, Uganda
- **Aboriginal** : Austrailia
- **Samoyed** : West Siberia
- **Saami or Lapps** : Norway, Sweden, Finland – Also known as Laplanders
- **Bushmen or San** : Kalahari – Namibia, Botswana, Angola
- **Semang** : Malaysia
- **Bindibu** : Western Australia
- **Kikuyu** : Kenya's most populous ethnic group
- **Ainu** : Japan
- **Semites** : Ethiopians
- **Fulani/Fula** : Cattle herders of Nigeria, Senegal, Guinea or Chad
- **Important Mining Centers Of The World:**
- **Kalgoorlie** : Gold (Australia)
- **Witwatersrand** : Gold (S. Africa)
- **Rum Jungle**: Uranium (Australia)
- **Kelsey Lake, Colorado** : Diamond (USA)
- **Catoca** : Diamond (Angola)
- **Damthsha** : Diamond (Botswana)
- **Sudbury** : Nickel (Canada)
- **Kinta Valley** : Tin (Malaysia)
- **Montana** : Copper (USA)
- **Mount Isa** : Silver (Austrailia)
- **Major Discontinuities within the earth:**
- Conrad Discontinuity : Between outer & inner crust
- Mohorovicic Discontinuity : Between crust & mantle
- Repetti Discontinuity : Between outer & inner mantle
- Weichart-Gutenberg Discontinuity: Between mantle & core
- Lehmann Discontinuity : Between outer & inner core
- **Important Places/Regions & Their Locations:**
- Chaco / Gran Chaco : Low, flat, arid

region covering Argentina Paraguay & Bolivia

- Ob, Yenisey & Lena: Major rivers of Russia
- Llanos : Tropical Grasslands of Venezuela
- Campos : Tropical grasslands of Brazil
- Yucatan Peninsula : Mexico
- Nordic Countries: Norway, Iceland, Greenland, Denmark
- Matto grosso: Thick jungle in west central brazil north of Bolivia

Clouds:

- Cumuliform or globular clouds. Cirrus or highest clouds & Alto or medium clouds. Nimbus or rain bearing clouds. Stratus clouds are very close to ground surface. Cirrocumulus clouds form 'mackerel clouds' & cirrostratus clouds produce 'haloes'. Alto-cumulus are called sheep clouds. Rain falling from nimbostratus but not reaching ground is called virga. Low clouds less than 2 km high are stratus, cumulus, stratocumulus & nimbostratus & these are the only ones which give precipitation.

Mountain Passes:

- Burzil pass, Zozi La pass- J & K
- Bara Lacha pass, Shipki La pass- Himachal
- Thagla pass, Niti pass & Lipu Lekh- Uttaranchal
- Nathu La pass, Jelep La pass- Sikkim
- Bomdila Pass- Arunachal Pradesh

Uranium distribution in india:

- Singhbhum District, Jharkhand: Jaduguda Mine, Keruadungri, Bhatin and Narwapahar.

Thorium Distribution in India:

- **Kerala** : Quilon and Kanyakumari (Lipuram, Pudur, Kovalam, Varkala and Neendakarai)
- **Andhra Pradesh** : Bhimuniapatnam, Vishakhapatnam

Major Natural Regions:

- Equatorial Lowland-**Amazon Type**

- Equatorial Highland-**Malay Type**
- Equatorial High Plateaus-**Ecuador Type**
- Tropical Eastern Margin-**Monsoon Type**
- Tropical Interiors-**Sudan Type**
- Tropical Western Deserts-**Sahara Type**
- Warm Temperate/Subtropical Western Margins-**Mediterranean Type**
- Warm Temperate/Subtropical Eastern Margin-**China Type**
- Warm Temperate/Subtropical Interior Lowland -**Turan Type**
- Warm Temperate/Subtropical Interior Plateau- **Iran Type**
- Cool Temperate Western Margin-**European Type**
- Cool Temperate Eastern Margin-**St. Lawrence Type**
- Cool Temperate Interior Lowland-**Prairie Type**
- Cool Temperate Interior Highland-**Altai Type**
- Cool Temperate High Plateau-**Tibet Type**
- Polar Lowland-**Tundra Type**
- Polar Highland- **Ice Cap Type**
- **IMPORTANT LAGOONS AND LAKES:**
- **VEMBNAD LAKE** (Kerala), **KAYALS** (Popularly called back water in Kerala), **KOLLERU LAKE** (Andhra Pradesh), **LOKTAK LAKE** (Manipur), **NAKKI LAKE** (Rajasthan), **DEEDWANA LAKE** (Rajasthan), **PULICAT LAKE** (Andhra Pradesh), **JAISAMAND LAKE** (Rajasthan), **CHILKA LAKE** (Orissa, Largest brackish water lake in Asia), **WULAR LAKE** (Jammu and Kashmir, largest fresh water lake),
- **Diamond Distribution in India:**
- Panna (Madhya Pradesh), Anantpur, Kurnool (Andhra Pradesh), Bellary (Karnataka)
- **Gold distribution in India:**
- Kolar (karnatak) gold field produces

99 percent gold of the country. Other Ramgiri in Andhra Pradesh, Wynad in Kerala and Salem in Tamil Nadu. Gold is produced from the sand of rivers Subarana Rekha (Jharkhand) and Subansri (Arunachal Pradesh).

- **INDIA-MAJOR SOIL TYPES:**

- **ALLUVIAL SOIL :** Northern plains or river basin: Punjab, Haryana, eastern part of Rajasthan, Gujarat, U.P., Bihar, West Bengal and Assam Valley.

- **BLACK COTTON SOIL OR REGUR SOIL :** It covers lateaus of Maharastra, Sourth Orissa, Northern Karnataka, Parts of Rajasthan (two districts of Bundi and Tonk) Central and South Tamil Nadu.

- **RED SOIL :** Larger part of Tamil Nadu, Andhra Pradesh and Karnataka. Southern parts of Maharashtra, Eastern Mp, parts of Orissa and Chotanagpur and Bundelkhand.

- **LATERITE SOIL :** Tropical humid areas where rainfall is more than 200 cm e.g., Western Ghats, Karnataka, Tamil Nadu, Chotanagpur Plateau and slopes of North Eastern states.

- **ARID OR DESERT SOIL :** Punjab, Southern parts of Haryana, Western Rajasthan and Rann of Kachchh in Gujarat.

- **MOUNTAIN SOILS :** Himalayan region of Jammu and Kashmir, Himachal Pradesh. Also in Western and Eastern Ghats as well as in some region of Peninsular plateau.

- **PEATY AND ORGANIC SOIL:** Regions like Kari in Kerala, T.N., coastal Orissa, W.B. and North Bihar.

- **ANNUAL RAINFALL IN INDIA:**

- **HEAVY RAINFALL,** (Rainfall between 200- 400 cm): The Arabian Sea branch of **south west monsoon** cause rainfall all along the western Ghats and Western coastal regions from June to September. In North East India, the Bay of Bengal branch of monsoonal winds which causes monsoon in the southern hills of

Shillong Plateau, Garo, Khasi, Jaintia hills (Meghalaya) and other states. In These regions Orographic features play an important role because the moisture laden monsoon winds strike against physical barriers the like mountains, to cause heavy rainfall.

- **MODERATE RAINFALL** (Rainfall between 100 – 200 cm) : The average rainfall over North Indian Plain generally remains between 100 to 200 cm. Other areas of moderate rainfall are north eastern parts of Peninsular India, highlands of Central India, and Tamil Nadu. **Rain fall between 60 – 100 cm** occurs in the upper Ganga Valley, eastern parts of Aravallis, eastern Gujarat, internal parts of Andhra Pradesh, Tamil Nadu, Maharashtra and Karnataka. The intensity of rainfall decreases from east to west and north to south in the Northern Plains.

- **SCANTY RAINFALL (Rain fall between 40 – 60 cm):** Parts of Punjab, Haryana, northern and western Rajasthan and Kachchh and Kathiawar regions of Gujarat. A narrow strip of land, **lying in rain shadow areas** of Peninsular India receives rainfall below 60cm. The dry regions of Rajasthan, west of the Aravalli hills receives rainfall below 20cm, Northern parts of Gujarat and Jammu and Kashmir are other regions which receive **scanty rainfall**.

- **WINTER RAINFALL :** The northwestern parts of India-Jammu & Kashmir, Punjab and U.P. plains. Tamil Nadu: Rainfall due to **North East monsoon**.

- **HIMALAYAN RIVERS:**

- **INDUS AND ITS TRIBUTORIES:** Mountain tributaries: **Gilgit Shyok, Skardu, Shigoo.** Plain tributaries: **Jhelum, Chenab, Ravi, Sutlej and Beas.**

- **GANGA (Largest river basin in India) AND ITS TRIBUTARIES:** The Ganga formed by two head streams **Alaknada and Bhagirathi** which join

at **Devprayag**. Rises in **Gangotri glacier** of the Great Himalaya. Its total length is 2,525 k.m.. **Left Bank tributaries:** Ramganga, Gomati, Ghagra, Gandak, Burhi Gandak, Kosi ('**Sorrow of Bihar**'). **Right Bank tributaries:** Yamuna, Son. The Bhagirathi – Hooghly is the western most distributary of the river. Beyond Frakka it bifurcates itself into Bhagirathi Hooghly in West Bengal and **Padma-Meghna in Bangladesh.**

- **The Yamuna** (Largest tributary of Ganga) : Important tributaries; Chamba, Sindh, Betwa and Ken.

- **BRAHMAPUTRA AND ITS TRIBUTARIES :** **Important tributaries:** Subansiri Kameng, Dhansiri, Dilhang, Lohit, Tista, Torsa. Manas; Burhi Dihing, etc. It flows through Tibet, India and Bangladesh and forms the **large delta of the world along with Ganga.**

- **PENINSULAR RIVERS**

- **Mahanadi (M.P., Orissa, Bihar and Maharashtra):** Left bank tributaries: **Sheonath, Hasdeo, Ib and Mand.** Right bank tributaries : **Tel, Ong, and Jonk.**

- **GODAVARI (Maharashtra, Andhra Pradesh, M.P., Orissa, and Karnataka) AND ITS TRIBUTARIES :** Largest river system of the Peninsular India. Left bank tributaries; **Penganga, Wardha, Wainganga, Indravati and Sabri,** Right Bank tributaries: **Manjra.**

- **KRISHNA (Karnataka, Andhra Pradesh and Maharashtra) AND ITS TRIBUTARIES:** Important tributaries: **Bhima, Tungabhadra, Ghatprbha, Malaprabha, Musi and Koyna.**

- **Kaveri:** Left bank tributaries: **Herangi, Hemavati, Shimsha, Arkavati, etc.** Right bank tributaries: **Kabani, Bhavani and Amravati etc.**

- **WEST FLOWING RIVER**

- **Sabarmati (Rajasthan and Gujarat):** Important tributaries: **Hathmati, Sedhi, Wakul.**

- **Narmada (M.P. Gujarat and Maharashtra):** Largest west flowing Peninsular river. Left bank tributaries: **Tawa Burhner, etc.** Right Bank tributaries: **Hiran.** World's famous **Dhuan Dhar or Cloud of Mist Falls** is located on this river. It flows through a **rift valley** between the Vidhyas and the Satpura Range.
- **Tapi** (M.p., Maharashtra and Gujarat): Left bank tributaries: **Purna, Veghar, Girna, Bari and the Punjhar,** Right Bank tributaries: **Betul, Arunavati, Ganjal and Gomai.**
- **Agricultural Commodities & Their Largest Producer:**

Palm Oil	Malaysia
Tobacco	China
Paper	USA
Olives	Spain
Milk	India
Banana	India
Mangoes	India
Rye	Russia
Potato	China

- **Conservation of forests in India:**
- **Indian Institute of Forest Management :** This institute is established in **Ahemdabad** in 1978 in collaboration with a Swedish Company.
- **Council of Forestry Research and Education:** It was established at **Dehradun.** Forestry Research Institutes and centres under the council are responsible for undertaking research in their respective eco-climatic zone.
- **Vanmahotsav** - In 1950 **K. M. Munshi**, the then Agriculture minister had started Vanmahotsav - "Plant more trees movement" to increase the forest area and to motivate people for plantation. Vanmahotsava is celebrated from **1st to 7th July** every year in our country. **The forest policy of 1988:**

The main aim of the forest policy of 1988 is protection, conservation and development of forests.

- **Social Forestry** - This programme of plantation is started in association with World Bank. It aims to plant useful trees in waste lands, road side and canal embankments near villages.
- **Rare species of National Parks/ Sanctuaries**
- **National Park/ State/Area Rare Species Sanctuaries**
- **Manas wild life Sanctuary** (Assam-Barpeta): Elephant, Rhinoceros, wild Buffalo, Indian Bison (Gaur), Pig, Golden Langur, Tiger, Leopard, Bear, Aligator, Python, giant Squirrel, Pigmy hog, hrispid hare.
- **Kaziranga National Park** (Assam – Jorhat)" One-horn Rhinoceros.
- **Dhragandhara Sanctuary**(Gujarat): **‘Ghurkahr’** extinct species of wild asses.
- **Keibul-Lamjao National Park** (Manipur): Brow antlered deer, water fowl.
- **Gir National Park** (Gujarat) : Asiatic Lion
- **Desert Sanctuary** (Rajasthan): Black buck, Chinkara, Godavan (Jaiselmer, Barmer)
- **Kanchanjunga National Park** (Sikkim): **Red Panda, Snow Leopard,** Clouded Leopard, Thar Musk Deer.
- **Vedanthangal Water bird Sanctuary**(Tamilnadu): Many species of water birds
- **Simplipal National Park** (Orissa-Mayurbhanj): Tiger, Gaur, Cheetal, Leopard, **flying Squirrel,** Crocodile.
- **Bhitarkanika wild life Sanctuary** (Orissa-Baleshwar): Salt water Crocodile, Monitor lizards, Leopards, water birds, **Ridley Turtle, sea fishing cat**
- **Dachigam National Park** (Jammu & Kashmir -Srinagar): Leopard, Black

Bear, Brown Bear, Serav, Muskdeer, **Hangul**

- **Dudhwa National Park** (Uttar Pradesh- Lakhimpur Khiri): Tiger, Leopard, Sloth bear, Swamp deer, Sambhar, Cheetal, wild Cock, Titar
- **Keoladeo Ghana National Park** (Rajasthan -Bharatpur) : **Siberian Creanes,** Storks, Sambar, Cheetal, **Black buck,** Civet Cat.
- **Pinvalley National Park**(Himachal Pradesh): Snow Leopard, Wild goat, Ibex.
- **Jim Corbett National Park** (Uttranchal): Panda, Tiger, Elephant etc.
- **Tiger and Elephant Project :** Tiger project was started in **1973** in the country. Its main objective is to protect and conserve the tiger. There are **27 tiger reserves** in the country. To protect and conserve elephants, elephant project was started 14 elephant projects are running in the country.
- **Biosphere Reserves** :Biosphere reserves are established in the country to conserve the ecosystem and preserve the biological diversity. **14 Biosphere reserves** have been established in the country.
- **Kharif Crops** - The crops which are sown in the beginning of rainy season (June- July) and ready to reap by the end of spring season after Dusherra (OctoberNovember) are called Kharif crops. Rice, jawar, bajra, maize, soyabean, sugarcane, cotton, groundnut, sesamum are the chief kharif crops.
- **Rabi Crops** - The crops, which are sown in October-November after Dussera and are ready to reap by the beginning of summer season in March-April are called Rabi crops. **Wheat, gram, barely, mustard, tobacco** are the main Rabi Crops. **Zaid Crops** - The crops grown in summer especially vegetables and green fodder are called Zaid crops.

- Position of India in the production of crops

Crops	Position of India in world	Highest producing State in India
Wheat	Fourth	Uttar Pradesh
Rice	Second	West Bengal
Jawar	First	Maharashtra
Maize	Tenth	Uttar Pradesh
Cotton	Fifth	Maharashtra
Jute	Second	West Bengal
Sugarcane	First	Uttar Pradesh
Tea	First	Assam
Soyabean	First	Madhya Pradesh

- Rice is the **main food crop of India** and wheat ranks second. In the total production of food grains wheat contributes 12.7% Rice 40.5%, Millets 30.3% and Pulses 16.5%.
- Pink revolution:** Emphasis is given on growing **fruits** in tropical and temperate climate (Apple, Mango, Banana, Coconut, Pineapple, Cashewnut, Oranges, Lemon, Almond) using the soil and varied climate of our country, this is named as pink revolution. **Blue Revolution** - Progress in production and productivity in fisheries sector in the country is called Blue Revolution. India is the world's third largest producer of fish. **Yellow Revolution** - The strategy of research and development in the field of production of crops for **edible oil and**

oil seeds is known as yellow revolution. India was self-sufficient till sixties in oilseed production but due to decreased area of oil seed crops in total cultivable land, negligible use of manures and fertilizer, limited irrigation facilities, increasing population, crop security and no use of scientific technology has reduced the production in the country. **White Revolution** - White revolution is closely related to animal rearing. White revolution means increase in **milk production** with the help of dairy development programmes in rural areas. This is also known as **operation flood**. **Green Revolution** - Green revolution means rapid increase in agricultural production by the use of seeds of high yielding variety, chemical fertilizers and new technology.

- Iron :**
- Haematite** - It is red and brown in colour, contains 60 to 70 percent of iron. This is the best quality iron ore found in abundance in India. It is found in aqueous rocks. **Magnetite** - It is a black coloured oxide of magnetic iron, containing 72 percent of iron. It is found in igneous rocks. Mainly found in Karnataka and Tamilnadu. **Limonite** - It is formed by the combination of oxygen, water and iron. It contains 10 to 40 percent of iron. It is yellow in colour and found in sedimentary rocks. **Siderite** - This is also known as iron carbonate formed by the combination of iron and carbon. It is brown in colour. 10 to 48 percent of iron is present in it.

- Oil Refineries of India

1. Digboi (Assam)	2. Vishakhapatnam (A. P.)
3. Barauni (Bihar)	4. Koyali (Gujarat)
5. Haldia (West Bengal)	6. Mathura (Uttar Pradesh)
7. Mangalore (Karnataka)	8. Bhatinda (Punjab)
9. Numaligarh (Assam)	10. Trombay (Maharashtra)
11. Noonmati	12. Kochi (Kerala)
13. Chennai (Tamilnadu)	14. Bongaigaon (Assam)
15. Panipat (Haryana)	16. Jamnagar (Gujarat)
17. Narimanam (Tamil Nadu)	18. Tatipaka (Andhra Pradesh)

- **Natural Gas :** Gas reserves are found near Tripura, Gujarat and western coast in India. Gas reserves are estimated in Cavery and Godawari regions. Production of natural gas the country is less as compare to reserves. Apart from its use in the houses as source of energy, it is also used in petro chemical industries and industries producing fertilizers and electricity, **60 percent of it is used in fertilizer industries**, 20 percent in the production of electricity, 15 percent in internal uses and 5 percent is used in other activities.

- **Coal:**

- **Anthracite :** It is the best quality coal. 85 to 95 percent of carbon is present in this type of coal. It is bright and very hard. When burnt it gives more heat and is smokeless.
- **Bituminous -** It is second grade coal containing 70 to 80 percent of carbon. It is black in colour and gives less smoke when burnt.
- **Brown or lignite -** This is a poor quality coal. 40 to 55 percent of carbon is present in this coal. It gives more smoke when burnt.
- **Peat -** This is the primary form of coal. It is deposited in the shallow pits due to the disintegration of vegetation. Carbon content is 20 percent and contains 80 percent humidity.

Coal based Thermal power projects in india :

- **Singrauli** (Uttar Pradesh) 2. Korba (Chhatisgarh) 3. Ramagundum (Andhra Pradesh) 4. Farakka (West Bengal) 5. Vindhyachal (Madhya Pradesh) 6. Rihand (Uttar Pradesh) 7. Dadri (Uttar Pradesh) 8. Kahalgaon (Bihar) 9. **Talchar** (Orissa) 10. Unchahar (Uttar Pradesh) 11. Badarpur (Delhi)
- **Hydroelectricity Producing areas -** First hydel power station in India was established in 1902 at Shivasamudram in Karnataka.
- **Important hydro electric projects of India**
- Punjab – Bhakar, Dehar, Pong

- Himachal Pradesh – Baria Siul
- Jammu and Kashmir– Lower Jhelum, Salal,
- Rajasthan – Rana Pratap Sagar
- Uttar Pradesh- Rihand, Yamuna Stage II, Chilka, Obera, Ramganga 198
- Gujarat –Ukai
- Madhya Pradesh – Gandhi Sagar
- Maharashtra Koyna 880
- Andhra Pradesh Lower Sileru 400
- Nagarjun Sagar 510
- Srisailem 330
- Karnataka Saravati, Kalinadi 810
- Kerala : Iddikki, Sabarigiri 300
- Tamilnadu – Kunda, Mettur 240
- Periyar 140
- Jharkhand – Subarnarekha
- Orissa – Balimela, Hirakund
- West Bengal – Damodar
- Manipur – Loktak
- **Geothermal energy** – The interior of the earth is very hot. Energy generated from this heat is called geothermal energy. Production of this energy depends on springs of hot water and water bodies. There are about 340 water bodies in different parts of our country. The important water bodies which produces electricity are situated in North -west Himachal and West Coast. Pooga in Jammu and Kashmir, mountain valleys of Himachal Pradesh and Western Coastal areas are producing geothermal energy. A plant to produce 300 KW electricity is developing in Tatapani (Chhattisgarh). The production of electricity from geothermal energy is controlled by National Geothermal Research Institute, Hyderabad.

- **Planets & satellites:**

Mars	Deimos, Phobos
Jupiter	Ganymede, Callisto, Europa,
Saturn	Titan, Tethys, Rhea, Iapetus, Dione
Uranus	Oberon, Titania, Umbriel, Ariel
Neptune	Triton

- **Major Trenches in the Ocean**

- Aleutian trench, Tonga trench, Philippine trench, Peru-Chile trench, Mariana Trench (near Micronesia)- **Pacific Ocean**
- Puerto Rico trench, South sandwich trench, Romanche trench- **Atlantic Ocean**
- Java trench- **Indian Ocean**

- **Composition of the Earth:**

Earths Crust : Oxygen (46.6%), Silicon (27.7%), Aluminium (8%), Iron (5%), Calcium (3.6%), Sodium (2.8%), Potassium (2.6%), Magnesium (2.1%)

Whole Earth : Iron (35%), Oxygen (30%), Silicon (15%), Magnesium (13%), Nickel (2.4%), Sulphur (1.9%), Calcium (1.1%), Aluminium (1.1%)

- **Principal Gases in the atmosphere**

Nitrogen	78.084
Oxygen	20.947
Argon	.934
Carbon Dioxide	.0314
Neon	.0018
Helium	.0005
Methane	.0002
Krypton	.00011
Hydrogen	.00005
Xenon	.0000087

- **Cotton textile industry:** The **first modern** textile mill was established in Calcutta in the year 1818 but it was a failure. The first modern successful mill was set up in 1851 in Mumbai by Shri Nanabhai Dabur.
- **Paper industry:** The **first** successful paper mill was set up in India in the year 1716 in Trankubar in Tamilnadu.
- **Ports of Western coast -** Kandla, Bombay, Nhavasheva (Jawaharlal Nehru Port), Marmagao, New Manglore and Cochin. **North Eastern Ports -** Tuticorin, Innaur, Chennai, Vishakhapatanam, Paradwip, Kolkata (This is the biggest free trade centre not only of India but the whole of Asia), and Haldia.

- Atlantic Ocean: The warm North Atlantic Drift (NAD) gives rise to the Irminger Current south of Iceland which travels along western and northwestern coasts of Iceland until it meets East Greenland Current. Another branch of NAD flows along Norway coast forming Norwegian current. Falkland current brings the cold waters of the Antarctic sea northward up to Argentina.
- Pacific Ocean :Kuroshio (or Kuro Siwo) Current of Pacific is similar to the gulf stream of Atlantic. One branch separates from Kuroshio current & enters the sea of Japan as Tsushima current. The Cold Oyashio (or Oya Siwo) Current (similar to Labrador current) is also known as Kurile current & it flows through the Bering Strait in a southerly direction. The cold Okhotsk current flows past Sakhalin to merge with Oya Siwo current near Hokkaido Island & later mergers with the warm Kuro Siwo current producing dense fogs. The north pacific drift continues later as Aleutian current which divides into two parts – the northern branch becomes Alaska current while the southern branch becomes California cold current (similar to Canary cold current of Atlantic). Cromwell current also called pacific equatorial undercurrent is a submarine river & flows towards east. Mindanao current is a southward flowing boundary current along the Philippine coast.
- Indian Ocean: One branch of the south equatorial current moves southward through the Mozambique Channel to form the Mozambique Current. This current joins the Agulhas Current & moves to the southern tip of Africa. During the northeast monsoon season the Somali Current flows southward & During the southwest monsoon the current develops into an intense northward jet
- La Nina is opposite of El Nino & intensifies the Humboldt Current. El

Nino causes drought conditions in India, Southern Africa, Australia & heavy rains in Chile, Colorado. The El Nino events of 1982 & 1997 were severe. The Southern Oscillation, a more recent discovery, refers to an oscillation in the surface pressure (atmospheric mass) between the southeastern tropical Pacific and the Australian-Indonesian regions.

• Tribal Groups of India

Gonds	MP, Jharkhand
Bhils	MP, Gujarat
Oraons	Bihar
Khonds	Orissa
Tharu	Uttaranchal & MP
Chenchu	Andhra Pradesh
Todas	Nilgiri Hills. Classic example of polyandry.
Lahaula	Himachal Pradesh
Badagas	Nilgiri region, Tamil Nadu
Baiga	M.P.
Bakkarwals	J & K
Bhotias	Uttaranchal, Sikkim & West Bengal
Bhulia	M.P.
Birhors	M.P., Chattisgarh, Jharkhand & Orissa
Gaddis	Himachal Pradesh
Gujjars	J&K & Himachal Pradesh
Irula	Tamil Nadu
Kanikar	Tamil Nadu
Katkari	M.P.
Kharia	M.P.
Khasa	Jaunsar region, Uttaranchal
Moplahs	Muslims of Malabar district, Kerala
Sabra	M.P.
Kol	M.P. & Maharashtra
Kolam	Andhra Pradesh
Kotas	Nilgiri Hills
Murias	Bastar District, Chattisgarh

Uralis	Kerala
Varlis	Maharashtra, Gujarat, Dadra & Nagar Haveli
Yurva	Tamil Nadu
Khasis	Meghalaya & Tripura
Mikirs	Assam
Kukis	Manipur, Assam, Nagaland & Tripura
Angami	Nagaland
Ao	Nagaland
Apatani	Arunachal Pradesh
Chuttra	Assam
Garos	Meghalaya & Assam
Jaintia	Meghalaya & Assam
Sema	Nagaland
Lushai	Mizoram & Tripura
Lepchas	Original Tribals of Sikkim
Abors	Arunachal Pradesh
Chakma	Tripura
Chang	A Naga tribe
Gallong	Arunachal Pradesh
Jarawas	Andaman & Nicobar.
Onges	Andaman & Nicobar.
Shompens	Andaman & Nicobar.
Sentinelese	Andaman & Nicobar.

• Various Revolutions in Indian Economy

Yellow Revolution	Oil Seeds
White Revolution-	Milk
Blue Revolution-	Fish
Pink Revolution-	Shrimp
Brown Revolution-	Masala
Grey Revolution-	Wool
Golden Revolution-	Horticulture

46. Indian Railways, Headquarters:

North Railway	Delhi
Southern Railway	Chennai
Eastern Railway	Kolkata
Western Railway	Mumbai (Churchgate)
North-Western Railway	Jaipur

North-Central Railway	Allahabad
North-Eastern Railway	Gorakhpur
North-East Frontier Railway	Guwahati
East Coast Railway	Bhubaneshwar
East Central Railway	Hazipur
West Central Railway	Jabalpur
Central Railway	Mumbai (V.T)
South-Central Railway	Secundarabad
South Eastern Railway	Kolkata
South-Western Railway	Bangalore
South-East Central Railway	Bilaspur

- **Irrigation in India** – Wells & Tubewell (56%), Canal (32%), Tank (6%), Others (6.5%). Uttar Pradesh leads in Canal irrigation as well as Tubewell irrigation. Andhra Pradesh leads in Tank Irrigation.
- **Ramsar Convention** on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides for the conservation and wise use of wetlands
- **Oil Fields Distribution:** Assam – Digboi, Naharkatia, Moran, and Sibsagar.
- **Ocean currents**

Current	Ocean	Type
Agulhas Current	Indian	Warm
Alaska Current North	Pacific	Warm
Benguela Current	South Atlantic	Cool
Brazil Current	South Atlantic	Warm
California Current	North Pacific	Cool
Canaries Current	North Atlantic	Cool
East Australian Current	South Pacific	Warm
Equatorial Current	Pacific	Warm

- Gujarat – Mehsana, Cholkha, Kalol, Nawagam, Ankaleshwar and Kosamba
- **Plantation Crop RUBBER:** Kerala (above 90 percent of total production, Kottayam, Ernakulum, Kozhikode and Kollan are the main producing districts)
- **Cash Crop TOBACCO:** Gujarat (90 percent of Tobacco from **Vadodara and Kheda** districts).
- **Mt. Rakaposhi** : Steepest peak in the world
- **Bhangar** : Old alluvium
- **Khadar** : New alluvium
- **Anai Mudi** (2,695m) the highest peak of South India is in Anaimalai Hills.
- **NILGIRI HILLS** is the meeting point of Western and Eastern Ghats.
- Punjab Himalaya (**Between Indus and Sutlej**), Kumaon Himalaya (Between Sutluj and Kali),
- Nepal Himalaya (Between Kali and Tista), Assam Himalaya (Between Tista and Dihang).
- **Mishmi Hills:** The highest range of Purvanchal Hills which is situated in the north-eastern part of **Arunachal Pradesh**.
- **IMPORTANT GULFS:** GULF MANNAR separates Sri Lanka and Southern India.
- **Renewable** resources do not exhaust e.g. Electricity, Wind energy, Solar energy etc.
- **Conventional Sources of energy** - Coal, Petroleum, Natural Gas and Electricity.
- **Non Conventional sources of energy** - Solar energy, Wind energy, Bio-energy, Geo-thermal energy etc.
- **Post offices:** To provide efficient services in big cities the dak distribution system has been classified as follows: **Capital channel** (yellow coloured letterboxes), **Metro channel** (Light blue coloured letter boxes), **Green Channel** (green letter boxes, local letters)
- In cyclone when the Isobars form concentric closed circles, the smallest circle in the centre indicates a **low pressure centre**. Air moves from a high pressure area to a low pressure area. In the Northern Hemisphere the wind blows in a counter clock-wise direction in a cyclone. In the southern Hemisphere, the wind blows in a clock-wise direction.
- The Anti-cyclone is opposite of cyclone. Anti cyclone have **high pressure in the centre** and they are surrounded by low pressure. The isobar is usually circular and the winds blow in clock-wise direction in the northern Hemisphere and counter clock-wise in the southern Hemisphere. The winds blow outwards from the centre in such condition.
- Block mountain – black forest, Old fold mountain – Appalachian, young fold mountain – rocky, relict mountain – Scottish highlands.

Gulf Stream	North Atlantic	Warm
Humboldt (Peru) Current	South Pacific	Cool
Kuroshio (Japan) Current	North Pacific	Warm
Labrador Current	North Atlantic	Cool
North Atlantic Drift	North Atlantic	Warm
North Pacific Drift	North Pacific	Warm
Oyashio (Kamchatka) Current	North Pacific	Cool
West Australian Current	Indian	Cool
West Wind Drift	South Pacific	Cool

• Rocks

- Down to a depth of 16 km from the surface of land, 95 per cent of the earth materials found in the earth's crust consist of rocks. Rocks are made up of individual substances, called minerals, found mostly in solid state. Rocks are usually classified into the following three major types.

- Igneous :** These rocks are formed directly from the molten material, when it gets solidified, e.g. Mica, Granite, etc.

- Sedimentary :** These rocks are formed from materials which have accumulated as a result of building up of particles derived from other rocks or from the remains of organically formed matter or from deposits created by chemical action, e.g., Gravel, Peat, Gypsum, etc.

- Metamorphic :** These rocks were originally igneous or sedimentary but have been changed by pressure, heat or action of water, e.g. Gneiss, Marble, Quartzite, etc.

• Latitude and Longitude

- A globe has two fixed points—the North Pole and the South Pole. An imaginary line equator is drawn in such a way that at all points it lies exactly halfway between the two poles. It divides the earth into two equal parts i.e., the Northern Hemisphere and the Southern Hemisphere. One set of lines drawn in between the two poles in an east-west direction are called parallels of latitudes. The other set of lines drawn

joining the north and the south poles are called meridians of longitude. The equator has a latitude of 0° . The distance between any two parallels of latitude is always equal.

Important Parallels of Latitude

- The Tropic of Cancer :** It is in the northern hemisphere at an angular distance of $23\frac{1}{2}^\circ$ ($23^\circ 30'N$) from the equator.
- The Tropic of Capricorn :** It is in the southern hemisphere at an angular distance of $23\frac{1}{2}^\circ$ ($23^\circ 30'S$) from the equator.
- The Arctic Circle :** It lies at a distance of $66\frac{1}{2}^\circ$ ($66^\circ 30'N$) north of the equator.
- The Antarctic Circle :** It lies at a distance of $66\frac{1}{2}^\circ$ ($66^\circ 30'S$) south of the equator. There are two solstices each year, called the Summer Solstice and the Winter Solstice.
- Summer Solstice :** The day of 21st June when the sun is vertically overhead at the Tropic of Cancer ($23^\circ 30'N$).
- Winter Solstice :** The day of 22nd December when the sun is vertically overhead at the Tropic of Capricorn ($23^\circ 30'S$).

Meridians of Longitude

- The semi-circles running from pole to pole or from north to south are known as meridians of longitude and distance between
- them is measured in degrees of longitude. Greenwich Meridian or Prime Meridian with a value of 0° longitude serves as a common base

for numbering meridians of longitude lying on either side of it — east as well as west. There are 360 meridians including Prime Meridian. Each degree of a longitude is divided into sixty equal parts, each part is called a minute. Each minute is again divided into sixty equal parts, each part being called a second.

- Local Time :** Local time of any place is 12 noon when the sun is exactly overhead. It will vary from the Greenwich time at the rate of four minutes for each degree of longitude.
- Standard Time :** It is the uniform time fixed by each country. It is fixed in relation to mean time of a certain meridian which generally passes through it.
- Greenwich Mean Time :** The time at 0° longitude is called Greenwich Mean Time. It is based on local time of the meridian passing through Greenwich near London.
- Indian Standard Time :** It is fixed on the mean of $82\frac{1}{2}^\circ E$ Meridian, a place near Allahabad. It is $5\frac{1}{2}$ hours ahead of Greenwich Mean Time.
- International Date Line :** It roughly corresponds to $180^\circ E$ or W Meridian of longitude and the date changes by one day as this line is crossed. If one crosses this line from east to west a day is added, and a day is subtracted while moving from west to east.
- Mesozoic Era :** This era started about 225 million years ago and

ended about 65 million years ago. This era includes the main period : Jurassic period.

- **Eclipses**
- When the light of the sun or the moon is blocked by another body, the sun or moon is said to be in eclipse.
- **Solar Eclipse** : It is caused when the moon revolving around the earth comes in between the earth and the sun, thus making a part or whole of the sun invisible from a particular part of earth. Thus, the eclipse can be partial or complete.
- **Lunar Eclipse** : When the earth comes between the moon and the sun, the shadow cast by the earth on the moon results in a lunar eclipse.
- **BLACK HOLES** : For stars in excess of 50 solar masses, the core collapse is so extreme that the whole mass may collapse into a single point. The intense concentration of mass causes a distortion of local space-time to such an extent that even radiation (i.e. light) cannot escape from the 'sphere of influence', which theoretically extends to a radius of 29.5 km for a ten solar mass core, and would therefore appear as a 'black hole' with a diameter of 59 km.

ENVIRONMENTAL LEGISLATION:

- India had an Elephant's Preservation Act of 1879 and a Forest Act of
- 1927, environment related legislation came very late in 1972 with Wild Life Protection Act 1971.
- Article 48A states "**The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country**".
- The Environment Protection Act of 1986 (EPA) came into force soon after the Bhopal Gas Tragedy.
- The Water (Prevention and Control of Pollution) Act of 1974 and Amendment, 1988
- The Water (Prevention and Control of Pollution) Cess Act of 1977

- The Air (Prevention and Control of Pollution) Act of 1981 and amendment, 1987
- The Wild Life (Protection) Act of 1972 and Amendment, 1982
- The Forest (Conservation) Act of 1980
- Wetland Convention (Ramsar Convention)
- It is an international convention came in force in 1975. The convention provides the framework for international cooperation for the conservation and wise use of wetland habitats. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) serves as the Depositary for the Convention, and its secretariat, the Ramsar Bureau, is in Gland, Switzerland. India became signatory to this convention on in 1981.
- The Convention aims to halt the loss of wetlands and to ensure the conservation of fauna and flora and their ecological processes. Obligations of parties include:
 - designating one or more wetlands for inclusion in the list of Wetlands of International
 - Importance (e.g. six Ramsar wetlands in India).
 - promoting wise judicious use of wetlands, including mangroves.
 - promoting conservation of wetlands through establishment of nature reserves.
 - irrespective of their listing under the Convention and managing wetlands for the benefit of water fowl.
 - promoting training in the field of wetland research, managing and warding.
 - consulting with other parties about implementation of the convention, especially with regard to trans frontier wetlands, shared water systems, shared species, and development of wetland projects.

Montreal Protocol

- To pursue the objectives of convention for the protection of ozone layer the **Montreal**
- **Protocol on Substances** that deplete the Ozone layer was agreed to by nations in 1987 and has since been amended five times so far. Its control provisions were strengthened through five amendments to the Protocol adopted in London (1990), Copenhagen (1992), Vienna (1995), Montreal (1997) and Beijing (1999). The Protocol aims to reduce and eventually eliminate the emission of man-made ozone depleting substances.
- **UN Framework Convention on Climate Change (UNFCCC)** is the landmark international treaty unveiled at the United Nations Conference on Environment and Development in Rio de Janeiro in June 1992.
- In pursuance with the objectives of the Convention on Climate Change the **Kyoto Protocol** was agreed upon in December 1997 in Kyoto, Japan.
- **The Convention on Biological Diversity (CBD)** was adopted during the United Nations
- Conference on Environment and Development (UNCED - or the "Earth Summit") in Rio de Janeiro on 5 June 1992. CBD has been instrumental in highlighting conservation of biodiversity on the international agenda and its implementation on national level.
- **Environmental Impact Assessment (EIA)** which is a tool for preventing adverse environmental impact of developmental activities, significance, methodology and practice. EIA was introduced in India in 1978, with respect to river valley projects.
- The Central Pollution Control Board (CPCB), is statutory organisation, was constituted in September, 1974

under the Water (Prevention and Control of Pollution) Act, 1974.

- **Indian Board for Wildlife (IBWL)**
- The IBWL is the apex advisory body in the field of Wildlife Conservation in the country and is headed by the Honorable Prime Minister of India
- United Nations Environment Programme (UNEP)
- UNEP was created by United Nations General Assembly, as an outgrowth of the United Nations Conference on the Human Environment, held in Stockholm 1992. It is headquartered in **Nairobi** (Kenya).
- The World Health Organization (WHO)
- It is one of the original agencies of the United Nations, its constitution formally coming into force on the first **World Health Day**, (7 April 1948), when it was ratified by the 26th member state. The WHO has 193 Member States.

HELI

- To tackle environment related health hazards WHO has developed **Health Environment Link Initiative (HELI)**. HELI is a global effort by WHO and UNEP to support action by developing country policymakers on environmental threats to health.
- **Kyoto Protocol- what it means**
- The Kyoto Protocol, an international and legally binding agreement to reduce greenhouse gas emissions worldwide, entered into force on 16 February 2005.
- Crocodile Biosphere Reserve in India Katarniaghat – U.P.
- Satkotia – Odissa
- Papikonda – Andhra Pradesh
- Gundi – Tamilnadu
- Central Crocodile breeding and Management Training Institute – Hyderabad

Marine Biotic Community

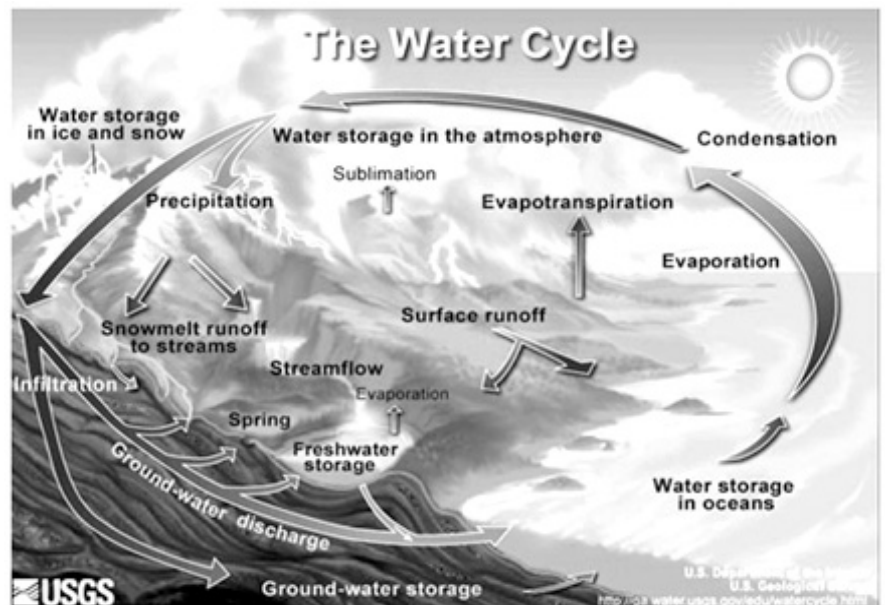
- Plankton community –eg. coppedad, Dufocid

- Necton community – eg. Whale
- Benthos community – Octopus, Hetchet

Water Cycle (Hydrologic Cycle)

- Water is always on the move. Rain falling where you live may have been water in the ocean just days before. And the water you see in a river or stream may have been snow on a high mountaintop. Water can be in the atmosphere, on the land, in the ocean, and even underground. It is recycled over and over through the water cycle. In the cycle, water changes state between liquid, solid (ice), and gas (water vapour). Most water vapour gets into the atmosphere by a process called evaporation. This process turns the water that is at the top of the ocean, rivers, and lakes into water vapour in the atmosphere using energy from the Sun. Water vapour can also form from snow and ice through the process of sublimation and can evaporate from plants by a process called transpiration.

- The water vapour rises in the atmosphere and cools, forming tiny water droplets by a process called condensation. Those water droplets make up clouds. If those tiny water droplets combine with each other they grow larger and eventually become too heavy to stay in the air. Then they fall to the ground as rain, snow, and other types of precipitation. Most of the precipitation that falls becomes a part of the ocean or part of rivers, lakes, and streams that eventually lead to the ocean. Some of the snow and ice that falls as precipitation stays at the Earth surface in glaciers and other types of ice. Some of the precipitation seeps into the ground and becomes a part of the groundwater.
- Water stays in certain places longer than others. A drop of water may spend over 3,000 years in the ocean before moving on to another part of the water cycle while a drop of water spends an average of just eight days in the atmosphere before falling back to Earth.



Food Chains in Ecosystem

- The unidirectional transfer of food energy from the producers, through a series of organisms (herbivores to carnivores to decomposers) with repeated eating and being eaten, is known as food chain. Producers utilize the radiant energy of sun which is transformed to chemical form, ATP during photosynthesis. Thus

green plants occupy, in any food chain, the first trophic (nutritional) level- the producers level, and are called the primary producers. The energy, as stored in food matter manufactured by green plants, is then utilized by the plant eaters- the herbivores, which constitute the second trophic level- the primary consumers level, and are called the primary consumers (herbivores). Herbivores in turn are eaten by the carnivores, which constitute the third trophic level- the secondary consumers level, and are called the secondary consumers (carnivores). These in turn may be eaten still by other carnivores at tertiary consumers level i.e. by the tertiary consumers (carnivores). Some organisms are omnivores eating the producers as well as the carnivores at their lower levels in the food chain.

- A number of food chains are interconnected by organisms which occur in more than one food chain. All organisms, including man need food which provides energy for growth, maintenance and reproduction. A part of the energy provided by food is used for biological processes and the rest is dissipated to the environment as heat energy by the process of respiration. Undigested food is excreted and enters the detritus path. Now, plants can be eaten by a rat. The rat, in turn, can be eaten by a cat and finally, the cat can be eaten

by a dog. So, we find that there is a sequence in which one organism eats up the other organisms to fill its belly. The sequence of living organisms in a community, in which one organism consumes another organism to transfer food energy, is called a Food Chain.

Project Tiger

- Project Tiger Scheme was launched in 1973 as a Centrally Sponsored Scheme of Government of India.
- **Project Elephant (PE)** was launched by the Government of India in the year 1992.
- **The Montreal Protocol on Substances that**

Deplete Ozone Layer (adopted, 1987; entered into force, 1989)

- The Montreal Protocol on Substances that Deplete Ozone Layer is a protocol under the Vienna Convention. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform—are to be phased out. Further the ‘Multilateral Fund for the Implementation of the Montreal Protocol’ provides funds to help developing countries to phase out the use of ozone-depleting substances. Funds are used, for example, to finance the conversion of existing manufacturing processes, train personnel, pay royalties and

patent rights on new technologies, and establish national ozone offices.

- **The Cartagena Protocol** on Biosafety to the Convention on Biological Diversity is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. It was adopted on 29 January 2000 as a supplementary agreement to the Convention on Biological Diversity and entered into force on 11 September 2003.
- **The Nagoya Protocol** on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components. It was adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting on 29 October 2010 in Nagoya, Japan.



Budget 2015-16 & Economic Survey

- Roadmap to achieve Fiscal deficit of 3% of GDP in three years: Target is 3.9% in 2015-16, 3.5% in 2016-17, 3% in 2017-18.
- National Insurance scheme called PM Suraksha Bhima Yojana, offering coverage of 2 lakh rupees for just premium of Rs.12 per year.
- GST will be put in place state of art internationally indirect tax system by April 1st 2016
- National Skill Mission to be launched through skill development and entrepreneurship ministry, to develop employability of youth, especially below 25 years of age
- Propose to set-up an IT based student financial aid system under PM Vidya Laxmi scheme. The new Pradhan Mantri Vidya Lakshmi Programme will ensure no student misses out on higher education opportunities due to lack of funds
- Defer the applicability of GAAR for 2 years; will only apply prospectively after Apr 2017.

ECONOMIC SURVEY

- Growth rate of over eight percent expected in 2015-16.
- Foodgrain production in 2014-15 estimated at 257.07 million tonnes; will exceed average foodgrain production of last five years by 8.5 million tonnes
- Agriculture and allied sectors contributed 18 percent to GDP
- Services sector clocks double digit growth of 10.6 percent
- **Facts About GST – What is Goods and Services Tax:**
- The Goods and Service Tax or GST is a taxation system where there is a

single tax in the economy for goods and services. This taxation system is meant to create a single taxation system in the entire country for all goods and services.

Facts About GST – Advantages

- GST is a transparent Tax and also reduce numbers of indirect taxes. With GST implemented a business premises can show the tax applied in the sales invoice. Customer will know exactly how much tax they are paying on the product they bought or services they consumed.
- GST will not be a cost to registered retailers therefore there will be no hidden taxes and the cost of doing business will be lower. This in turn will help Export being more competitive.
- GST can also help to diversification of income sources for Government other than income tax and petroleum tax.
- Under Goods and Services Tax, the tax burden will be divided equally between Manufacturing and services. This can be done through lower tax rate by increase Tax base and reducing exemptions.
- In GST System both the Central GST and State GST will be charged on manufacturing cost and will be collected on point of sale. This will benefit people as prices will come down which in turn will help companies as consumption will increase.
- Biggest benefit will be that multiple taxes like octroi, central sales tax, state sales tax, entry tax, license fees, turnover tax etc will no longer

be present and all that will be brought under the GST. Doing Business now will be easier and more comfortable as various hidden taxation will not be present.

Facts About GST – Disadvantages

- Critics say that GST would impact negatively on the real estate market. It would add up to 8 percent to the cost of new homes and reduce demand by about 12 percent.
- Some Economist says that CGST, SGST and IGST are nothing but new names for Central Excise/Service Tax, VAT and CST and hence GST brings nothing new for which we should cheer.
- 12 RBI Governor Raghuram Rajan announced on 12 February 2014 that in coming days Indian citizens without a bank account would be able to withdraw cash from an ATM (automated teller machine) with the help of mobile technology. Payment banks will play important role in facilitating this system under which a payment system will facilitate funds transfers from bank account holders to those without accounts through ATMs. Which committee had recently recommended establishment of payment banks? – **Nachiket More Committee on Financial Inclusion**
- 113. Till February 2014, the Reserve Bank of India has issued the certificate of authorisation to how many non-bank entities for setting up and operating white label ATMs (WLAs) in India? – **Four (The entities which got the permission are Tata Communications Payment**

Solutions; Prizm Payment Services, Mumbai; Muthoot Finance , Kochi and Vakrangee Limited, Mumbai.

- **Plastic notes** in the denomination of Rs. 10 will be introduced on a trial basis in which five cities in the second half of 2014, as stated by the Union Government on 7 February 2014 in the Parliament? – **Kochi, Mysore, Jaipur, Shimla and Bhubaneswar**
- Who will head the **7th Central Pay Commission** which will revise salaries of over 50 lakh central government employees and remuneration of 30 lakh pensioners? – **Justice Ashok Kumar Mathur**
- What is the name of a new fund announced on 27 January 2014 by the National Innovation Council (NInC) and the Ministry of Micro, Small and Medium Enterprises to combine innovation and the dynamism of enterprise to solve the problems of citizens at the bottom of the economic pyramid in India? – **India Inclusive Innovation Fund – III**
- What was the GDP growth rate figure for Indian economy for 2012-13 declared by the Union Government on 31 January 2014? – **4.5%**
- To promote women entrepreneurship, the country's first women's bank – the **Bharatiya Mahila Bank (BMB)** – has chosen to do away with collateral for loans availed by women. The BMB will provide collateral-free loans for amounts up to Rs 1 crore. Which entity would cover the risk under this initiative? – **Credit Guarantee Fund Trust for Micro and Small Enterprises – CGTMSE**
- **Mayaram Panel** -The government had set up a four-member committee headed by Economic Affairs Secretary Mayaram to define FDI and FII and remove the ambiguity between them.
- Who was the head of RBI's committee on strengthening

monetary policy framework, which in its recommendations has suggested that the target for inflation should be set at 4% with a band of +/- 2% around it? – **Urjit Patel**

- The Reserve Bank of India during January 2014 constituted an 8-member expert committee to review the governance of bank boards in India, which includes examining the ownership and salary structure of banks. Who heads this committee? – **PJ Naik**,
- Which stock exchange retained its position as the world's largest bourse in terms of equity trades for the second consecutive year in 2013? – **India's National Stock Exchange (NSE)**
- Retirement fund-body the **Employees' Provident Fund Organisation (EPFO)** on 13 January 2014 decided to increase the rate of interest on Provident Fund deposits to 8.75 per cent for 2013-14, a move that will benefit about 5 crore subscribers. What was the present rate of interest for EPFO subscribers? – **8.5%**
- **SEBI (Securities and Exchange Board of India)** Chairman **UK Sinha's** term was extended by 2 years during January 2014. Sinha will now head the regulatory body till 16 March 2016. Among the last four chairmen, Sinha is the only one whose term has been extended. Who is the only SEBI chief to have held the post for a longer duration than Sinha? – **D.R. Mehta** (Mehta served as SEBI Chairman for 7 years (1995-2002). Sinha's three predecessors – GN Bajpai (2002-2005), M Damodaran (2005-2008) and CB Bhav (2008-2011) – had only got a three-year terms)
- The committee constituted by the Reserve Bank of India (RBI's) to promote financial inclusion headed by Nachiket Mor in its report, presented to the RBI on 7 January 2014, recommended universal

electronic bank accounts to all Indian citizens above the age of 18 years. What is the deadline for opening these bank accounts as recommended by the committee? – **1 January 2016**

- **The Reserve Bank of India (RBI)** on 23 December 2013 warned users, holders and traders of **virtual currencies**, including bitcoins, of financial, operational, legal, customer protection and security related risks. Why was this warning given by the RBI for **bitcoins type currency**, which is digital or virtual currency that uses peer-to-peer technology to facilitate instant payments? – Because bitcoins as a medium for payments are presently not authorised by any central bank or monetary authority in India (**Bitcoin** is an alternative currency, which uses cryptography for security, making it difficult to counterfeit. Bitcoin issuance and transactions are carried out collectively by the network, with no central authority. The central bank said it was keeping watch at the developments relating to certain electronic records claimed to be decentralised digital currency such as **bitcoins, litecoins, bbqcoins, dogecoins** and their usage or trading in the country)
- Who was appointed as the new Chairman of the National Bank for Agriculture and Rural Development (NABARD) during December 2013? – **Harsh Kumar Bhanwala**
- Who on 12 November, 2013 was appointed as the first Chairperson and Managing Director of Bharatiya Mahila Bank (BMB), the first all-women bank of India? – **Usha Anathasubramaniam**
- The Reserve Bank of India (RBI), on 6 November, 2013, permitted wholly-owned subsidiary (WOS) of foreign banks to acquire domestic private sector banks as well as set up branches anywhere in the country. It also allowed foreign bank

subsidiary to list on local stock exchanges. What is the maximum holding above which foreign bank subsidiaries would not be able to hold in domestic private sector banks? – **74%** (It is the sectoral cap for overall foreign investment and would apply in this case too)

- What was **India's unemployment rate** during the five year period ending 2009-10, data pertaining to which was released by the **National Sample Survey Organisation** on 26 October, 2013? – **2.8%** (This displayed fall of 1% in unemployment rate from 3.8% during previous 5-year period. The data pertaining to unemployment rate was based on NSSO's 8th Quinquennial survey on employment and unemployment conducted in the 66th round of NSS during July 2009 to June 2010)
- Which city witnessed **maximum unemployment rate** during the five year period ending 2009-10, as stated in the latest NSSO report released on 26 October, 2013? – **Patna** (Patna witnessed unemployment rate of 13.2% during this period and it was followed by Kanpur which witnessed 7.7% unemployment)
- Which city witnessed **minimum unemployment rate** during the five year period ending 2009-10, as stated in the latest NSSO report released on 26 October, 2013? – **Bhopal** (Bhopal witnessed an unemployment rate of just 0.1% during this period. Gujarat's Surat was in second place with unemployment rate of 0.6%)
- What is the name of a panel constituted by the Reserve Bank of India (RBI) during October 2013, which would give its recommendations for implementing a **national Indian Bill Payment System** so that households will be able to use bank accounts to **pay school fees, utilities, medical bills** and make remittances electronically? – **GIRO Advisory**

Group (GAG) – GAG is headed by Prof. Umesh Bellur

- The Reserve Bank of India (RBI) on 19 October, 2013 launched the new Real Time Gross Settlement (RTGS) system for large-value funds transfer. This new RTGS system provides new functionalities like advance liquidity features, gridlock resolution mechanism and hybrid settlement facility, facility to accept future value-dated transactions and options to process multi-currency transactions. It complies with which latest ISO standard system? – **ISO 20022**
- Three American economists – **Eugene Fama, Lars Peter Hansen** (both with the University of Chicago) and **Robert Shiller** (Yale University) won the 2013 Nobel Prize for Economics. This announcement was made by the Royal Swedish Academy of Sciences on 14 October, 2013. What was the area of research of these three economists for which they were selected for this prestigious award? – **For developing new methods to study trends in asset markets**
- **Selected Terms:**
- **Revenue Deficit :** Difference between revenue expenditure & revenue receipts
- **Budget Deficit :** Difference between total expenditure & revenue receipts
- **Fiscal Deficit :** Budget deficit plus non debt creating capital receipts
- **Primary Deficit :** Fiscal deficit – Interest Payments.
- **Direct & Indirect Taxes:**

Direct Tax	Indirect Tax
Corporation Tax	Excise Duties
Income Tax	Service Tax
Interest Tax	Central Value Added Tax (Vat)
Expenditure Tax	Sales Tax
Wealth Tax	Property Tax
Gift Tax	Octroi
Estate Duty	Customs Duties
Land Revenue	Stamp Duties

- **Types of unemployment:**
- **Disguised unemployment** is when people are employed but their marginal productivity is zero.
- **Functional unemployment** occurs when people change from one job to another & there is an interval. This can happen even in a situation of full employment.
- **Structural unemployment** happens when jobs exist for qualified persons but the unemployed do not have the matching qualifications. It also occurs when labour is available, but factors of production are missing.
- **Cyclical unemployment** arises out of cycles of recession.
- **WTO terminology:**
- Subsidies in general are identified by “boxes” which are given the colours of traffic lights: **green** (permitted), **amber** (slow down — i.e. be reduced), **red** (forbidden).
- **Green Box:** For agriculture, all domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box. In order to qualify for the “**green box**”, a subsidy must not distort trade, or at most cause minimal distortion. It includes amount spent on research, disease control, infrastructure & food security.
- **Blue box** subsidies are held to be trade distorting & include direct payment to farmers to limit production & certain government assistance to encourage agriculture & rural development in developing countries.
- **Trade Related Investment measures (TRIMS)** under WTO apply that no restrictions will be imposed on foreign investment in any sector; all restrictions on foreign companies will be scrapped; Imports of raw materials by foreign companies are to be allowed freely.

- **Four Modes of Services under GATT**
- **Mode - 1:** Cross border trade, which is defined as delivery of a service from the territory of one country into the territory of other country.
- **Mode - 2 :** Consumption abroad - this mode covers supply of a service of one country to the service consumer of any other country.
- **Mode - 3:** Commercial presence- which covers services provided by a service supplier of one country in the territory of any other country.
- **Mode - 4 :** Presence of natural persons - which covers services provided by a service supplier of one country through the presence of natural persons in the territory of any other country.
- **The Phillips curve** illustrates the relationship between inflation and unemployment.
- **Laffer Curve** – hypothesis that when the tax rate is raised the revenue realized tends to fall.
- **Zero-based Budgeting** requires that a program be justified from the ground up each fiscal year. ZBB is especially encouraged for Government budgets because expenditures can easily run out of control if it is automatically assumed what was spent last year must be spent this year

Organizations & Their Survey/Reports	
Wholesale Price Index	Ministry of Industry
Poverty Ratio	Planning Commission
Economic Survey	Ministry of Finance
National Account Statistics	CSO
World Economic & Social Survey	U. N
World Investment Report	UNCTAD
Global Competitiveness Report	World Economic Forum
World Economic Outlook	IMF
Business Competitive Index	World Economic Forum
Green Index	World Bank
Business Confidence Index	NCAER
World Development Indicator	World Bank
Overcoming Human Poverty	UNDP
Global Development Report	World Bank

- PNB is the oldest existing commercial bank in India.
- **Bretton Woods Agreement** led to the establishment of World Bank & IMF.
- **Current Account Convertibility** – the holders of domestic currency have the right to convert the currency into foreign exchange for any current account purpose such as travel, tourism, trade. Transactions like those in assets are not permissible unless there capital account convertibility.
- At present the value of **SDR**(special drawing rights) is fixed in relation to a basket of five currencies – US dollar, German mark, British pound, French frank & Japanese yen.
- The CSO is responsible for estimating the national income in india.
- **Components of Money Supply:**
- **M1 :** Consists of currency with the public (ie notes & coins in circulation minus cash with the banks) plus demand deposits with the bank (deposits which can be withdrawn without notice) plus other deposits with RBI (usually negligible). Also called narrow money
- **M2:** M1 + saving deposits + Certificate of Deposits (CDs) + term deposits maturing within a year.
- **M3:** M2 + term deposits with maturity more than a year + term borrowing of banking system. Also known as broad money.
- **L1 :** M3 + all Deposits with the Post Office Savings Banks (excluding National Savings Certificates)
- **L2:** L1 + Term Deposits with Term Lending Institutions and Refinancing Institutions (FIs) + Term Borrowing by FIs+ Certificates of Deposit issued by FIs; and
- **L3:** L2 + Public Deposits of Non-Banking Financial Companies
- **Millenium Development Goals:**
- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria, and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

- **Various Acts & their Enactment Years:**
- **Banking Regulation Act :** 1949
- **Industries (Development & Regulation) Act :** 1951
- **MRTPA Act :** 1969
- **FERA :** 1973
- **FEMA :** 2000
- **Competition Act :** 2002
- **Commissions/Committees & Their Purpose:**
- **Arjun Sen Gupta Committee :** Public Sector Enterprise Autonomy
- **Rangarajan Committee :** Disinvestment of PSUs & Balance of Payments.
- **Malhotra Committee :** Insurance Sector & its regulation. Follow up led to setting up of IRDA.
- **Madhukar Committee :** Gold exchange traded fund implementation.
- **Naresh Chandra Committee :** Corporate Audit & Governance
- **JJ Irani Committee :** Company Law
- **B. Bhattacharya Committee :** Committee on pension reforms
- **Rakesh Mohan Committee :** Small saving & Administered interest rates
- **Vijay Kelkar Committee :** FRBM (fiscal responsibility & budget management) Act implementation
- **Raghvan Committee :** Replacement of MRTPA act by competition act.
- **M.S. Verma :** Restructuring weak banks
- **Lakdawala Committee :** Estimating Poverty line in India
- **Rakesh Mohan Committee :** Development of Infrastructure in India
- **Abid Hussain Committee :** Small Scale industry Sector
- **Omkar Goswami Committee :** Industrial Sickness
- **G.V. Ramakrishna :** Disinvestment Commission
- **Vaghul Committee :** Money Markets India reforms



PUNJAB PCS PAPER - I 2013

1. India obtained observer status in the Arctic Council. The Council has eight members. Which one of the following countries is **not** a member of the Arctic Council?
 - (a) Russia (b) U.S.A.
 - (c) U.K. (d) Sweden
2. Consider the following statements:
 1. Mahatma Gandhi Pravasi Suraksha Yojana (MGPSY) is a pension and life insurance fund scheme introduced by the Ministry of External Affairs.
 2. The scheme is for the Overseas Indian workers having Emigration Check Required (ECR) passports.

Which of the above statements is/are true?

 - (a) Both 1 and 2
 - (b) 1 only
 - (c) 2 only
 - (d) None of the above
3. What is Ug 99?
 - (a) A newly discovered Black hole located in the constellation Ophiuchus.
 - (b) Gene responsible for sickle-cell anaemia.
 - (c) Wheat rust disease which hits stem of wheat plant.
 - (d) The asteroid which had a close pass with the Earth in September 2013.
4. Under the 'Campaign Clean India', an initiative of Ministry of Tourism, ONGC has adopted six monuments/tourist destinations in India. Which of the following is **not** one amongst these?
 - (a) Taj Mahal
 - (b) Ellora Caves
 - (c) Elephanta Caves
 - (d) Char Minara
5. What is "Jiyo Parsi"?
 - (a) An upcoming Bollywood film on the life and contribution of Tatas.
 - (b) Famous music album composed by Parsi children.
 - (c) A scheme to increase the declining population of Parsis.
 - (d) A scheme for old population of Parsis for treatment of geriatric ailments.
6. Consider the following statements:
 1. JENVAC is an indigenously produced Japanese encephalitis vaccine.
 2. It is a live attenuated vaccine.
 3. Japanese encephalitis is a bacterial infection.

Which of the above mentioned statements is/are correct?

 - (a) 1 and 2
 - (b) 1, 2 and 3
 - (c) 1, 2 and 3
 - (d) 1 only
7. Match the following :

<u>Name of</u> <u>Football Player</u>	<u>Country/</u> <u>National Team</u>
A. Marion Suarez mata	1. Germany
B. Gareth Bale	2. Spain
C. Robert Lewandowski	3. Wales
D. Marco Reus	4. Poland

Choose the correct code :

	A	B	C	D
(a)	1	2	3	4
(b)	2	3	4	1
(c)	3	2	4	1
(d)	4	3	1	2
8. Which of the following statements are correct regarding the entitlements under the Janani Shishu Suraksha Karyakaram (JSSK) of Ministry of Health and Family Welfare, Government of India?
 1. Free and zero expense delivery of pregnant women excluding Caesarean section.
 2. Free drugs and consumables.
 3. Essential diagnostics at nominal user charges.
 4. Free and zero expense treatment of sick newborn till 30 days after birth.

Choose the correct combination :

 - (a) 1, 2 and 3
 - (b) 2 and 4
 - (c) 1 and 4
 - (d) 1, 2, 3 and 4
9. Cyber Coalition 2013 refers to
 - (a) Cyber security exercise conducted by NATO
 - (b) An organization for cyber security formed by China
 - (c) A coalition formed by India and South East Asian countries to secure cyberspace
 - (d) Cyber security exercise conducted by Russia
10. Consider the following statements:
 1. Nkosazana Dlamini-Zuma become the first woman to take over office as the Chairperson of the African Union Commission (AUC).
 2. The African Union headquarters are located at Nairobi.
 3. All the African nations are members of the African Union.

Which of the above statements is/are correct?

 - (a) Only 1
 - (b) 2 and 3
 - (c) 1 and 3
 - (d) 1, 2 and 3
11. Magnus Carlsen, who won the recent World Chess Championship, hails from which of the following countries?
 - (a) Finland
 - (b) Sweden
 - (c) Russia
 - (d) Norway

12. What is the 'Know India Programme' of the Government of India?
- It is an orientation programme designed by the Ministry of Finance to familiarise FIIs with rules of investment in India.
 - It is a tourism programme designed by the Ministry of Tourism under 'Incredible India' for promoting tourist arrivals in the country.
 - It is an orientation programme designed by the Ministry of Overseas Indian Affairs for diaspora youth to promote awareness on different facets of life in India.
 - It is an orientation programme designed by the Ministry of Art and Culture to promote awareness regarding the cultural aspects of India and its States.
13. Which among the following sites has been selected under the project "Destination Flyways" by United Nations World Tourism Organization (UNWTO) for development of sustainable tourism?
- Sunderbanse Delta
 - Chilika Lagoon
 - Western Ghats
 - Ashtamudi Lake
14. Consider the following statements:
- The Lusofonia Games is a multinational multi-sport event organized by the Association of Portuguese Speaking Olympic Committees (ACOLOP).
 - ACOLOP is approved by the IOC (International Olympic Committee).
 - Bengaluru, India hosted the 2014 Lusofonia games.
- Which of the above statements is **not** correct?
- Only 1
 - Only 2
 - Only 3
 - None of the above
15. Chemical agent Sarin was used in the chemical attack carried out in Syria in 2013. Which type of chemical agent is Sarin?
- Blister Agent
 - Choking Agent
 - Blood Agent
 - Nerve Agent
16. In Cauvery river water dispute, the determination of share of the waters of river Cauvery is regarding which of the following State (s)/ Union Territory?
- Kerala
 - Puducherry
 - Karnataka
 - Andhra Pradesh
- Which of the following is correct?
- 1 and 3
 - 1, 2 and 3
 - 1, 3 and 4
 - 2, 3 and 4
17. In which of the following countries is "Kalahari desert" located?
- Namibia
 - Botswana
 - South Africa
- Choose the correct answer from the following :
- 1 and 3
 - 2 and 3
 - Only 3
 - 1, 2 and 3
18. Consider the following statements regarding Census 2011 :
- The mascot of Census 2011 was a female enumerator.
 - Bihar is the most densely populated State in India with 1102 persons per sq. km.
 - 2001 - 2011 is the first decade [with exception of 1911 - 1921]
- which has actually added lesser population compared to the previous decade.
4. Dadra and Nagar Haveli has the lowest sex ratio among all the States/UTs of India.
5. The logo of Census 2011 comprises of figures of Adult Female, Female Child, Adult Male and Male Child.
- Which of the above statements are correct?
- 2, 3 and 4
 - 1, 3 and 5
 - 1, 2, 3 and 5
 - 1, 2, 3, 4 and 5
19. Match the following :
- | <u>Railway Zone</u> | <u>Headquarters</u> |
|-----------------------|---------------------|
| A. South Central | 1. Kolkata |
| B. South Eastern | 2. Secunderabad |
| C. South Western | 3. Bilaspur |
| D. South East Central | 4. Hubli |
- Choose the correct code :
- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (a) | 2 | 1 | 4 | 3 |
| (b) | 3 | 4 | 1 | 2 |
| (c) | 2 | 3 | 1 | 4 |
| (d) | 4 | 3 | 1 | 2 |
20. Gulf of Bothnia is located between which of the following countries?
- Finland
 - Norway
 - Sweden
 - Estonia
- Choose the correct answer from the following :
- 1 and 2
 - 2 and 3
 - 1 and 3
 - 1 and 4
21. Which one of the following pairs of countries fought wars over a region called Ogaden?
- Eritrea and Sudan
 - Ethiopia and Somalia
 - Kenya and Somalia
 - Ethiopia and Sudan

22. Macht List I (Valley) with List II (State) and select the correct answer using the codes given below the lists :

List I (Valley) List II (State)

A. Johar Valley	1. Uttarakhand
B. Dzukou Valley	2. Himachal Pradesh
C. Nubra Valley	3. Jammu and Kashmir
D. Parvati Valley	4. Nagaland

Codes :

	A	B	C	D
(a)	2	4	3	1
(b)	3	4	1	2
(c)	1	4	3	2
(d)	3	4	2	1

23. On which river and between which two places is the National Waterway No. 2 situated?

- (a) Brahmaputra, Sadiya - Dhubri
(b) Ganga, Haldia - Allahabad
(c) West Coast Canal, Kottapuram Kollam
(d) Godavari, Nasik-Rajahmundry

24. Equator does **not** pass through which of the following countries?

1. Columbia
2. Brazil
3. Democratic Republic of Congo
4. Bolivia
5. Angola

Choose the correct answer from the following :

- (a) 1 and 3 (b) 2 and 4
(c) 3 and 4 (d) 4 and 5

25. In which of the following States is Gugamal National Park located?

- (a) Karnataka
(b) Andhra Pradesh
(c) Maharashtra
(d) Odisha

26. In demography, the biological capacity for reproduction is called

- (a) Fertility (b) Birth Rate
(c) Vitality (d) Fecundity

27. Which of the following separates the Asiatic Turkey from the European Turkey?

- (a) Bering Strait
(b) Bosphorus Strait
(c) Malacca Strait
(d) Strait of Gibraltar

28. The 98th Constitutional Amendment Act, 2012, has added a new article 371-J in the Constitution. It relates to creating special provisions regarding which of the following regions?

- (a) Telangana - Rayalaseema
(b) Karnataka - Hyderabad
(c) Vidarbha - Marathwada
(d) Rayalaseema - Seemandhra

29. Which of the following States joined the Indian Union after the conduct of special opinion poll in 1975?

- (a) Manipur (b) Meghalaya
(c) Goa (d) Sikkim

30. Consider the following statements regarding lapsing of bills in the Parliament :

1. A Bill pending in the Parliament lapses by reason of the prorogation of the Houses.
2. A Bill pending in the Rajya Sabha but not passed by Lok Sabha lapses when Lok Sabha dissolves.

Which of the above statements is/are correct?

- (a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) Neither 1 nor 2

31. Which of the following places do(es) **not** fall under the territorial establishment jurisdiction of Bombay High Court?

1. Daman and Diu
2. Dadra and Nagar Haveli
3. Goa
4. Lakshadweep

Choose the correct option from the following :

- (a) Only 1 (b) 1 and 2
(c) Only 4 (d) 3 and 4

32. Consider the following statements about the Attorney General of India :

1. He is appointed by the President about the Attorney General of India :
2. He must have the same qualifications as are required for a judge of the High Court.
3. He has the right to speak in either House of Parliament.
4. He can be removed by following the process of impeachment.
5. He has the right of audience in all courts in the territory of India.

Which of the above mentioned statements are correct?

- (a) 1, 2 and 4
(b) 2, 3 and 5
(c) 1, 2, 3 and 5
(d) 1, 3 and 5

33. Consider the following statements:

1. The 'veto' power of the President is limited because if after reconsideration, the Parliament passes the same bill again and sends it back to the President, then, the President has to give assent to that bill.
2. There is no mention in the Constitution about the time limit within which the President must send the bill back for reconsideration.

Which of the above statements is/are correct?

- (a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) Neither 1 nor 2

34. Which of the following subjects are a part of 'State List' as specified in the Seventh Schedule of the Constitution of India?

1. Markets and fairs
2. Public health and sanitation; hospitals and dispensaries

3. Cultivation, manufacture, and sale for export, of opium
4. Insurance
5. Relief of the disabled and unemployable
- Choose the correct option from the following :
- (a) 1, 2 and 3
- (b) 2, 3 and 5
- (c) 3, 4 and 5
- (d) 1, 2 and 5
35. Which of the following is/are mentioned in the Directive Principles of State Policy?
1. Securing a social order for the promotion of welfare of the people.
2. Organization of Agriculture and Animal husbandry.
3. Provision of giving opportunities and facilities to the children for their development in a healthy manner.
4. Provision of safeguarding public property.
- Choose the correct answer from the following :
- (a) 2 and 3
- (b) 1, 3 and 4
- (c) 1, 2 and 3
- (d) 1, 2, 3 and 4
36. When the office of the Chief Justice of India is vacant or when the Chief Justice is, by reason of absence or otherwise, unable to perform the duties of his office, the duties of the office are performed by and acting Chief Justice. Who appoints the acting Chief Justice?
- (a) President of India
- (b) Senior most Judge of the Supreme Court (Ex-officio)
- (c) Prime Minister of India
- (d) Vice-President of India
37. Which of the following languages is **not** mentioned in the Eighth Schedule of the Constitution of India?
- (a) Maithili (b) Nepali
- (c) Bhojpuri (d) Santhali
38. Which of the following statements is **not** correct?
- (a) The Chairman of a Joint Public Service Commission is appointed by the President.
- (b) A member of a Joint Public Service Commission holds office for a term of six years from the date on which he enters upon his office or until he attains the age of sixty-five years, whichever is earlier.
- (c) As nearly as may be one-half of the members of every Public Service Commission shall be persons who at the dates of their respective appointments have held office for at least ten years either under the Government of India or under the Government of a State.
- (d) A member of a Joint Public Service Commission may, by writing under his hand, addressed to the President, resign his office.
39. Which of the following comprises the electoral college of the Vice-President of India?
1. Members of Lok Sabha
2. Members of Rajya Sabha
3. Members of State Legislative Assemblies
4. Members of State Legislative Councils
- Choose the correct answer from the following :
- (a) 1 and 2
- (b) Only 2
- (c) 1, 2 and 3
- (d) 1, 2, 3 and 4
40. India is divided into how many Postal Index Number (PIN) regions?
- (a) Six Geographical and one reserved for Army Postal Service
- (b) Seven Geographical and two reserved for Army Postal Service
- (c) Eight Geographical and one reserved for Army Postal Service
- (d) Ten Geographical and two reserved for Army Postal Service
41. Natal, Recife and Fortaleza are
- (a) Names of experimental subjects in recently conducted experiments in Nanotechnology
- (b) Names of drugs associated with the treatment of Psychological disorders
- (c) Names of famous tourist places in South Africa
- (d) Names of host cities of 2-14 FIFA World Cup in Brazil
42. In 2002, National Dairy Development Board had standardised package design of milk for consumers to identify the type of milk. the colour identity of milk packets is common for all milk cooperatives including Verka of Punjab. In this context, identify the **incorrect** pair (s) of the following :
- | <u>Colour of Packet</u> | <u>Type of Milk</u> |
|-------------------------|---------------------|
| 1. Blue | - Double Toned |
| 2. Green | - Standard |
| 3. Purple | - Skimmed |
| 4. Orange | - Full Cream |
| 5. Yellow | - Toned |
- Choose the answer from the following :
- (a) 1, 2 and 3 (b) 3 and 4
- (c) 1 and 5 (d) Only 3
43. Which of the following institutes prepares and issues new sugar standards for the sugar industry every year?
- (a) The Bureau of Sugar Standards
- (b) The Bureau of Indian Standards
- (c) Central AGMARK Laboratory
- (d) National Institute of Food Processing

44. Dr. Sugata Mitra, Chief Scientist at NIIT, is credited with the discovery of "Hole-in-the-Wall". This famous experiment in innovative learning is formally known as
- Closely Supervised Education
 - Distantly Monitored Education
 - Minimally Invasive Education
 - Non-Monitored Education
45. Who among the following wrote the famous poem on Rani of Jhansi with the popular line "*Khoob lari mardani woh to Jhansi wali rani thi*"?
- Sumitranandan Pant
 - Bhawani Prasad Mishra
 - Bharatendu Harishchandra
 - Subhadra Kumari Chauhan
46. In Islam, offering prayers five times a day is called
- Sawn
 - Zakat
 - Salat
 - Shahada
47. Consider the following statements regarding the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 :
- It is mandatory to carry out Social Impact Assessment Study in consultation with the Panchayat, Municipality or Municipal Corporation.
 - The Social Impact Assessment Study should be completed within three months from the date of its commencement.
 - Public hearing to ascertain the views of affected families for Social Impact Assessment is mandatory.
 - There is no exemption from undertaking Social Impact Assessment Study even when the land is proposed to be acquired under urgency clause.
- Which of the above mentioned statements is/are **not** correct?
- 1 and 3
 - 2 and 4
 - Only 3
 - Only 4
48. Consider the following statements about the National Population Register (NPR) :
- It is an identity database to be maintained by the Registrar General and Census Commissioner of India.
 - It is a Register containing entries of only the citizens of the country.
 - It is a substitute for Aadhaar/UID (Unique Identification) Number.
 - The biometric details of individuals who are registering are captured through fingerprints and iris prints.
- Which of the above statements are **not** correct?
- 2 and 3
 - 1 and 3
 - 3 and 4
 - 2 and 4
49. The film "*The Lunchbox*" was screened as a part of the International Critics' Week as the 2013 Cannes Film Festival, where it won the Critics' Week Viewers Choice Award, also known as Grand Rail d'Or. Who is the writer of this film?
- Anurag Kashyap
 - Arun Rangachari
 - Prasoon Joshi
 - Ritesh Batra
50. In an effort to protect critically-endangered vultures from being extinct, Bombay Natural History Society (BNHS) has decided to set up Vulture Safe (VSZ) in
- Bundelkhand, Madhya Pradesh
 - Krishna, Andhra Pradesh
 - Ramnagar, Karnataka
 - Nasik, Maharashtra
51. Crop logging is
- a method to assess crop damage.
 - a method to identify parasitic weeds associated with a crop.
 - a method of keeping record of progress of crops and crop analysis for maximizing yield.
 - a method of cropping more than one variety of crops.
52. What are the differences between asteroids and comets?
- Asteroids are composed of rocks and metals, while comets contain lot of ice along with rocks and hydrocarbons.
 - Asteroids are found mostly in Kuiper belt beyond the orbit of Neptune and in Oort cloud in outer Solar System, while comets are found in the belt between Mars and Jupiter.
 - The surface of asteroids is solid and stable, whereas the surface of comets is very unstable and changeable.
- Which of the statements given above is/are correct?
- 1 and 2
 - 1 and 3
 - 3 only
 - 1, 2 and 3
53. The resistivity of a wire varies with its
- Length
 - Cross-section
 - Mass
 - Material
54. A piece of ice is floating in a jar containing water. When the ice melts, then level of water
- Rises
 - Falls
 - Remains unchanged
 - Rises or falls depending upon the mass of ice
55. Sound travels with a different speed in different media. In which order does the velocity of sound increase in these media?
- Water, iron and air
 - Iron, air and water
 - Air, water and iron
 - Iron, water and air

56. "Beaufort Scale" is used to measure
- Atmospheric pressure
 - Wind velocity
 - Humidity
 - Hydraulic pressure
57. Match the following :
- | <u>Type of Colloid</u> | <u>Example</u> |
|------------------------|----------------|
| A. Gel | 1. Paing |
| B. Emulsion | 2. Butter |
| C. Sol | 3. Fog |
| D. Aerosol | 4. Milk |
- Choose the correct code :
- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 2 | 1 | 4 | 3 |
| (b) | 1 | 4 | 2 | 3 |
| (c) | 2 | 4 | 1 | 3 |
| (d) | 4 | 3 | 1 | 2 |
58. Consider the following pairs of metals and their ores:
- | | Metal | | Ore |
|----|--------|---|------------|
| 1. | Iron | – | Siderite |
| 2. | Copper | – | Calamine |
| 3. | Zinc | – | Sphalerite |
- Which of the above mentioned pairs is/are not correctly matched?
- 1 and 2
 - Only 2
 - 2 and 3
 - Only 3
59. A light and a heavy body have equal momentum. Which one has greater kinetic energy?
- The light body
 - The heavy body
 - Both have equal kinetic energy
 - Data given is incomplete
60. In the binary number system, 111 represents
- Three
 - Four
 - Seven
 - One hundred and eleven
61. Which of the following are the primary lymphoid organs?
- Bone marrow
 - Thymus
 - Spleen
 - Tonsils
- Choose the correct answer from the following :
- 1 and 2
 - 2 and 3
 - 1 and 3
 - 1, 2, 3 and 4
62. Aflatoxins are produced by which of the following?
- Bacterium
 - Fungus
 - Algae
 - Virus
63. Which of the following natural food colours is most commonly added in butter and cheese?
- Annatto
 - Paprika
 - Betanin
 - Pandan
64. Paa is a 2009 Indian comedy-drama film directed by R. Balakrishnan in which Amitabh Bachchan is shown to suffer with a rare genetic disease of childhood characterized by dramatic, premature ageing. What is this type of disorder called?
- Conn's syndrome
 - Acromegaly
 - Progeria
 - Down's syndrome
65. In computer terminology, little text-based faces and objects that help give the reader a sense of the writer's feelings behind the text are known as
- Joystick
 - Emoticon
 - Emulation
 - Captcha
66. Which of the following is not correctly matched?
- Snivitz : A computer problem
 - Gigaflops : A measure of computer performance
 - Gnutella : A challenge response test that determines whether a user is human or an automated bot
 - Favicon : A small website icon
67. The Department of Currency Management, RBI receives notes from four currency note printing presses in the country. Two of the currency note printing presses are owned by the Government of India and two are owned by the Reserve Bank. Which one of the following is not amongst these?
- Salboni
 - Mysore
 - Dewas
 - Hyderabad
68. The first bank-note issued by Reserve Bank of India in January 1938 was bearing the portrait of which of the following?
- George VI
 - Queen Victoria
 - George V
 - Edward VIII
69. Consider the following statements regarding the High Powered Money:
- It is the total liability of Monetary Authority of India.
 - It consists of currency (notes and coins in circulation with the public and vault cash of commercial banks) and deposits held by the Government of India and commercial banks with RBI.
 - The deposits are not refundable by RBI on demand from deposit-holders.
- Which of the above statement(s) is/are correct?
- Only 1
 - 1 and 2
 - 2 and 3
 - Only 3
70. Consider the following statement regarding "Managed Floating" exchange rate system:
- It is a mixture of fixed and flexible exchange rate systems.
 - It is also called dirty floating.
 - India's exchange rate policy has not yet shifted to "managed floating" exchange rate system.

4. Under this system, the Govt./ Central banks do not intervene to buy and sell foreign currencies in an attempt to moderate exchange rate movements.
- Which of the above statements is/ are not correct?
- (a) Only 2 (b) 1 and 3
(c) 2, 3 and 4 (d) 3 and 4
71. Goods and Services Tax (GST) is the next logical step towards comprehensive indirect tax reforms in the country. Consider the following statements with respect to GST :
1. With the introduction of GST, the burden of Central Sales Tax (CSL) will be removed.
 2. For introduction of GST at State level, States should be given the power to levy tax on services.
- Which of the above statements is/ are true?
- (a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) Neither 1 nor 2
72. Which of the following measures would contribute to inflation more?
- (a) Repayment of Public Debt
(b) Borrowing from public to finance Budget deficit
(c) Reducing Fiscal Deficit
(d) Creating new money to finance Budget deficit
73. Demutualization in the context of stock markets means
- (a) Separation of ownership from the management of the stock exchange
(b) Conversion of a stock exchange into a non-profit organization
(c) Unlisting of a blue chip company from the stock exchange
(d) Awarding trading rights by a company to a merchant bank
74. Consider the following statements:
1. Forward Markets Commission of India was earlier overseen by the Department of Consumer Affairs under the Ministry of Consumer Affairs, Food and Public Distribution.
 2. At present the Forward Markets Commission is overseen by the Department of Economics Affairs under the Ministry of Finance, Government of India.
 3. Forward Markets Commission regulates the Commodity Futures and Financial Futures Trading in the country.
- Which of the above statements is/ are correct?
- (a) Only 1
(b) Only 2
(c) 1 and 2
(d) 1, 2 and 3
75. Consider the following statements regarding the Non-Performing Asset :
- It is a loan or an advance where
1. interest and/or instalment of principal remain overdue for a period of more than 90 days in respect of a Term Loan.
 2. the instalment of principal or interest thereon remains overdue for two crop seasons for short duration crops.
 3. the bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted.
- Which of the above statements is/ are correct?
- (a) Only 1
(b) 1 and 3
(c) 1 and 2
(d) 1, 2 and 3
76. Twin deficit basically refers to
- (a) Lack of investor confidence and high deficit
(b) Lack of positive credit rating and high fiscal deficit
(c) Situation of huge outflow of FIIs and rising fiscal deficit
(d) Situation of large current account and fiscal deficit
77. Consider the following liquid assets:
1. Demand deposits with the banks
 2. Time deposits with the banks
 3. Savings deposits with the banks
 4. Currency
- The correct sequence of their decreasing order of liquidity is
- (a) 1-4-3-2 (b) 4-3-2-1
(c) 4-1-3-2 (d) 4-3-1-2
78. Which of the following is/are a part of Capital Account of Balance of Payments?
1. Portfolio Investment
 2. External Assistance
 3. NRI Deposits
- Choose the correct answer from the following %
- (a) 1 and 2
(b) 1, 2 and 3
(c) Only 1
(d) Only 3
79. Where is the Stock Exchange located in Punjab?
- (a) Jalandhar
(b) Patiala
(c) Amritsar
(d) None of the above
80. Match the following :
- | <u>Authors</u> | <u>Writings</u> |
|----------------------------|----------------------|
| A. Minhaj al-Siraj Juzjani | 1. Malfuzat-i-timuri |
| B. Ziauddin Baani | 2. Fatwa-i-Janadari |
| C. Isma | 3. Tabaqat-i-Nasiri |
| D. Amir timur | 4. Futuh-us Salatin |

Choose the correct code:

	A	B	C	D
(a)	2	1	3	4
(b)	1	2	3	4
(c)	3	2	4	1
(d)	4	3	2	1

81. Mansur, the court painter of Jahangir, was famous for painting which of the following?

- Historical monuments
- Human portraits
- Landscapes
- Plants, birds and animals

82. There were five major political centres in the Mauryan Empire including the capital Pataliputra and four provincial centres. Which one of the following is not amongst these provincial centres?

- Kaushambi
- Ujjayini
- Tosali
- Suvarnagiri

83. Consider the following statements:

- Prabhavati Gupta was the daughter of one of the most important rulers in early Indian history, Chandragupta I.
- She was married into the ruling family of the Vakatakas, who were powerful in the Deccan.

Which of the above mentioned statement is/are correct?

- Only 1
- Only 2
- Both 1 and 2
- Neither 1 nor 2

84. Consider the following statements:

- Satavahana rulers were identified through metonymics (names derived from that of the mother).
- In Satavahana rulers, the succession to the throne was generally patrilineal.

Which of the above mentioned statements is/are correct?

- Only 1
- Only 2
- Both 1 and 2
- Neither 1 nor 2

85. According to Buddhist texts, who was the first woman to enter Sangha and ordained as "bhikkuni"?

- Mahamaya Mayadevi
- Mahapajapati Gotami
- Mahadevi Yashodhara
- Shailbhanjika Anandi

86. Match the following :

<u>Foreign Travellers</u>	<u>Country of Origin</u>
---------------------------	--------------------------

- | | |
|------------------------------|-------------|
| A. Afanasiy Nikitich Nikitin | 1. England |
| B. Duarte Barbosa | 2. Russia |
| C. Peter Mundy | 3. Portugal |
| D. Antonio Monserrate | 4. Spain |

Choose the correct code :

A	B	C	D
(a)	2	1	3
(b)	3	4	1
(c)	3	4	2
(d)	2	3	1

87. Emperor Akbar classified the lands in various categories and fixed different revenue to be paid by each. In this context, examine which of the following defines *Polaj land*?

- Land which is annually cultivated for each crop in succession and is never allowed to lie fallow.
- Land left out of cultivation for a time that it may recover its strength.
- Land that has lain fallow for three or four years.
- Land uncultivated for five years and more.

88. The Disorders Inquiry Committee (1919–1920) headed by Lord Hunter was constituted to investigate the disturbances in Bombay, Delhi and

Punjab their cause and measures taken to cope with them.

Which of the following were not member(s) of the Committee?

- Justice G. C. Rankin
- Chimanlal Harilal Setalvad
- Pt. Jagat Narayan
- Sultan Shamsheer Beg
- W. F. Rice

Choose the answer from the following:

- 2 and 3
- 3 and 4
- Only 4
- Only 5

89. Arrange the following in a chronological order:

- Wavell Plan
- Poona Pact
- Gandhi Irwin Pact
- Individual Satyagraha
- Communal Award

Choose the correct code :

- 3, 5, 2, 4, 1
- 5, 3, 2, 4, 1
- 3, 2, 5, 4, 1
- 2, 5, 3, 1, 4

90. "New Lamps for Old" a series of articles criticising moderate politics, was authored by

- Bal Gangadhar Tilak
- Chittaranjan Das
- Bipin Chandra Pal
- Aurobindo Ghosh

91. During World War II, which of the following countries was invaded by Germany under the code name, "Operation Barbarossa"?

- Great Britain
- Soviet Union
- France
- U.S.A.

92. In 1942, Battle of Midway was fought between the naval forces of which of the following belligerent nations?

- Germany and France
- Germany and Great Britain
- Japan and U.S.A.
- Japan and Soviet Union

93. Consider the following statements regarding River Beas :

1. River Beas originates from Borasu Pass in Kinnaur district, Himachal Pradesh.
2. Pandoh reservoir and Pong reservoir are built over this river.
3. It joins river Satluj at Hari-ke-Pattan.

Which of the above mentioned statement is/are not correct?

- (a) Only 1 (b) 1 and 2
(c) Only 3 (d) 1 and 3

94. Match the following :

<u>Rivers</u>	<u>Ancient Name</u>
A. Beas	1. Askini
B. Ravi	2. Vipasa
C. Chenab	3. Parushni/ Airavati
D. Jhelum	4. Vitasta

Choose the correct code :

A	B	C	D
(a) 2	1	3	4
(b) 3	4	1	2
(c) 2	3	1	4
(d) 4	3	1	2

95. Which of the following pairs is/are not matched correctly?

<u>Name of Wildlife Sanctuary</u>	<u>Location</u>
1. Jhajjar	– Rupnagar
2. Kathlaur	– Sangrur
3. Bir Aishwan	– Hoshiarpur
4. Bir Dosanjh	– Patiala

Choose the answer from the following :

- (a) 1 and 2 (b) 2 and 3
(c) 2 and 4 (d) 1 and 3

96. The battle of Balakot was fought in 1831 A.D. between the forces of

- (a) East India Company and the Afghans
(b) East India Company and the Marathas
(c) Maharaja Ranjeet Singh and the Marathas
(d) Maharaja Ranjit Singh and Syed Ahmad Bareilvi

97. Match the following :

<u>Assemble constituency</u>	<u>District</u>
A. Nihal Singhwala	1. Hoshiarpur
B. Shutrana	2. Sangrur
C. Chabbewal	3. Gurdaspur
D. Dirba	4. Patiala
	5. Moga

Choose the correct code :

A	B	C	D
(a) 3	2	1	5
(b) 5	4	1	2
(c) 3	4	1	2
(d) 5	1	4	2

98. Consider the following statements:

1. HMEL is developing Talwandi Sabo Thermal Power Plant.
2. L & T Power Development Limited is developing Rajpura Thermal Power Plant.

3. Fuel Supply for Rajpura Thermal Power Plant will be given by Mahandi Coalfields Limited (MCL), whereas for Talwandi Sabo Thermal Power Plant, it will be given by South Eastern Coalfields Limited (SECL).

Which of the above mentioned statements is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) Only 3 (d) Only 2

99. Arrange the following places of Punjab with respect to their location from South to North :

1. Maur
2. Qadian
3. Sardulgarh
4. Nihal Singhwala
5. Kanjli

Choose the correct code :

- (a) 3, 1, 4, 5, 2
(b) 1, 3, 4, 2, 5
(c) 3, 1, 4, 2, 5
(d) 3, 4, 1, 5, 2

100. On the basis of Census 2011, arrange the following districts of Punjab with respect to their population in the increasing order :

1. Rupnagar
2. Faridkot
3. Muktsar
4. Mansa

Choose the correct code :

- (a) 1, 2, 4, 3 (b) 2, 1, 4, 3
(c) 2, 1, 3, 4 (d) 1, 3, 2, 4

ANSWERS KEY - 2013

1. (c)	2. (c)	3. (c)	4. (d)	5. (c)	6. (d)	7. (b)	8. (b)	9. (a)	10. (a)
11. (d)	12. (c)	13. (b)	14. (c)	15. (d)	16. (b)	17. (d)	18. (c)	19. (a)	20. (c)
21. (b)	22. (c)	23. (a)	24. (d)	25. (c)	26. (d)	27. (b)	28. (b)	29. (d)	30. (d)
31. (c)	32. (d)	33. (c)	34. (d)	35. (c)	36. (a)	37. (c)	38. (b)	39. (a)	40. (c)
41. (d)	42. (c)	43. (a)	44. (c)	45. (d)	46. (c)	47. (b)	48. (a)	49. (d)	50. (a)
51. (c)	52. (b)	53. (d)	54. (c)	55. (c)	56. (b)	57. (c)	58. (b)	59. (a)	60. (c)
61. (a)	62. (b)	63. (a)	64. (c)	65. (b)	66. (c)	67. (d)	68. (a)	69. (b)	70. (d)
71. (c)	72. (d)	73. (a)	74. (c)	75. (d)	76. (d)	77. (c)	78. (b)	79. (d)	80. (c)
81. (d)	82. (a)	83. (b)	84. (c)	85. (b)	86. (d)	87. (a)	88. (c)	89. (a)	90. (d)
91. (b)	92. (c)	93. (a)	94. (c)	95. (b)	96. (d)	97. (b)	98. (d)	99. (a)	100. (b)

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1. Atom
 - (a) is the smallest particle of an element
 - (b) can exist independently
 - (c) can retain chemical properties of the element
 - (d) all of the above
2. Which of the following is not a method of heat transfer between two bodies?
 - (a) Conduction
 - (b) Convection
 - (c) Absorption
 - (d) Radiation
3. Land breeze and sea breeze are caused by difference in rate of cooling of the Earth and water. Mark the correct answer:
 - (a) Sea breeze moves from sea to land during night.
 - (b) Sea breeze moves from sea to land during day.
 - (c) Land breeze moves from sea to land during night.
 - (d) None of the above.
4. Woollen clothes keep us warm during winter, which of the following facts is incorrect?
 - (a) Wool is a bad conductor of heat.
 - (b) Electro-static charge of fibres retains heat.
 - (c) Wool keeps air trapped in its fibres.
 - (d) Wool resists escape of body heat to environment.
5. At what temperature do the Celsius and Fahrenheit scales will read the same?
 - (a) - 32 degree
 - (b) 32 degree
 - (c) 40 degree
 - (d) Absolute zero
6. Pressure cooker helps us in cooking food faster because.
 - (a) it raises the boiling point of liquids due to increase in pressure.
 - (b) it can conserve heat being made of special metal.
 - (c) it does not allow atmosphere to cool down the food.
 - (d) provides better medium of conduction of heat to food.
7. Densities of water and ice are
 - (a) Equal
 - (b) Different
 - (c) Can be equal or different
 - (d) None of the above
8. An aircraft, which is heavier than air, flies in air due to.
 - (a) Buoyancy
 - (b) Forward motion of the aircraft
 - (c) Difference in pressure on the upper and lower sides of the wings
 - (d) Jet propulsion
9. Rate of cooling of a body depends on
 - (a) Its size and the velocity of air around it
 - (b) Difference in temperature between the body and the surroundings
 - (c) Method of heat transfer
 - (d) Is independent of the temperature of surroundings
10. When a substance passes from solid state to vapour state without passing through liquid state, the phenomenon is called.
 - (a) Vaporisation
 - (b) Mutation
 - (c) Condensation
 - (d) Sublimation
11. Corrected vision of human eye can be achieved by prescription glasses which use the principle of
 - (a) Reflection
 - (b) Refraction
 - (c) Chromatic Aberration
 - (d) None of these
12. Usually the outside rear view mirrors of a motor vehicle are
 - (a) Concave mirrors
 - (b) Convex mirrors
 - (c) Plane mirrors
 - (d) Concavo convex mirrors
13. Electric current flows in a conductor due to
 - (a) Amperage
 - (b) Wattage
 - (c) Potential difference
 - (d) None of these
14. Vaccines are used to build immunity to disease by
 - (a) simulating disease in the body to produce antibodies.
 - (b) injecting antibodies in blood stream.
 - (c) enhancing immunity by a large dose of vitamins.
 - (d) enhancing immunity by a large dose of enzymes.
15. Which fact about speed and velocity is incorrect?
 - (a) Speed is the distance travelled by a body in a particular time.
 - (b) Speed must be in a particular direction.
 - (c) Velocity is the speed in a particular direction.
 - (d) Both speed and velocity depend on distance and time.
16. Bio-gas plant used for producing domestic fuel produces _____ gas

- (es), which burn (s) without giving any smoke.
- (a) Ethane
(b) Methane
(c) Octane
(d) All of the above
17. A solar water heater cannot be used to get hot water on
(a) a sunny day
(b) a cloudy day
(c) a hot day
(d) a windy day
18. Which of the following constitutes a food chain?
(a) Grass, wheat and mango
(b) Grass, goat and human
(c) Goat, cow and elephant
(d) Grass, fish and goat
19. At the time of a short circuit, the current in the circuit.
(a) redyces substantially
(b) does not change
(c) increases heavily
(d) varies continuously
20. Which of the following correctly describes the magnetic field near a long straight wire carrying current?
(a) The field consists of straight lines perpendicular to the wire.
(b) The field consists of straight lines parallel to the wire.
(c) The field consists of radial lines originating from the wire.
(d) The field consists of concentric circles centred on the wire.
21. Kidneys in human beings are part of the system for.
(a) Nutrition
(b) Respiration
(c) Excretion
(d) Locomotion
22. The xylem in plants are responsible for
(a) Transport of water
(b) Transport of food
(c) Transport of amino acids
(d) Transport of oxygen
23. Which one of the following is not a web browser?
(a) Internet Explorer
(b) Windows Explorer
(c) Google Chrome
(d) Safari
24. Adobe Acrobat files have suffix
(a) .doc (b) .xls
(c) .pdf (d) .mp3
25. CAG has pointed out certain irregularities in allotment of spectrum to cell phone operators. What is spectrum?
(a) It is them territory over which an operator can provide services without roaming charges.
(b) It is the frequency channels which the operator can use for telecommunication.
(c) It is the total number of cell phones which an operator can use on certain frequency.
(d) None of the above.
26. Which is correct about the radio frequencies?
(a) Higher the frequency, lower will be the wavelength.
(b) Higher the frequency, higher will be the wavelength.
(c) Higher the frequency, higher will be the amplitude.
(d) Higher the frequency, lower will be the amplitude.
27. Bhartiya Sahitya Akademi award winner, Dalip Kaur Tiwana, was awarded this honour for which of her writings?
(a) Eho Hamara Jeewana
(b) Ik Chhit Chanan Di
(c) Ik Mian Do Talwaran
(d) Adh Chanani Raatd
28. Which of the writers and his work have been paired wrongly?
(a) Pilo - Mirza Sahian
(b) Waris Shah - Heer Ranjah
(c) Hasham Shah - Sassi Punnu
(d) Kadar Yaar - Sohni Mahinwal
29. Fateh Burj is:
(i) 100 metres tall
(ii) Is taller than Qutab Minar
(iii) Is a monument to commemorate Baba Banda Singh's win over Sirhind
(iv) Is located at Chapar Chiri
Which fact (s) given above is/are correct?
(a) Only (i) and (iii) are correct.
(b) Only (iii) and (iv) are correct.
(c) Only (i), (iii) and (iv) are correct.
(d) All are correct.
30. What moved Shahid Bhagat Singh in his early life to resist the English rule?
(a) Non-cooperation movement
(b) Simon Commission
(c) Jallianwala Bagh Massacre
(d) Naujuan Bharat Subah
31. Which one of the following is not a traditional Punjabi dance?
(a) Sammi (b) Vain
(c) Gidha (d) Bhangra
32. What is correct about Singh Sabha?
(a) It was founded in 1907 at Lahore.
(b) It aimed at protecting the interests of Sikhs through education and literature.
(c) It prescribed social code of conduct for Sikhs.
(d) It was aimed at protecting the honour of Sikh women and children.
33. Which fact about Punjab is not true?
(a) Its area is about 50,000 square kilometres.
(b) Punjab has more than 12000 villages.
(c) There are more Panchayats than the number of villages.
(d) Population density in Punjab is about 600 people per square kilometre.

34. Kandi area, an important agroclimatic zone of Punjab, has following characteristics:
- Sub- mountainous undulating terrain
 - Lack of perennial water source
 - High cost of cultivation
 - Extremely fertile land
- (i) and (iv) are correct
 - (i), (ii) and (iii) are correct
 - (ii), (iii) and (iv) are correct
 - (i), (ii) and (iv) are correct
35. Namdhari movement also called Kuka movement was started by whom and when?
- Bhai Dial Singh on 1st April, 1857
 - Bhai Ram Singh on 1st April, 1857
 - Bhai Dial Singh on 13th April, 1925
 - Bhai Ram Singh on 13th April, 1925
36. Arrange the following important events in the history of Punjab in chronological order:
- Jallianwala Bagh Incident
 - Kamagata Maru Incident
 - The Ghadar Movement
 - Battle of Saraghari
- (i), (ii), (iv) and (iii)
 - (iii), (ii), (i) and (iv)
 - (iv), (iii), (i) and (ii)
 - (iv), (iii), (ii) and (i)
37. As per 2011 census the most and the least densely populated districts in Punjab are
- Amritsar and Masna
 - Ludhiana and Muktsar
 - Ludhiana and Mansa
 - Amritsar and Muktsar
38. In comparison to 2001 census the population of Punjab as per 2011 census has increased.
- From 2.28 crores to 2.77 crores
 - From 2.48 crores to 2.77 crores
 - From 2.44 crores to 2.77 crores
 - From 2.58 crores to 2.77 crores
39. Over the last decade, Punjab has achieved least growth in employment generation in
- Primary Sector
 - Secondary Sector
 - Tertiary Sector
 - No growth
40. Sluggish growth in the agriculture sector in Punjab is due to.
- Per acre yield of crops has peaked
 - Decrease in average land holding of farmers
 - Increased dependence on ground water
 - All of the above
41. Punjab Land Records Society (PLRS) was formed by the Punjab Government to
- Implement Land Reforms Act
 - To study flaws in Land Records
 - Provide efficient Land Record related services
 - To settle disputes related to Land Records
42. Balari Rakshak Yojana launched by the Punjab government is aimed at
- Correcting child sex ratio
 - Reducing child mortality
 - Encouraging family planning
 - All of the above
43. Mealy bug is a pest which affects the yield of ____ crop in Punjab.
- Maize
 - Oil seeds
 - Cotton
 - Pulses
44. In Punjab the maximum number of Ministers can be
- 16
 - 18
 - 20
 - 22
45. Who is Jin Yong Kim?
- He is a famous tennis player.
 - He is the President of the World Bank.
 - He is the new king of Malaysia.
 - None of the above
46. The UN General Assembly elected in October, 2012, five new non-permanent members to the Security Council. They include
- North Korea and Luxembourg
 - South Korea and Rwanda
 - Australia and Argentina
 - India and Brazil
- (i) and (iii) are correct
 - (ii) and (iii) are correct
 - (i) and (iv) are correct
 - (iii) and (iv) are correct
47. The killings of Sarpanches by militants and their mass resignations in the news recently, were in
- Chhatisgarh
 - Assam
 - J&K
 - Bihar
48. UN Department of Economics and Social Affairs data showed that in 2000, which of the following countries had female infant mortality rate higher than male infant mortality?
- Pakistan and Indian
 - Pakistan and Sri Lanka
 - China and India
 - Egypt and Iraq
49. BRICS Summit 2012 at New Delhi was
- Second BRICS Summit
 - Third BRICS Summit
 - Fourth BRICS Summit
 - None of the above
50. The headquarters of the International Monetary Fund (IMF) is in
- Geneva
 - Washington D.C.
 - Rio de Janeiro
 - New York City
51. Which of the following statements is false?
- India is a secular state with equality to all religions.
 - India does not have an official state religion.
 - No religious instruction is given in the government aided schools.
 - The word 'secular' was inserted in the Preamble by the 44th Amendment, 1976.

52. The idea of G-20 was proposed by
 (a) Paul Martin
 (b) John Major
 (c) Bill Clinton
 (d) George W Bush
53. Who is regarded as the Father of Local Self Government in India?
 (a) Lord Mayo
 (b) B.R. Ambedkar
 (c) Lord Rippon
 (d) None of the above
54. The 11th Schedule of the Indian Constitution is concerned with the
 (a) Panchayats and Nagarpalikas
 (b) State Finance Commission
 (c) Minorities
 (d) Panchayats
55. The provision of District Planning Committee is given in the
 (a) 73rd Amendment Act
 (b) 74th Amendment Act
 (c) 81st Amendment Act
 (d) None of the above
56. Who is the present Chief Election Commissioner of India?
 (a) S.Y. Quraishi
 (b) Navin Chawla
 (c) N. Gopalaswami
 (d) V.S. Sampath
57. 86th Amendment, 2002 inserted
 (a) Right to Education under Article 21A
 (b) Fundamental Duty under Article 51K
 (c) Both of the above
 (d) None of the above
58. Who termed the Right to Constitutional Remedies as “the heart and soul of the Constitution”?
 (a) Mahatma Gandhi
 (b) J.L. Nehru
 (c) Sardar Patel
 (d) None of the above
59. The AADHAAR program of the UIDAI is an important step towards
 (a) Creating a database of nurses
 (b) Creating awareness among consumers
 (c) Creating a database of Indian citizens
 (d) Creating awareness among children
60. The basic structure of the Indian Constitution cannot be altered because
 (a) this is clearly mentioned in the Constitution itself.
 (b) it will negatively affect the vote bank of the ruling party.
 (c) it has clearly emerged from the judicial interpretation.
 (d) none of the above.
61. Expression of ‘Fundamental Duties’ is a feature of Indian Constitution which was borrowed from
 (a) England
 (b) USA
 (c) Former USSR
 (d) Ireland
62. A Nager Panchayat is constituted in a
 (a) Small urban area
 (b) Large urban area
 (c) Metropolitan area
 (d) None of the above
63. Which of the following statements is correct?
 (a) A Panchayat constituted after mid-term election shall have a full term of five years.
 (b) 33% seats in Panchayats shall be reserved for women.
 (c) Panchayat Samitis may not be constituted in a State having a population not exceeding 20 lakh.
 (d) All of the above statements are correct.
64. Which among the following words appears first in the Preamble to the Constitution of India?
 (a) Equality (b) Justice
 (c) Liberty (d) Fraternity
65. In 2012, who said “Coalition Politics has slowed pace of reforms”?
 (a) Manmohan Singh
 (b) Pranab Mukerjee
 (c) P. Chidambaram
 (d) Sonia Gandhi
66. Who has been awarded honorary Doctorate of Arts by the Edinburgh Napier University for outstanding contribution to Indian cinema in 2012?
 (a) Amitabh Bachchan
 (b) Abhishek Bachchan
 (c) Shahrukh Khan
 (d) Sharmila Tagore
67. What is SHADE?
 (a) It is a mechanism to check sea piracy in Indian Ocean by naval forces of three countries jointly.
 (b) It is a new trade pact signed by India, Japan and Bangladesh.
 (c) It is a new gene discovered in maize plant by the UK scientists.
 (d) Its national intelligence grid to access all intelligence data.
68. To explore the planet Mars, NASA last year launched a Rover nicknamed
 (a) Crusty (b) Courtesy
 (c) Curiosity (d) Cursory
69. Anna Hazare has emerged as a popular leader. What is meant by “Anna” in Marathi?
 (a) Food
 (b) Army man
 (c) Elder brother
 (d) Social activist
70. Which of the following statements is true regarding London Olympics 2002?
 (a) USA topped the medal tally, followed by Argentina.
 (b) USA topped the medal tally, followed by China.

- (c) USA topped the medal tally, followed by Great Britain.
(d) China topped the medal tally, followed by USA.
71. The legacy of Kapil Sibal as the Union Education Minister does not include
(a) Passage of RTE Act
(b) Making class X board examinations optional
(c) Allowing foreign education providers
(d) Replacing marks with grades
72. Which of the following is incorrectly matched?
(a) Devdutt Pishorimal Anand - Dev Anand
(b) Shivaji Rao Gaikwad - Rajnikanth
(c) Jatinder Khanna - Rajesh Khanna
(d) Aamir Hussain Khan - Aamir Khan
73. What is the name of the Pak Foreign Minister who visited India last?
(a) Honey Irani
(b) Hina Rabbani Khar
(c) Mohammed Nasheed
(d) None of the above
74. "Dengue" is caused by
(a) Anopheles mosquito
(b) Aedes Aegypti mosquito
(c) A bacteria
(d) Climate change
75. Vijay Kelkar Committee Report 2012 is a roadmap for:
(a) Improvement in sports like hockey
(b) Fiscal consolidation
(c) Stopping global warming
(d) None of the above
76. Who is the Chairperson or National Commission for Women?
(a) Dr. Girija Vyas
(b) Smt. Mamta Sharma
(c) Smt. Ambika Soni
(d) Ms. Jayanti Patnaik
77. The 16th NAM Summit 2012 was held at
(a) New Delhi (b) Dhaka
(c) Islamabad (d) Tehran
78. Coal allocation controversy came into light with draft report of the CAG of India _____.
(a) Dr. S.Y. Quraishi
(b) Shri Vinod Rai
(c) Shri T.N. Seshan
(d) Shri R. Srinivasam
79. The literacy rate of India as per the Population Census of India in 2011 was
(a) 65.78% (b) 68.58%
(c) 82.04% (d) 74.04%
80. Who won Nobel Prize for Medicine for stem cell research?
(a) John Gordon
(b) Shinya Yamanaka
(c) Both of the above
(d) None of the above
81. Hurricanes Sandy and Katrina were in the news recently. Why are the hurricanes named?
(a) To make them easier to remember when issuing warnings.
(b) They are named arbitrarily after unpopular female characters.
(c) To remember the names of the people who died in the Titanic.
(d) All of the above.
82. Which country granted Wikileaks founder Julian Assange political asylum?
(a) Iran (b) Ecuador
(c) Syria (d) Egypt
83. Which country adopted Comprehensive Test Ban Treaty (CTBT) recently?
(a) India
(b) South Korea
(c) Indonesia
(d) None of these
84. Who was appointed 'UN Goodwill Ambassador for UNAIDS' recently?
(a) Shabana Azmi
(b) Amitabh Bachchan
(c) Shahrukh Khan
(d) Aishwarya Rai Bachchan
85. In the light of recent Union Cabinet reshuffle, match the following :
- | | |
|-------------------------|---------------------------------|
| (i) M. Veerappa | (1) Human Resources Development |
| (ii) Pawan Kumar Bansal | (2) Law |
| (iii) M.M. Pallam Raju | (3) External Affairs |
| (iv) Salman Khursheed | (4) Petroleum & Natural gas |
| | (5) Railways |
- | | | | |
|---------|------|-------|------|
| (i) | (ii) | (iii) | (iv) |
| (a) (2) | (5) | (3) | (1) |
| (b) (4) | (1) | (5) | (2) |
| (c) (4) | (5) | (1) | (2) |
| (d) (4) | (5) | (1) | (3) |
86. On the basis of the Planning Commission's Environmental Performance Index (EPI), which State is named as the best performing State in terms of environmental standards?
(a) Sikkim
(b) Madhya Pradesh
(c) Uttarakhand
(d) Himachal Pradesh

87. Who won the Formula 1, Indian Grand Prix in 2012?
 (a) Fernando Alonso
 (b) Mark Webber
 (c) Felipe Massa
 (d) Sebastian Vettel
88. 2012 has been designated as the National Year of _____.
 (a) Science
 (b) Environment
 (c) Mathematics
 (d) Health
89. Industrial Revolution first took place in
 (a) England (b) America
 (c) France (d) Germany
90. The Non-Cooperation Movement did not envisage
 (a) reviving hand-spinning and weaving as part of encouraging Swadeshi
 (b) deliberate violation of laws
 (c) boycott of foreign goods
 (d) refusal to cooperate with the Government
91. Permanent Revenue System of Lord Cornwallis proved oppressive to the tenants because they were
 (a) forced to produce more
 (b) exploited by the Zamindars
 (c) asked to pay yearly revenue in advance
 (d) asked to pay under military pressure
92. Nazi ideology was synonymous with the Hitler's Worldview. What the Nazi ideology did not emphasise upon?
 (a) Purity of the Nordic Aryan race
 (b) Make the Aryans stronger
 (c) Empower women for achieving the goals
 (d) Dominate the world
93. Which was not part of the Allies in the First World War?
 (a) England (b) Austria
 (c) France (d) Russia
94. Napoleon Bonaparte was established as the Emperor of France in
 (a) 1804 (b) 1814
 (c) 1808 (d) 1812
95. The World War II is said to have commenced when Germany attacked
 (a) Russia (b) France
 (c) Poland (d) Bulgaria
96. Which one of the following countries was not attacked by Germany on 10th May 1940?
 (a) Belgium
 (b) Czechoslovakia
 (c) Netherlands
 (d) Luxembourg
97. German Instrument of Surrender was signed on 29th April 1945 at
 (a) Prague
 (b) Reims
 (c) Berlin
 (d) None of the above
98. The Harappan Civilization was mainly concentrated in
 (a) Punjab, Rajasthan and Gujarat
 (b) Punjab, Rajasthan and Madhya Pradesh
 (c) Punjab, Rajasthan & U.P.
 (d) Delhi, Bengal and Haryana
99. The most common features of all Indus Valley sites are
 (a) Elaborate drainage system and use of baked bricks
 (b) Desert and Zoological features
 (c) Building and burial system
 (d) Climate, flora and fauna
100. Which one of the following is considered to be the homeland of the Indo - Aryans?
 (a) Central Europe
 (b) India
 (c) Central Asia and Southern Russia
 (d) Australia
101. Why Buddha's eight-fold path is known as middle path?
 (a) Convergence of all religions
 (b) Eternal truth of all religions
 (c) Balanced way of life
 (d) The divine truth
102. The war between Chandragupta Maurya and Nanda Kings is described in
 (a) Dipavamsa
 (b) Puranas
 (c) Mudrarakshasa
 (d) None of the above
103. Which of the following Sultans of the Slave Dynasty did not belong to the Ilbari Tribe?
 (a) Qutubuddin Aibak
 (b) Iltutmish
 (c) Razia Sultana
 (d) Giasuddin Balban
104. Which of the following Bhakti Movement Saints wrote 'Vinay Patrika'?
 (a) Tulsidas (b) Sankardev
 (c) Namdev (d) Tukaram
105. The reason behind Nana Sahib's taking leadership of the 1857 Revolt was
 (a) His claim to Peshwaship was abolished.
 (b) The Britishers refused to pay him the pension earlier paid to his father Peshwa Bajirao II.
 (c) The British humiliated him by saying that he was not a natural son of Bajirao II.
 (d) His friendship with Mangal Pandey.
106. Which of the following played a very important role in the 1857 Revolt at Avadh?
 (a) Nana Sahib Peshwa
 (b) Tantia Tope
 (c) Birjis Qadar
 (d) Begum Hazrat Mahal

107. Which of the following wasn't a reform introduced by William Bentinck?
- Abolishment of Slavery
 - Abolishment of Sati
 - Suppression of the organized bands of thugs
 - Removal of disabilities due to change of religion
108. Which of the following revolutionary activist died in Lahore jail after 64 days of fast in 1929?
- Jatin Das
 - Madanlal Dhingra
 - Chandrashekhar Azad
 - Batukeshwar Dutt
109. Which of the following was not one of the people to have propounded the so called 'two nation theory' prior to Pakistan resolution of the Muslim League?
- Sir Sayed Ahmed Khan
 - Vir Savarkar
 - Lord Curzon
 - Mohammad Iqbal
110. Which of the following Indian revolutionaries was the author of 'Indian War of Independence'?
- Vinayak Savarkar
 - Bipin Chandra Pal
 - Madanlal Dhingra
 - Bhagat Singh
111. The pre-reform economic policy (1947-91) was marked by
- (Near) public monopoly over heavy industry
 - (Strict) investment licensing for private industry
 - import substitution and export promotion strategy
 - All the above
112. The banks were nationalized to
- ensure their greater penetration into 'unbanked'/'underbanked' areas.
 - ensure their reach to the 'un-reachable'.
 - Both the above statements are right.
 - Both the above statements are wrong.
113. Indian Economic Planning is
- totalitarian in nature
 - totally centralized
 - essentially imperative
 - None of the above
114. The link between infrastructure and economic development is
- a once for all affair
 - casual and symbiotic
 - insignificant
 - an ongoing process
115. Which one of the following is not regarded as a social sector indicator?
- IMR
 - Hunger ratio
 - NNP
 - Literacy level
116. The New Agricultural Policy was presented in Parliament in the year
- 1991
 - 2000
 - 2001
 - 2011
117. India's share in the world trade since 1950 has
- remained constant
 - increased
 - shown a mixed trend
 - declined
118. The term Mini-Navratna is used in regard to
- Micro Enterprises
 - Public Sector Enterprises
 - Small Enterprises
 - Co-operative Enterprises
119. Over time, the share of agriculture in the GDP has
- risen
 - fallen
 - remained stable
 - fluctuated
120. In which Five Year Plan poverty removal was given top priority?
- Seventh
 - Third
 - Tenth
 - Fifth
121. PURA aims to
- strengthen urban infrastructure
 - reduce overall poverty
 - increase rural connectivity
 - remove overall unemployment
122. Demographic dividend implies
- improvement in the employability of labour force
 - increase in the ratio of labour force
 - greater availability of job opportunities
 - All the above
123. The Fiscal Responsibility and Budget Management Act aims to control
- Fiscal deficit
 - Public expenditure profligacy
 - Revenue deficit
 - Private sector extravagance
124. The focus of Eleventh Five Year Plan was.
- Inclusive growth
 - Higher growth
 - Balanced growth
 - Self-sufficient growth
125. The present base year for the computation of National Income at constant prices is
- 2004-05
 - 2001
 - 2001
 - 1993-94
126. The most acceptable indicator of economic development is
- a rise in the Monetary National Income.
 - a rise in the Real National Income.
 - a rise in the Per Capita Monetary Income.
 - a rise in the Real per Capita Income.
127. Inflation measured in terms of WPI is called
- Core inflation
 - Food inflation
 - Headline inflation
 - None of the above

128. The National Income Statistics are computed by
- Planning Commission
 - CSO
 - NSSO
 - All of them
129. Of the following which is the most important source of saving?
- Households
 - Corporate sector
 - Government
 - None of these
130. The objective (s) of the National Manufacturing Policy is to
- increase growth of manufacturing to 12-14 percent in the medium period.
 - enable manufacturing to contribute at least 25 percent of GDP by 2022.
 - enhance global competitiveness of Indian manufacturing.
 - All the above
131. Which one of the following ports has been developed as 12th major port of India?
- Tuticorin
 - Jawaharlal Nehru (Navasheva)
 - Ennore
 - Kandla
132. Which one of the following pairs is not correctly matched?
- Blue revolution - Fish
 - Yellow revolution - Oil seeds
 - Golden Revolution - Fruits and Vegetable
 - White revolution - Cotton
133. Which one of the following is considered as the best indicator of development?
- Infant mortality
 - Female literacy
 - Per Capita Income
 - Degree of urbanization
134. Criteria used by the census of India to designate settlement as 'urban' are
- Population size of 5000 persons.
 - More than 75 percent of its male work force engaged in non-agricultural activities.
 - Density of 600 persons per sq. km.
- Which of the criteria given above is/are correct?
- 1 and 2 only
 - 2 only
 - 1 and 3 only
 - 1, 2 and 3
135. Which one among the following gases is heavier than the others?
- Carbon dioxide
 - Argon
 - Oxygen
 - Nitrogen
136. The normal lapse rate throughout the troposphere is
- 1°C per 150 metre ascent
 - 3°C per 500 metre ascent
 - 3°C per 1000 metre ascent
 - 2.5°C per 400 metre ascent
137. Which one of the following gases is not a greenhouse gas?
- Ozone
 - Methane
 - Nitrous oxide
 - Chlorine
138. Combustion of coal and oil releases
- Carbon monoxide
 - Sulphur dioxide
 - Nitrogen oxide
 - Non-methane hydrocarbons
139. Which is the correct sequence of layers of the atmosphere from the Earth surface
- Stratosphere, Thermosphere, Troposphere, Mesosphere, Exosphere
 - Troposphere, Mesosphere, Exosphere, Stratosphere, Thermosphere
 - Thermosphere, Stratosphere, Mesosphere, Troposphere, Exosphere
 - Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere
- (d) Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere
140. Generally the coral polyps are found between the altitudes of
- 5° - 25° N
 - 5° - 25° S
 - 25° N and 25° S
 - 35° - 65° N and S
141. Which one of the following types of clouds are often accompanied by heavy rains?
- Cumulonimbus
 - Stratocumulus
 - Alto cumulus
 - Nimbostratus
142. The subsistence agriculture is characterized by
- Small and scattered holding
 - Majority of farmers practice it
 - Most of the food production is marketed
- Select the correct answer using the codes given below:
- Only
 - 1 and 2 only
 - 2 and 3 only
 - 1, 2 and 3
143. Human Development Index (HDI) is a composite measure of
- Life expectancy
 - Educational attainment
 - Standard of living
- Select the correct answer using the codes given below:
- 1 only
 - 2 and 3 only
 - 1 and 3 only
 - 1, 2 and 3
144. Maximum water - vapour that exists in the atmosphere by its volume of air is
- 1 - 2 percent
 - 3 - 4 percent
 - 5 - 6 percent
 - 8 - 10 percent

145. 'Horse latitudes' are characterized by
1. High pressure condition
 2. Subsidence and piling of air
 3. Calm condition with feeble winds
- Select the correct feature/s from the above using the code below :
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 2 only
 - (d) 1, 2 and 3
146. In the 2012 US Presidential Elections, Barack Obama and Mit Romney obtained how many electoral votes?
- (a) 303 and 206 respectively
 - (b) 287 and 253 respectively
 - (c) 31508198 and 27892876 respectively
 - (d) 48962378 and 31685230 respectively
147. Which political leader recently stirred a controversy by allegedly terming Lord Ram as "bad husband"?
- (a) Sonia Gandhi
 - (b) Salman Khursheed
 - (c) Ram Jethmalani
 - (d) Buta Singh
148. In England a bronze bust of Indian origin woman was unveiled in London recently for her services in France during World War II. Her name is
- (a) Balbir Kaur
 - (b) Noor Inayat Khan
 - (c) Dalip Kaur
 - (d) Nargis Fatima
149. Immediately after Sandy which New York?
- (a) Laurin
 - (b) Morris
 - (c) Athena
 - (d) Terry
150. Doldrums is a zone of
- (a) Mid latitudes
 - (b) Inter-tropical convergence
 - (c) Inter - tropical divergence
 - (d) Sub-polar

ANSWERS KEY - 2012

1. (d)	2. (c)	3. (a)	4. (b)	5. (c)	6. (a)	7. (b)	8. (c)	9. (b)	10. (d)
11. (b)	12. (b)	13. (c)	14. (a)	15. (b)	16. (b)	17. (b)	18. (b)	19. (c)	20. (d)
21. (c)	22. (a)	23. (b)	24. (c)	25. (b)	26. (a)	27. (a)	28. (d)	29. (d)	30. (c)
31. (b)	32. (b)	33. (d)	34. (b)	35. (b)	36. (d)	37. (b)	38. (c)	39. (a)	40. (d)
41. (c)	42. (d)	43. (c)	44. (b)	45. (b)	46. (b)	47. (c)	48. (c)	49. (c)	50. (b)
51. (d)	52. (a)	53. (c)	54. (d)	55. (b)	56. (d)	57. (c)	58. (d)	59. (c)	60. (c)
61. (d)	62. (d)	63. (c)	64. (b)	65. (b)	66. (d)	67. (a)	68. (c)	69. (c)	70. (b)
71. (c)	72. (c)	73. (b)	74. (b)	75. (b)	76. (b)	77. (d)	78. (b)	79. (d)	80. (c)
81. (a)	82. (b)	83. (c)	84. (d)	85. (d)	86. (c)	87. (d)	88. (c)	89. (a)	90. (b)
91. (b)	92. (c)	93. (b)	94. (a)	95. (c)	96. (b)	97. (b)	98. (a)	99. (a)	100. (c)
101. (c)	102. (c)	103. (a)	104. (a)	105. (b)	106. (d)	107. (a)	108. (a)	109. (a)	110. (a)
111. (d)	112. (c)	113. (d)	114. (b)	115. (c)	116. (b)	117. (d)	118. (b)	119. (b)	120. (d)
121. (c)	122. (d)	123. (b)	124. (a)	125. (a)	126. (d)	127. (c)	128. (b)	129. (a)	130. (d)
131. (c)	132. (d)	133. (a)	134. (a)	135. (a)	136. (c)	137. (d)	138. (b)	139. (d)	140. (c)
141. (a)	142. (b)	143. (d)	144. (b)	145. (d)	146. (a)	147. (c)	148. (b)	149. (c)	150. (b)

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- UPSC significantly changed the question pattern/trend in 2013,2014's preliminary paper/main papers, most senior players were shocked and caught unguarded. "UPSC is trying not to fix a permanent trend/ pattern (last 2 years analyses)". Competition is tough and exam is not friendly to anyone, anymore, whether you're a coaching/no-coaching/first timer/senior player...you too should adapt and study hard.

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1. Does India really have freedom of speech/expression? Is it justified for the government of India to ban the documentary "India's Daughter"? Name any 5 banned books in India? Why? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1,After government ...)**
2. Who is responsible for corruption in India, and why? Explain any two cases of political corruption in India? What is one thing that can end corruption in india? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1,10 year jail term of chautala ...)**
3. How can an average Indian contribute to getting rid of corruption in India? Is India in the top 10 list of Most corrupt nations in the world ? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1,10 year jail term of chautala ...)**
4. What possible resolutions could have been adopted instead of india's partition to deal with communal differences and minority rights in India? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1, Maharashtra scraps muslim quota.....)**
5. "... religion or caste or creed... has nothing to do with the business of the State." in the light of this jinnah's statement ,was Jinnah a liberal rather than a devout religious leader? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1, Maharashtra scraps muslim quota.....)**
6. What are the rights given to minorities in india ? critically explain ? **(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1,Maharashtra scraps muslim quota.....)**
7. "India-Sri Lanka relations appear to be reaching a phase of stagnation." **In the light of the statement critically analyze the India- Srilanka relations. (Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1, sushma in colombo.....)**
8. **In your view,what role Panchayat Institutions of India have played for the development of villages and villagers?(Most Expected for IAS Main 2015 & IAS Interview 2014)(MARCH 6,2015.THE HINDU,PAGE 1, functions galore.....)**
9. **Which is not correctly matched?(Most Expected for IAS Prelim 2015)(MARCH 6,2015.THE HINDU,PAGE 2, holi festiviities.....)**
 - (a) Yaosang - Manipur
 - (b) Shimga - Sikkim
 - (c) Dol Yatra - West Bengal
 - (d) Dulandi - Haryana
10. Vazhuvoor (or Vizhuvur) is one of the original styles of (a) Bharatanatyam (b) Kuchipudi (c) Kathakali (d) Kathak?**(Most Expected for IAS Prelim 2015)(MARCH 6,2015.THE HINDU,art & culturePAGE, A Daughter.....)**

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