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# GK Digest for RRB NTPC 2017

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<b>1. History(Ancient, Medieval, Modern)</b>
<b>2.Geography</b>
<b>3.General Science</b>
<b>4.Current Affairs</b>

## History

### ANCIENT HISTORY

### INDUS VALLEY CIVILIZATION



The Indus Valley civilization was an ancient civilization thriving along the Indus river and the Ghaggar-Hakra river in what is now Pakistan and north-western India. Among other names for this civilization is the Harappan civilization in reference to the first excavated city of Harappa.

- An alternative term for the culture is Saraswati- Sindhu civilization
- R.B. Dayaram Sahni first discovered Harappa (on Ravi) in 1921.

R.D. Banerjee discovered Mohenjodaro in 1922.

Sir John Marshal played a crucial role in both these.

- Mediterranean, Proto-Australoid, Mongoloids and Alpines formed the bulk of the population
- More than 100 sites belonging to this civilization have been excavated.
- According to radio-carbon dating, it spread from the year 2500-1750 B.C.
- Copper, bronze, silver and gold were known but not iron.

- Covered parts of Punjab, Sindh, Baluchistan, Gujarat, Rajasthan and some parts of Western U.P & J&K. It extended from Manda in Jammu in the north to Daimabad in the south and from Alamgirpur in western U.P. to Sutkagendor in Baluchistan in the west.
- The towns were divided into two parts: Upper part or Citadel and the Lower part.
- The Citadel was an oblong artificial platform some 30-50 feet high and about some 200-400 yards in area. It was enclosed by a thick (13 m in Harappa) crenellated mud brick wall. The Citadel comprised of public buildings whereas the lower part comprised of public dwellings.
- In Mohenjodaro, a big public bath (Great Bath) measuring 12 m by 7 m and 2.4 m deep has been found. The Great Bath was probably used for ritual bathing.
- The Indus people sowed seeds in the flood plains in November, when the flood water receded, and reaped their harvests of wheat and barley in April, before the advent of the next flood.
- The people grew wheat, barley, rai, peas, sesamum, mustard, rice (in Lothal), cotton, dates, melon, etc. The Indus people were the first to produce cotton in the world.
- Horses weren't in regular use but elephant was for transportation.
- Well-knit external and internal trade. There was no metallic money in circulation and trade was carried through Barter System.
- Weights and measures of accuracy existed in Harappan culture (found at Lothal). The weights were made of limestone, steatite, etc. and were generally cubical in shape.
- 16 was the unit of measurement (16, 64, 160, 320).
- Flint tool-work, shell-work, bangle-making (famous in Kalibangan), etc. were practiced.
- The Harappan culture belongs to the Bronze Age and bronze was made by mixing tin and copper. Tools were mostly made of copper and bronze.

### Religious Life

- The main object of worship was the Mother Goddess or Shakti.
- Many trees (peepal), animals (bull), birds (dove, pigeon) and stones were worshipped. Unicorns were also worshipped. However no temple has been found at that time.
- At Kalibangan and Lothal fire altars have been found.

### Script

- The script is not alphabetical but pictographic. (about 600 undeciphered pictographs).

- The script has not been deciphered so far, but overlaps of letters show that it was written from right to left in the first line and left to right in the second line. This style is called 'Boustrophedon'. End/Decay
- The Harappan culture lasted for around 1000 years.
- The invasion of the Aryans, recurrent floods (7 floods), social breakup of Harappans, Earthquakes, successive alteration in the course of the river Indus and the subsequent drying up of the areas in and around the major cities, etc. are listed as possible causes for the decline of the Indus Valley Civilization.

## Important Sites of the Indus Valley Civilization

### 1. Harappa

It is situated in Montgomery district of Punjab (Pakistan).

- Evidence of coffin burial and cemetery 'H' culture.
- The dead were buried in the southern portion of the fortified area, called cemetery R-37.

### 2. Mohenjo-daro

- Also known as the 'Mound of the dead', it lies in Larkana district of Sindh (Pakistan).
- Some of the specific findings during the excavations of Mohenjodaro include:
- A college, a multi-pillared assembly hall.
- The Great Bath
- A large granary (the largest building of Mohenjodaro) which suggests extreme centralization as the ruling authorities must have first brought the agricultural produce here and then redistributed it.

### 3. Alamgirpur

- The famous Harappan site is considered the eastern boundary of the Indus culture. Findings suggest that Alamgirpur developed during the late-Harappan culture.
- The site is remarkable for providing the impression of cloth on a trough.

### 4. Kalibangan

Kalibangan was an important Harappan city. The word Kalibangan means 'black bangles'. A ploughed field was the most important discovery of the early excavations. Later excavations at Kalibangan made the following specific discoveries:

- A wooden furrow
- Seven fire altars in a row on a platform suggesting the practice of the cult of sacrifice.

- A tiled floor which bears intersecting designs of circles.

### 5. Kot-Diji

Kot-Diji is known more as a pre Harappan site. Houses were made of stone.

## Rig Vedic Age (1500-1000 B.C.)

The source of information of this period includes the archeological evidences as well as the literary source i.e. Rig Veda. It is an important source of information for this period.

Concepts about Rig Vedic Age

- Rig Vedic society was much simple as compared to that of the Indus Valley. The main occupation of Rig Vedic people was cattle rearing. It was only in the later Vedic Age that they adhered to the sedentary agriculture
- There is no sign of urbanization during this period.
- It was altogether a rural-tribal economy.
- Horse and cow were the two most important animals during this period.
- There has been no evidence of horse in the Indus Valley Civilization, however the horse was the important animal of this age.
- Indira, Agni and Som were the important gods which were worshipped. There is no evidence of worship of mother goddess or proto-Shiva as in the case of Indus Valley Civilization.

## Religious movements (6th Century B.C)

The sixth century B.C. was the age of religious unrest in the history of India. This was the time when Vedic religion and philosophy witnessed churning and reactions from within and without. The churning from within the Vedic religion was in the form of Upanishads which gave a serious jolt to the cult of sacrifices; and gave emphasis on the knowledge as a vehicle to achieve God. On the other hand Jainism, Buddhism and various other heterodox sects emerged during this period as a reaction to the Vedic religion and philosophy. While the Upanishads philosophy was aimed to rectify the Vedic religion and thus strengthen it, the aim of Jainism, Buddhism and various other heterodox sects was to dismantle it.

## Buddhism

- Gautama, the Buddha also known as Siddhartha, Sakyamuni and Tathagata.
- Born in 563 BC (widely accepted), at Lumbini, near Kapilvastu, capital of the Sakya republic.

- Left home at the age of 29 and attained Nirvana at the age of 35 at Bodh Gaya.
- Delivered his first sermon at Sarnath.
- He attained Mahaparinirvana at Kusinara in 483 BC.
- The first Council was held in 483 BC at Sattapanni cave near Rajagriha to compile the Sutta Pitaka and Vinaya Pitaka.
- The second council was held at Vaisali in 383 BC.
- The third council was held at Pataliputra during the reign of Ashoka. 236 years after the death of Buddha. It was held under the Presidentship of Moggliputta Tissa to revise the scriptures.
- The fourth council was held during the reign of Kanishka in Kashmir under the Presidentship of Vasumitra and Asvaghosha and resulted in the division of Buddhists into Mahayanists and Hinayanists.
- The Vinaya Pitaka:
  - mainly deals with rules and regulations, which the Buddha promulgated
  - it describes in detail the gradual development of the Sangha.
  - An account of the life and teaching of the Buddha is also given.
- The Sutra Pitaka:
  - Consists chiefly of discourses delivered by Buddha himself on different occasions.
  - Few discourses delivered by Sariputta, Ananda, Moggalana and others are also included in it.
  - It lays down the principles of Buddhism.
- The Abhidhamma Pitaka:
  - Contains the profound philosophy of the Buddha's teachings.
  - It investigates mind and matter, to help the understanding of things as they truly are.
- The Khandhakas:
  - contain regulations on the course or life in the monastic order and have two sections - the Mahavagga and the Cullavagga. The third part - the Parivara is an insignificant composition by a Ceylonese monk.
  - Among the non-canonical literature Milindapanho, Dipavamsa and Mahavamsa are important. The later two are the great chronicles of Ceylon.
- Major Events of Buddha's Life and their Symbols
  - Birth: Lotus and Bull
  - Great Renunciation: Horse
  - Nirvana: Bodhi tree
  - First Sermon: Dharmachakra or wheel
  - Parinirvana or Death: Stupa
  - Four Noble Truths

- The world is full of sorrows.
- Desire is root cause of sorrow.
- If Desire is conquered, all sorrows can be removed. Desire can be removed by following the eight-fold path.

### Jainism

- Life of Mahavira
- Born in 540 BC at Kundagrama near Vaisali.
- Siddhartha was his father: Trisala his mother, Yasoda his wife and Jameli was the daughter.
- Attained Kaivalya at Jrimbhikagrama in eastern India at the age of 42.
- Died at the age of 72 in 468 BC at Pavapuri near Rajagriha.
- He was called Jina or Jitendriya, Nirgrantha and Mahavira.
- Way to Nirvana (Three Ratnas)
- Right faith (Samyak vishwas)
- Right knowledge (Samyak jnan)
- Right conduct (Samyak karma)
- The Principles of Jainism as Preached by Mahavira
- Rejected the authority of the Vedas and the Vedic rituals.
- Did not believe in the existence of God.
- Believed in karma and the transmigration of soul.
- Laid great emphasis on equality.
- Five Main Teachings
- Non-injury (ahimsa)
- Non-lying (saryai)
- Non-stealing (asateya)
- Non-possession (aparigraha)
- Observe continence (Bralmmcharya).



## Dynasties

### The Mauryan Empire (325 BC -183 BC)

#### *Chandragupta Maurya*

- In 305 BC Chandragupta defeated Seleucus Nikator, who surrendered a vast territory.
- Megasthenese was a Greek ambassador sent to the court of Chandragupta Maurya by Seleucus.
- Chandragupta became a Jain and went to Sravanbelgola with Bhadrabahu, where he died by slow starvation (Sale/than).
- Trade flourished, agriculture was regulated, weights and measures were standardized and money came into use.
- Bindusara
- Bindusara extended the kingdom further and conquered the south as far as Mysore.
- Asoka
- Asoka usurped the throne after killing his 99 brothers and spared Tissa, the youngest one.
- Radhagupta a Minister of Bindusara helped him in fratricidal struggle.
- Under Asoka, the Mauryan Empire reached its climax. For the first time, the whole of the subcontinent, leaving out the extreme south, was under imperial control.
- Asoka fought the Kalinga war in 261 BC in the 9th years of his coronation. The king was moved by massacre in this war and therefore abandoned the policy of physical occupation in favour of policy of cultural conquest. In other words, Bherighosha was replaced by Dhammaghosha.
- Facts about Mauryas
- During Mauryan period, the punch marked coins (mostly of silver) were the common units of transactions.
- Tamralipti in the Gangetic delta was the most prosperous port on the East Coast of India.
- Megasthenes in his *Indica* had mentioned 7 castes in Mauryan society. They were philosophers, farmers, soldiers, herdsmen, artisans, magistrates and councilors.

#### The Mauryan Administration

##### *The King*

- The Mauryan government was a centralised bureaucracy of which the nucleus was the king.
- The Mantri Parishad
- The king was assisted by Mantri Parishad, whose members included -



- The Yuvaraj, the crown prince
- The Purohita, the chief priest
- The Senapati. the commander-in-chief of the army a few other ministers.

### Art & Architecture

- The Mauryas introduced stone masonry on large scale.
- Fragments of stone pillars and slumps indicating the existence of an 80-pillared hall have been discovered at Kumarhar on outskirts of Patna.
- The pillars represent the Masterpiece of Mauryan sculpture. Each pillar is made of single piece of sandstone. only their capitals which are beautiful pieces of sculpture in form of lion or bulls are joined with pillar on the top.
- Single Lion capital at Rampurva and Lauriya Nandangarh.
- Single bull capital at Rampurva.
- Four lion capital at Sarnath and Sanchi.
- A carved elephant at Dhauli and engraved elephant at Kalsi.
- The Mauryan artisans also started the practice of hewing out caves from rocks for monks to live in. the earliest example are Barabar caves in Gaya.
- Stupas were built throughout the empire to enshrine the relics of Buddha. Of these, the most famous are at Sanchi and Bui hut

### The Decline

The Mauryan Empire lasted a little over a century and broke up fifty years after the death of Asoka. Slowly, the various princes of the empire began to break away and set up independent kingdoms. In 185 BC. the Mauryan king was overthrown by Pushyamitra Shunga, an ambitious Commander-in-Chief of armed forces. He started the Shunga dynasty in Magadha. The Mauryan Empire ushered in a dream that was to survive and echo again and again in centuries to come. Some probable causes of decline of the Mauryan Empire:

- Brahmanical reaction
- Financial crisis
- Oppressive rule
- Neglect of north-west frontier.
- Weak successors
- Pacific policy of Asoka
- New knowledge in outlying areas-Dissemination of knowledge of manufacturing Iron

### **Sunga dynasty: (185–73 B.C.)**

- Sunga Dynasty was established by Pushymitra Sunga, a Brahmin Commander-in-Chief of last Mauryan ruler named Brihadratha in 185 BC.
- The capital of Sungas was Videsa in modern Madhya Pradesh.
- Pushyamitra didn't adopt any royal title and ruled with the name of Senani
- The great Buddhist Stupa at Bharhut (in M.P.) was built during the reign of Sungas.
- The Greek king Antialcidas sent his ambassador named Herodotus to the court of Sungas. Herodotus constructed a pillar —Garudadhvaj in the honour of God Vasudeva

### **Kanva Dynasty: (73 to 28 B.C.)**

- In 73 BC, Devabhuti, the last ruler of the Sunga dynasty, was murdered by his minister Vasudeva, who usurped the throne and founded the Kanva dynasty.
- The dynasty was confined to Magdha only
- The period of Kanva rule came to an end in 28 BC when their kingdom was annexed by Satvahanas.

### **Satavahana Dynasty: (60 B.C. to 225 A.D.)**

- The most important of the native successors of the Mauryas in the Deccan and Central India were the Satvahanas.
- Their capital was Pratishthana or Paithan while Bhrauch was the most important port city.
- The early Satvahana kings appeared not in Andhra but in Maharashtra but most of their early inscriptions have been found in Andhra.
- Simuka (60 BC – 37 BC) was the founder of the Satvahana dynasty. He was immediate successor of Ashoka in this region.

### **Chedi Dynasty**

- After Mauryas, the Chedi dynasty emerged in the Kalinga region, i.e. modern Odisha
- The capital city of this dynasty was Sisupalgarh
- The important ruler of this dynasty was Kharwela.
- Kharvela patronized Jainism and the Hatigumpha inscription gives a reference of his victories.

### **The Sakas**

The Sakas, also known as Scythians, replaced the Indo-Greeks in India. Among the five branches of Sakas with their seats of power in different parts of India, the most important was the one which ruled in Western India till the 4th Century AD.

The five seats of power or Satraps were:

1. Kapisa (Afghanistan)
2. Taxila (Pakistan)
3. Mathura (Uttar Pradesh)
4. Upper Deccan
5. Ujjain

The most famous Saka ruler in India was Rudradaman (130 AD -150 AD). He is famous not only for his military conquests but also for his public works. He repaired the famous Sudarsan lake of the Mauryan period and gave patronage to Sanskrit language. The Junagarh inscription in Gujarat is attributed to Rudradaman is first ever inscription written in Sanskrit. Other important Saka rulers in India were Nahapana, Ushavadeva, Ghamatika, Chashtana etc. In about 58 BC a king of Ujjain, Vikramaditya – is supposed to have fought effectively against the Sakas. An era called Vikrama Samvat is reckoned from 58 B.C.

### **The Kushans (1st to 3rd Century A.D.)**



- The Kushans were one of the five Yeuchi clans of Central Asia.
- They replaced the Parthians in North-Western India and then expanded to the lower Indus basin and the upper and middle Gangetic basin.
- The Kushans controlled famous silk route starting from China, passing through their empire on to Iran & Western Asia. This route was a source of great income to the Kushans.
- The dynasty was founded by Kadphises I or Kujul Kadphises.
- The Kushans were the first rulers in India to issue gold coins on a wide scale.
- The second king was Kadphises II or Vema Kadphises was the first king who issued the gold coins.
- The most famous Kushan ruler was Kanishka (78 AD – 101 AD), also known as ‘Second Ashoka’. He started an era in 78 AD which is now known as the Saka era and is used officially by the Government of India.
- The empire of Kanishka was spread over a large area in the portion of five countries i.e. Russia, Afghanistan, Iran, Pakistan and India.
- His capital was Peshawar
- Kanishka was a great patron of Mahayana Buddhism. In his reign 4th Buddhist council was held in Kundalavana, Kashmir where the doctrines of the Mahayana form of Buddhism were finalized.

- Large size headless statue of Kanishka is found at Mathura
- The last great Kushan ruler was Vasudeva I.

### Gupta Period

SriGupta (240-280 AD) was ruling a small Hindu kingdom called Magadha from Vaishya community near Ganga river, a prayag based feudatory of Kushanas. He and his son Ghatotkach' (ruled from c. AD 280-319) was having hold over Patliputra' and nearby areas. Ghatotkacha (280 – 319 AD) became the successor of Sri Gupta.

#### *Chandragupta I*

- He was the first Gupta ruler to assume the title of Maharajadhiraja.
- He started the Guptan era i.e. 320 A.D.
- His marriage to Lichchhvi princess Kumaradevi, brought an enormous power, resources and prestige. He took advantage of the situation and occupied the whole of fertile Gangetic Valley.
- After the marriage he issued the special type of coins called —Chandragupta I-kumaradevi type.
- Chandragupta I was able to establish his authority over Magadha, Prayaga & Saketa.

#### *Samudragupta (335 – 380 A.D.)*

- Samudragupta was the greatest king of Gupta dynasty.
- He took the title Lichchhvidhutra as his mother was Lichchhvi princess.
- He is also described as a monarch with sharp intellect and polished poetry skills, for this he is described as Kaviraj.
- In the Gangetic Valley & Central India, Samudragupta annexed the territories of the defeated monarchs, but in South India he remained content with victories alone- he did not annex the territories of the conquered rulers.
- Samudragupta's military campaigns justify description of him as the Napoleon of India' by V.A. Smith.

#### *Ramgupta*

- Samudragupta was succeeded by Ramgupta.
- Ramgupta ruled for a very short period. He was the only Gupta ruler to issue copper coins'.
- Ramagupta, a coward and impotent king, agreed to surrender his queen Dhruvadevi to Saka invader. But the prince Chandragupta II, the younger brother of the king, resolved to go to the enemy's camp in the guise of the queen with a view to kill the hated enemy. Chandragupta II succeeded in killing the Saka ruler.
- Chandragupta II 'Vikramaditya (380-414 A.D.)

- Chandragupta II also succeeded in killing Ramagupta, and not only seized his kingdom but also married his widow Dhruvadevi.
- He issued the silver coins in the memory of victory over Sakas.
- He was the first Gupta ruler to issue silver coins and adopted the titles Sakari & Vikramaditya. Ujjain seems to have been made the second capital by Chandragupta II.
- Chinese pilgrim Fa-Hien visited India during his regime.

### ***Kumargupta I: 415-455 AD***

- Chandragupta II was succeeded by his son Kumargupta I. Kumargupta took the titles like Mahendraditya, Mahendra Singh and Ashvamedha Mahendrah. Kumargupta was the worshipper of god Kartikeya.
- He founded the Nalanda Mahavihara which developed into a great centre of learning.
- Towards the end of his reign, the Gupta Empire was threatened from the North by the Huns, which was temporarily checked by his son Skandagupta.
- Skandagupta : 455-467 AD
- Skandagupta, the last great ruler of the Gupta dynasty. During his reign the Gupta Empire was invaded by the Huns.
- He succeeded in defeating the Huns.
- The continuous attacks of the Huns weakened the empire and adversely affected its economy.
- The gold coinage of Skandagupta bears testimony to this.

### **The Huns: (500-530 A.D.)**

Huns were primitive pastoralists owning herds of cattle & horses but knowing nothing of agriculture.

They roamed in the Steppe in search of pasture & water. From the Oxus, the white Huns came into Afghanistan, destroyed the local power and after establishing themselves, began to pour into India in 458 AD.

### **MEDIEVAL HISTORY**

The period between AD 750 and AD 1200 is referred to as an early medieval period of Indian History.

### **PALLAVA DYNASTY**

- The Pallava dynasty emerged in South India at a time when the Satavhana dynasty was on the decline.
- Shivaskandavarman is said to have been the founder of the Pallava dynasty.
- During their reign, the Pallava rulers made Kanchi their capital.
- The noteworthy rulers during this period were: Simhavarama I, Sivaskandavarma I, Veerakurcha, Shandavarma II, Kumaravishnu I, Simhavarma II, and Vishnugopa.

- Vishugopa is said to have been defeated in battle by Samudragupta after which the Pallavas become weaker.
- It was Simhavishnu, the son of Simhavarma II, who eventually crushed the Kalabhras' dominance in 575 AD and re-established his kingdom.
- In 670, Parameshwaravarma I came to the throne and restricted the advance of the Chlukyan king Vikramaditya I. However, the Chalukyas joined hands with the Pandya king Arikesari Maravarma, another prominent enemy of the Pallavas, and defeated Parameshwaravarma I.
- Parameshwaravarma I died in 695 and was succeeded by Narasimhavarma II, a peace loving ruler. He is also remembered for building the famous Kailashanatha temple at Kanchi. He died grieving his elder son's accidental death in 722.
- His youngest son, Parameshwaravarma II, came to power in 722. He died in 730 with no heirs to the throne, which left the Pallava kingdom in a state of disarray.
- Nandivarma II came to power after some infighting for the throne among relatives and officials of the kingdom. Nandivarma married the Rashtrakuta princess Reetadevi, and re-established the Pallava kingdom.
- He was succeeded by Dantivarma (796-846) who ruled for 54 long years. Dantivarma was defeated by the Rastrakuta king, Dantidurga, and subsequently by the Pandyas. He was succeeded by Nandivarma III in 846.
- Nandivarma III was succeeded by Nrupatungavarma, who had two brothers, Aparajitavarma and Kampavarma.
- The Chola king provoked Aprajitavarman into waging a civil war in the Pallava kingdom. Subsequently, Aprajita Varma captured the throne.

### THE CHALUKYAS

History of the Chalukyas, the Karnataka rulers, can be classified into three eras:

- 1) The early western era (6th -8th century), the Chalukyas of Badami(vatapi);
  - 2) The later western era (7th - 12th century), the Chalukyas of Kalyani;
  - 3) The eastern chalukya era (7th - 12th century), the chalukyas of Vengi.
- 1) Pulakesin I (543-566) was the first independent ruler of Badami with Vatapi in Bijapur as his capital.
  - 2) Kirthivarma I (566-596) succeeded him at the throne. When he died, the heir to the throne, Prince Pulakesin II, was just a baby and so the king's brother, Mangalesha (597-610), was crowned the caretaker ruler. Over the years, he made many unsuccessful attempts to kill the prince but was ultimately killed himself by the prince and his friends.

- 3) Pulakesin II (610-642), the son of Pulakesin I, was a contemporary of Harshavardhana and the most famous of the Chalukyan kings. His reign is remembered as the greatest period in the history of Karnataka. He defeated Harshavardhana on the banks of the Narmada.
- 4) After conquering the Kosalas and the Kalingas, and eastern Chalukyan dynasty was inaugurated by his (Pulakeshin II) brother Kubja Vishnuvardana.
- 5) By 631, the Chalukyan empire extended from sea to sea. However, Pulkeshin II was defeated and probably killed in 642, when the Pallavas under Narsimhavarma I attack on their capital & captured the Chalukyan capital at Badami.
- 6) The Chalukyas rose to power once again under the leadership of Vikramaditya I (655-681), who defeated his contemporary Pandya, Pallava, Cholas and Kerala rulers to establish the supremacy of the Chalukyan empire in the region.
- 7) Vikramaditya II (733-745) defeated the Pallava king Nandivarma II to capture a major portion of the Pallava kingdom.
- 8) Vikramaditya II's son, Kirtivarma II (745), was disposed by the Rastrakuta ruler, Dhantidurga, who established the Rashtrakuta dynasty.

### THE CHOLAS (9TH TO 13TH CENTURY)

- 1) The Chola dynasty was one of the most popular dynasties of south India which ruled over Tamil Nadu and parts of Karnataka with Tanjore as its capital.
- 2) Early Chola rulers were the Karikala Cholas who ruled in the 2nd century.
- 3) In 850, Vijayalaya captured Tanjore during the Pandya-Pallava wars. To commemorate his accession, he built a temple at Tanjore. The giant statue of Gomateswara at Shravanbelagola was also built during this period.
- 4) Vijayalaya's son Aditya I (871-901) succeeded him to throne.
- 5) It was Rajaraj I (985-1014) during which the CHOLAS reached at its zenith. He snatched back lost territories from the Rashtrakutas and become the most powerful of the Chola rulers. Rajaraja' is also famous for the beautiful shiva temple which he constructed at Thanjavur(TN). It is called Rajarajeswara after his name.
- 6) Rajendra Chola (1014-1044), son of Rajaraja I, was an important ruler of this dynasty who conquered Orissa, Bengal, Burma and the Andaman and Nicobar Island. The Cholas dynasty was at its zenith also during his reign.
  - 1) He also conquered Sri Lanka.
  - 7) Kulottunga I (1070-1122) was another significant Chola ruler. Kulottunga I united the two kingdom of the eastern Chalukyas of Vengi and the Cholas of Thanjavur. After a long reign of about half a century, Kulottunga I passed away

2) sometime in 1122 and was succeeded by his son, Vikrama Chola, surnamed Tyagasamudra.

8) The last ruler of the Chola Dynasty was Rajendra III (1246-79). He was a weak ruler who surrendered to the Pandyas. Later, Malik Kafur invaded this Tamil state in 1310 and extinguished the Chola empire.

### THE RASHTRAKUTA

- Dhantidurga (735-756) established this kingdom. They overthrew the Chalukyas and ruled up to 973 ad.
- Dhantidurga was succeeded by his son Krishna I (756-774). Krishna I is credited to have built the Kailasa temple at Ellora.
- Other kings of this dynasty were Govinda II (774- 780), Dhruva (780-790), Govinda III (793-814) and Amoghavarsa Nrupatunga I (814-887).
- Amoghavarsa was the greatest king of this dynasty & he was the son of GOVINDA III. The extent of the Amoghavarsa's empire can be estimated from the accounts of the Arabian traveller, Sulaiman, who visited his court in 851 and wrote in his book that 'his kingdom was one of the four great empires of the world at that time.'
- The Arab traveler Al-Mashdi, who visited India during this period, calls the Rashtrakuta king the, 'greatest king of India.'
- The dynasty of the Chalukyas of Kalyani was founded by Taila I after overthrowing the Rashtrakutas in 974-75,
- 6) The dynasty founded by him, with its capital at Kalyani (Karnataka), is known as the later Chalukyas of the Chalukyas of Kalyani (the early Chalukyas being the Chalukyas of Badami). Tailapa ruled for twenty three years from 974 to 997.

### THE PRatihARAS (8TH TO 10TH CENTURY)

- a. The Pratiharas were also called Gurjar Pratihars probably because they originated from Gujarat or Southwest Rajasthan.
- b. Nagabhata I, defended western India from the Arab incursions from Sindh into Rajasthan.
- c. After the Nagabhata I, the Pratiharas suffered a series of defeats mostly at the hands of the Rashtrakutas.
- d. The Pratihara power regained its lost glory only after only after the succession of Mihirbhoja, popularly known as Bhoja.
- e. His eventful career drew the attention of the Arab traveler, Sulaiman .
- f. Mihirbhoja was succeeded by his son Mahendrapala I whose most notable achievement was the conquest of Magadha and northern Bengal. The most brilliant writer in his court was Rajasekhara who has to his credit a number of literary works-



- 1) Karpuramanjari, 2) Bala Ramayana,
- 3) Bala and Bharta, 4) Kavyamimamsa.

g) Mahendrapala's death was followed by a scramble for the possession of the throne. Bhoja II seized the throne, but step brother, Mahipala soon usurped the throne.

The withdrawal of Indra III to the Deccan enabled Mahipala to recover from the fatal blow. Mahendrapala II, son and successor of mahipala, was able to keep his empire intact.

### THE PALAS (8TH TO 11TH CENTURY)

- 1) Sulaiman, an Arab merchant who visited India in the 9th century has termed the Pala empire as Rhumi.
- 2) The Pala Empire was founded by Gopala in 750 AD. Gopala was an ardent Buddhist and is supposed to have
- 3) He built the monastery at Odantapuri (Sharif district of Bihar).
- 4) Gopala was succeeded by his son Dharmapala who raised the Pala kingdom to greatness. The kingdom expanded under him and it comprised the whole of Bengal and Bihar.
- 5) After a reign of 32 years Dharmapala died, leaving his extensive dominions unimpaired to his son Devapala.
- 6) Devapala ascended the throne in 810 and Ruled for 40 years. He extended his control over Pragjyotishpur (Assam), parts of Orissa and parts of Modern Nepal.
- 6) He patronised Haribhadra, one of the great Buddhist authors. Devapala's court was adorned with the Buddhist poet Vijrakatta, the author of Lokesvarasataka.

### ESTABLISHMENT AND EXPANSION OF THE DELHI SULTANATE

#### *The First Battle of Tarain (AD 1191)*

In the first battle fought at Tarain in AD 1191, Ghori's army was routed and he narrowly escaped death. Prithviraj conquered Bhatinda but he made no efforts to garrison it effectively. This gave Ghori an opportunity to re-assemble his forces and make preparations for another advance into India.

#### *The Second Battle of Tarain (AD 1192)*

This battle is regarded as one of the turning points in Indian History. Muhammad Ghori made very careful preparations for this conquest. The Turkish and Rajput forces again came face to face at Tarain. The Indian forces were more in number but Turkish forces were well organized with swift moving cavalry. The bulky Indian forces were no match against the superior organisation, skill and speed of the Turkish cavalry. The Turkish cavalry was using two superior techniques. The first was the horse shoe which gave their horses a long life and protected their hooves. The second was, the use of iron stirrup which gave a good hold to the horse rider and a better striking power in the battle. A large number of Indian soldiers were killed. Prithviraj tried to escape but was captured near

Sarsuti. The Turkish army captured the fortresses of Hansi, Sarsuti and Samana. Then they moved forward running over Delhi and Ajmer. After Tarain, Ghori returned to Ghazni, leaving the affairs of India in the hand of his trusted slave general Qutbuddin Aibak.

In AD 1194 Muhammad Ghori again returned to India. He crossed Yamuna with 50,000 cavalry and moved towards Kanauj. He gave a crushing defeated Jai Chand at Chandwar near Kanauj.

Thus the battle of Tarain and Chandwar laid the foundations of Turkish rule in Northern India. His death in AD 1206 did not mean the withdrawal of the Turkish interests in India. He left behind his slave General Qutbuddin Aibak who became first Sultan of the Delhi Sultanate.

### Delhi Sultanate

After the assassination of Muhammad Ghori, Qutubuddin Aibek got the control over Delhi

This period can be divided into 5 distinct periods viz.

1. The Slave Dynasty (1206-90)
2. The Khilji Dynasty (1290-1320)
3. The Tughlaq Dynasty (1320-1414)
4. The Sayyid Dynasty (1414-51)
5. The Lodhi Dynasty (1451-1526).



### The Slave Dynasty

#### Qutubuddin Aibak (1206-10)

- A Turkish slave by origin, he was purchased by Mohammad Ghori who later made him his Governor.
- After the death of Ghori, Aibak became the master of Hindustan and founded the Slave Dynasty in 1206.
- The capital during his reign was not Delhi but Lahore.
- For his generosity, he was given the title of Lakh Bakhsh (giver of lakhs).
- He died in 1210 while playing Chaugan or Polo.
- He constructed two mosques i.e. Quwat-ul-Islam at Delhi and Adhai din ka Jonpra at Ajmer.
- He also began the construction of Qutub Minar, in the honour of famous Sufi Saint Khwaja Qutibuddin Bakhtiyar Kaki.

- Aibak was great patron of learning and patronized writers like Hasan-un-Nizami, author of ‘Taj-ul- Massir’ and Fakhruddin, author of ‘Tarikh-i-Mubarak Shahi’.

### **Aram Shah (1210)**

- He was the son of Aibak, who was defeated by Illutmish in the battle of Jud.

### **Shamsuddin Illutmish (1210-36)**

- He was a slave of Qutubuddin Aibak of Mamluke tribe and occupied the throne of Delhi in 1211.
- Illutmish began his career as Sar-e Jandhar or royal bodyguard.
- He was a very capable ruler and is regarded as the ‘real founder of the Delhi Sultanate’.
- He made Delhi the capital in place of Lahore.
- He saved Delhi Sultanate from the attack of Chengiz Khan, the Mongol leader, by refusing shelter to Khwarizm Shah, whom Chengiz was chasing.
- He introduced the silver coin (tanka) and the copper coin (jital).
- He organized the Iqta System and introduced reforms in civil administration and army, which was now centrally paid and recruited.
- He set up an official nobility of slaves known as Chahalgani/ Chalisa (group of forty).
- He completed the construction of Qutub Minar which was started by Aibak.
- He patronized Minhaj-us-Siraj, author of ‘Tabaqat-i-Nasiri’.

### **Ruknuddin : 1236**

- He was son of Illutmish and was crowned by her mother, Shah Turkan, after death of Illutmish.
- He was deposed by Razia, daughter of Illutmish.

### **Razia Sultana: (1236 – 40)**

- Illutmish had nominated his daughter Razia as the successor, the nobles placed Ruknuddin Feroz on the throne.
- She was the ‘first and only Muslim lady who ever ruled India’.
- She used to rule without the veil
- She further offended the nobles by her preference for an Abyssian slave Yakut.
- The wazir of Illutmish Junnaidi revolted against her but was defeated.
- There was a serious rebellion in Bhatinda, Altunia, governor of Bhatinda refused to accept suzerainty of Razia. Razia accompanied by Yakut marched against Altunia.
- However, Altunia got Yakut murdered and imprisoned Razia.
- Subsequently, Razia was married to Altunia and both of them marched towards Delhi as nobles in Delhi raised Bahram Shah (3rd son of Illutmish) to throne.

- In 1240 AD, Razia became the victim of a conspiracy and was assassinated near Kaithal (Haryana).

### ***Bahram Shah: 1240-42***

- Iltutmish's third son Bahram Shah was put on throne by powerful Turkish council Chalisa.
- He was killed by Turkish nobles.

### ***Allauddin Masud Shah: 1242-46***

- He was son of Ruknuddin Feroz.
- He was disposed after Balban and Nasiruddin Mahmud's Mother, Malika-e-Jahan, conspired against him and established Nasiruddin Mahamud as the new Sultan.

### ***Nasiruddin Mahmud 1246-66***

- He was the eldest son of Iltutmish.
- Minaj-us-Siraj has dedicated his book Tabaquat-i-Nasiri to him

### ***Ghiyasuddin Balban : 1266-87***

- After the death of Nasiruddin; Balban ascended the throne in 1266.
- He broke the power of Chalisa and restored the prestige of the crown. He made kingship a serious profession.
- The Persian court model influenced Balban's conception of Kingship. He took up the title of Zil-i-Ilahi (Shadow of God).
- He introduced Sijda (prostration before the monarch) and Paibos (kissing the feet of monarch) as the normal forms of salutation.
- Divine right of the king was emphasized by calling himself Zil-i-Ilahi.
- He gave great emphasis on justice and maintaining law and order.
- He established the military department Diwan-i-Arz.
- In his last days he overlooked Sultanate affairs due to death of his eldest and most loving son, Muhammad, and rebellion by his closest and most loved slave, Tughril. Muhammad died fighting Mongolians in 1285 and Tughril was captured and beheaded.

### ***Kaiqubad: 1287-90***

- He was the grandson of Balban was established on the throne by Fakruddin, the Kotwal of Delhi
- But Kaiqubad was killed by nobles Kaimur
- He was the minor son of Kaiqubad who came to throne at an age of 3
- He was the last Illbari ruler
- The Khalji nobles revolted against him and he was killed within three months.

### **The Khalji dynasty (1290-1320 A.D.)**

#### ***Jalaluddin Khalji***

- Jalaluddin Khalji founded the Khalji dynasty.
- He was a liberal ruler and adopted the policy of religious toleration
- His son-in-law and nephew was Allauddin Khalji

#### ***Allauddin Khalji***

- He was the first Turkish Sultan of Delhi who separated religion from politics. He proclaimed 'Kingship knows no Kinship'.
- During the reign of Jallauddin Khalji, he was the governor of Kara
- He adopted the title Sikander-e-Saini or the second Alexander
- Alauddin annexed Gujarat (1298), Ranthambhor (1301), Mewar (1303), Malwa (1305), Jalor (1311).
- In Deccan, Aluddin's army led by Malik Kafur defeated Ram Chandra (Yadava ruler of Devagiri), Pratap Rudradeva (Kakatiya ruler of Warangal), Vir Ballal III (Hoyasala ruler of Dwarsamudra) and Vir Pandya (Pandya ruler of Madurai).
- Malik Kafur was awarded the title Malik Naib

#### ***Shiabuddin Umar (1316)***

- He was the minor son of Jhitaipali who was raised to throne after the death of Allauddin.
- He became victim of the court politics and was later blinded.

#### ***Mubarak Khalji (1316-20)***

- He released 18,000 prisoners
- He reversed all the administrative and market reforms of Allauddin Khalji.
- During his time Devgiri was annexed.

### **The Thuglaq Dynasty**

#### ***Ghiyasuddin Tughlaq***

- Ghazi Malik or Ghiyasuddin Tughlaq of Qaurana tribe was the founder of Tughlaq dynasty.
- He was the governor of Dipalpur before coming to power as Sultan
- He died in the collapse of the victory pavilion near Delhi

#### ***Mohammad Bin Tughlaq (1325-51)***

- Prince Jauna, son of Ghiyasuddin Tughlaq ascended the throne in 1325.
- He gained the title Ulugh Khan, he was most educated of all the Sultans of the Delhi Sultanate
- He created a department Diwan-e-Amir-e-Kohi for the improvement of the agriculture

- He distributed Sondhar i.e. agriculture loans advanced for extension of agriculture of barren land
- He encouraged cash crops in place of cereals

### *Jalaluddin Ahsan Shah*

- 1336: Foundation of Vijayanagar by Harihar and Bukka; and Warangal became independent under Kanhaiya.

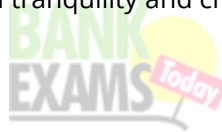
### *The five experiments*

- Taxation in the Doab : The Sultan made an ill-advised financial experiment in the Doab between the Ganges and Yamuna. He not only increased the rate of taxation but also revived and created some additional Abwabs or cesses.
- The Sultan crated a new department of Agriculture called Diwan-i-Kohi. The main object of this department was to bring more land under cultivation by giving direct help to peasants.
- Transfer of Capital: The most controversial step which Mohammad-bin Tughlaq under took soon after his accession was the so called transfer of capital from Delhi to Devagiri. He ordered mass exodus from Delhi to Devgiri. Devagiri had been a base for the expansion of Turkish rule in South India. It appears that the Sultan wanted to make Devagiri second capital so that he would be able to control South India better. Devagiri was thus named Daulatabad.
- Introduction of Token Currency: Mohammad-bin-Tughlaq decided to introduce bronze coins, which were to have same value as the silver coins. Mohammad-bin-Tughlaq might have been successful if he could prevent people from forging the new coins. He was not able to do so and the new coins began to be greatly devalued in markets. Finally Mohammadbin- Tughlaq decided to withdraw the token currency. He promised to exchange silver pieces for bronze coins.
- Proposed Khurasan Expedition: The Sultan had a vision of universal conquest. He decided to conquest Khurasan and Iraq and mobalised a huge army for the purpose. He was encouraged to do so by Khurasani nobles who had taken shelter in his court. Moreover there was instability in Khurasan on account of the unpopular rule of Abu Said. This project was also abandoned because of the change in political scenario in Khurasan.
- Qarachil Expedition: This expedition was launched in Kumaon hills in Himalayas allegedly to counter Chinese incursions.It also appears that the expedition was directed against some refractory tribes in Kumaon-Garhwal region with the object of bringing them under Delhi Sultanate. The first attack was a success but when the rainy season set in, the invaders suffered terribly.
- He died in Thatta while campaigning in Sindh against Taghi, a Turkish slave.

### *Feroz Shah Tughlaq (1351-88)*

- He was a cousin of Mohammad-bin Tughlaq.

- He adopted the policy of appeasement with the nobility, the army and theologians
- The new system of taxation was according to quran. Four kinds of taxes sanctioned by the Quran were imposed and those were Kharaj, Zakat, Jizya and Khams. Kharaj was the land tax, which was equal to 1/10 of the produce of the land, Zakat was 2% tax on property, Jizya was levied on non-Muslims and Khams was 1/5 of the booty captured during war.
- Firoz tried to ban practices, which the orthodox theologians considered non Islamic. Thus he prohibited the practice of Muslim women going out to worship at graves of saints and erased paintings from the palace.
- It was during the time of Firoz that Jizya became a separate tax.
- In order to encourage agriculture, the Sulatan paid a lot of attention to irrigation. Firoz repaired a number of canals and imposed Haque-i-Sharb or water tax
- He was a great builder as well; to his credit are cities of Fatehabad, Hisar, Jaunpur and Firozabad.
- The two pillars of Ashoka, one from Topra (Haryana) and other from Meerut (U.P.) were brought to Delhi.
- The Sultan established at Delhi, a hospital described as Dar-ul-Shifa.
- A new department of Diwan-i-Khairat was set up to make provisions for marriage of poor girls.
- However his rule is marked by peace and tranquility and credit for it goes to his Prime Minister Khan-i-Jahan Maqbul.
- He died in 1388.



### **The Sayyaid dynasty**

- Khizr Khan (1414-21)
- Mubarak Shah (1421-34)
- Muhammad Shah (1434-43)
- Alam Shah (1443-51)--He was the last Sayyid king descended in favour of Bahlol Lodhi and he retired. Thus began the Lodhi dynasty.

### **The Lodi Dynasty**

#### ***Bahlol Lodhi : 1451-88***

- Bahlol Lodhi was one of the Afghan sardars who established himself in Punjab after the invasion of Timur.
- He founded the Lodhi dynasty.
- Jaunpur was annexed into Delhi Sultanat during his reign

### *Sikandar Lodhi : 1489-1517*

- Sikandar Lodi was the son of Bahlol Lodhi who conquered Bihar and Western Bengal.
- Agra city was founded by him.
- Sikandar was a fanatical Muslim and he broke the sacred images of the Jwalamukhi Temple at Nagar Kot and ordered the temples of Mathura to be destroyed.
- He reimposed Jaziya tax on non muslims
- He use to write poems with the pen name —Gulrukhil
- He took a keen interest in the development of agriculture. He introduced the Gaz-i-Sikandari (Sikandar's yard) of 32 digits for measuring cultivated fields.

### *Ibrahim Lodhi : 1517-26*

- He was the last king of the Lodhi dynasty and the last Sultan of Delhi.
- He was the son of Sikandar Lodhi.
- At last Daulat Khan Lodhi, the governor of Punja invited Babur to overthrow Ibrahim Lodhi.
- Babur accepted the offer and inflicted a crushing defeat on Ibrahim Lodhi in the first battle of Panipat in 1526.
- He was the only Sultan who died in battle field

### *2.2 Administration under Sultanate*

There were four pillars of the state i.e.:

- 1) Diwan-i-Wizarat or finance department
- 2) Diwan-i-Risalat or department of religious matters and appeals
- 3) Diwan-i-Arz or department of military affairs
- 4) Diwan-i-Insha or department of royal correspondence

### *2.3 Art and architecture under Delhi Sultanate*

- The new features brought by the Turkish conquerors were :
  - The dome
  - The lofty towers
  - The true arch unsupported by beam
  - The vault.
  - Aibak built a Jami Masjid and Quwwatul Islam mosque, he also began the construction of Qutub Minar
  - Aibak also built the Adhai-din ka Jhonpra at Ajmer has a beautiful prayer hall, an exquisitely carved Mehrab of white marble and a decorative arch screen.
  - The first example of true or arch is aid to be the tomb of Ghiyasuddin Balban in Mehrauli (Delhi).



- Allauddin Khalji began the work of Alai minar to rival Qutab Minar, but this could not be completed because of his death
- Some notable Tughlaq monuments are the fort of Tughlaqabad, the tomb of Ghiyasuddin Tughlaq which marked a new phase in Indo-Islamic architecture.

### Mughal period

#### *Babur*

- The foundation of the Mughal rule in India was laid by Babur in 1526.
- He was a descendant of Timur (from the side of his father) and Chengiz Khan (from the side of his mother).
- Babur was invited by Daulat Kahna Lodi and Alam Khan Lodi against Ibrahim Lodi
- Babur defeated Ibrahim Lodhi in the first battle of Panipat on April 21, 1526 and established Mughal dynasty.
- In 1527, he defeated Rana Sanga of Mewar at Khanwa.
- In 1528, he defeated Medini Rai of Chaneri at Chanderi.
- In 1529, he defeated Muhammad Lodhi (uncle of Ibrahim Lodhi) at Ghaghra.
- In 1530, he died at Agra. His tomb is at Lahore. The tomb of only two Mughal emperors are outside India i.e. Babur and Bahadur Shah Zafar
- He was the first to use gunpowder and artillery in India.
- Two gun masters Mustafa and Ustad Ali were in his army
- He wrote his autobiography Tuzuk-i-Baburi in Turki .
- Tuzuk-i-Baburi was translated in Persian (named Baburnama) by Abdur Rahim Khan-e-khana and in English by Madan Bebridge.
- He compiled two anthologies of poems, Diwan (in Turki) and Mubaiyan (in Persian). He also wrote Risal-i-Usaz or letters of Babur.

#### *Humayun (1530-40 and 1555-56)*

- He was the son of Babur and ascended the throne in 1530. His succession was challenged by his brothers Kamran, Hindal and Askari along with the Afghans.
- In 1532 he established Tabl-e-adl at Agra.
- He fought two battles against Sher Shah at Chausa (1539) and at Kannauj/Bilgram (1540) and was completely defeated by him.
- He escaped to Iran where he passed 12 years of his life in exile.

- After Sher Shah's death Humayun invaded India in 1555 and defeated his brothers the Afghans. He once again became the ruler of India.
- He died while climbing down the stairs of his library (at Din Panah) in 1556 and was buried in Delhi.
- Abul Fazal calls him Insan-e-Kamil.
- His sister, Gulbadan Begum wrote his biography Humayunama.
- He built Din Panah at Delhi as his second capital.

### **Suri Empire (Second Afghan Empire) 1540-55**

#### *Sher Shah: 1540-45*

- He was the son of Hasan Khan, the Jagirdar of Sasaram.
- In 1539, he defeated Humayun in the battle of Chausa and assumed the title Sher Shah as emperor.
- As an emperor, he conquered Malwa (1542), Ranthambhor (1542), Raisin (1543), Rajputana annexation of Marwar (1542), Chittor (1544) & Kalinjar (1545).
- He died in 1545 while conquering Kalinjar.
- Purana Quila was built during his reign
- During his brief reign of 5 years he introduced a brilliant administration, land revenue policy and several other measures to improve economic conditions of his subjects.
- He issued the coin called Rupiah and fixed standard weights and measures all over the empire.
- He also improved communications by building several highways. He built the Grand Trunk Road (G.T. Road), which runs from Calcutta to Peshawar. The other roads built during his reign were:
  - Agra to Mandu
  - Agra to Jodhpur and Chittor
  - Lahore to Multan
- He set up cantonment in various parts of his empire and strong garrison was posted in each cantonments.
- According to Abul Fazal the empire of Sher Shah was divided into 63 sarkars or districts.
- The unit of land measurement was —bighall
- He like Allauddin Khalji introduced Dagh and Chera in the army
- Zamindars were removed and the taxes were directly collected.
- He was buried in Sasaram.

#### *Akbar*

- Akbar, the eldest son of Humayun, ascended the throne under the title of Jalaluddin Muhammad Akbar Badshah Ghazi at the young age of 14.

- His coronation took place at Kalanaur.
- Second Battle of Panipat (5 Nov., 1556) was fought between Hemu (the Hindu General of Muhammad Adil Shah) and Biram Khan (the regent of Akbar). Hemu was defeated, captured and slain by Bairam Khan.
- In the initial years of his rule Akbar was first under the influence of his reagent Bairam and then under her mother Maha Manga.
- The period of influence of Maham Anga on Akbar i.e. form 1560-62 is known as the period of Petticoat government.
- Akbar entered into matrimonial alliance with various Rajput kingdoms like Amber, Bikaner, Jaisalmer and Jodhpur
- Other important reforms that were undertaken by Akbar were:
  - Age of marriage for boys and girls was increased to 16 years and 14 years respectively
  - Sati was prohibited
  - In his 24th year Akbar introduced Dashala system for the collection of land revenue by the state.
  - The Mansabdari system under Akbar, divided the Mansabdars into 66 categories. This system fixed the following service conditions:
    - Rank and status
    - Salary
    - Number of sawars (horsemen)
  - As a revolt against the orthodoxy and bigotry of religious priests, Akbar proclaimed a new religion, Din-i-Ilahi, in 1581. Birbal was the only Hindu who followed this new religion.
  - Din-i-Ilahi, however, did not become popular.
  - Akbar built Fatehpur Sikri, Agra Fort, Lahore Fort and Allahabad Fort and Humayun's Tomb at Delhi.
  - Fatehpur Sikri, place near Agra-it said that Akbar had no son for a long time. Sheikh Salim Chisti, a Sufi saint blessed Akbar with a son who was named Salim/Sheikho Baba (Jahangir). In honour of Salim Chisti, Akbar Shifted his court from Agra to Fatehpur Sikri.
  - Tulsidas (author of Ramcharitmanas) also lived during Akbar's period.
  - When Akbar died, he was buried at Sikandara near Agra.
  - Birbal was killed in the battle with Yusufzai Tribe (1586).
  - Abul Fazl was murdered by Bir Singh Bundela (1601).
  - Akbar gave Mughal India one official language (Persian).



### **Jahangir (1605-27)**

- Salim, son of Akbar, came to the throne after Akbar's death in 1605.
- He established Zanjir-i-Adal (i.e. Chain of Justice) at Agra Fort for the seekers of royal justice.

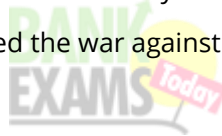
- In 1611, Jahangir married Mihr-un-nisa, widow of Sher Afghan, a Persian nobleman who was sent on expedition to Bengal. Later on she was given the title Nurjahan.
- Nurjahan exercised tremendous influence over the state affairs. She was made the official Padshah Begum.
- Jahangir issued coins jointly in Nurjahan's name and his own.
- Jahangir also married Jodha Bai of Marwar.
- In 1608, Captain William Hawkins, a representative of East India Company came to Jahangir's court. In 1615 Sir Thomas Roe, an ambassador of King James I of England also came to his court. He granted permission to the English to establish a trading port at Surat.
- His reign was marked by several revolts. His son Khusrau, who received patronage of 5th Sikh Guru Arjun Dev, revolted against Jahangir (1605). Arjun Dev was later sentenced to death for his blessing to the rebel prince (1606).
- During his last period, Khurram (Shahjahan), son of Jahangir, and Mahabat Khan, military general of Jahangir also revolted (Khurram: 1622-25 and Mahabat Kha : 1626-27).
- He wrote his memoirs Tuzuk-i-Jahangiri in Persian.
- He was buried in Lahore.

### *Shah Jahan*

- His real name was Khurram, he was born to Jodha Bai (daughter of Raja Jagat Singh).
- Shahjahan ascended the throne in 1628 after his father's death.
- Three years after his accession, his beloved wife Mumtaz Mahal (original name- Arzuman Bano) died in 1631. To perpetuate her memory he built the Taj Mahal at Agra in 1632-53.
- He continued applying tika (tilak) on the forehead
- He introduced the Char-Taslim in the court
- In addition to Jahangir's empire, Nizam Shahi's dynasty of Ahmadnagar was brought under Mughal control (1633) by Shahjahan.
- Shahjahan's reign is described by French traveler Bernier and Tavernier and the Italian traveler Niccolò Manucci. Peter Mundi described the famine that occurred during Shahjahan's time.
- The Red Fort, Jama Masjid and Taj Mahal are some of the magnificent structures built during his reign.
- Shahjahan's failing health set off the war of succession among his four sons in 1657.
- Aurangzeb emerged the victor who crowned himself in July 1658. Shahjahan was imprisoned by his son Aurangzeb in the Agra Fort where he died in captivity in 1666. He was buried at Taj (Agra).

### *Aurangzeb*

- The war of succession took place in the later stage of the Shah Jahan reign.
- His four sons Dara Shikoa, Aurangzeb, Shah Shuja and Murad were in the state of war for the throne.
- His daughters also supported one son or the other in the tussle for throne Janah Ara supported Dara. Roshan Ara supported Aurangzeb. Guhara supported Murad.
- Aurangzeb was coroneted twice, he was the only Mughal king to be coroneted twice
- Barnier was the foreign visitor who saw the public disgrace of Dara after he was finally deafeated in war at Deorai.
- During the first 23 years of the rule (1658-81) Aurangazeb concentrated on North India. During this period the Marathas under Shivaji rose to power and were a force to reckon with.
- Highest numbers of Hindu Mansabdars were there in the service of Mughals during the reign of Aurangzeb.
- Aurangzeb captured Guru Teg Bahadur, the 9th Guru of Sikhs in 1675 and executed him when he refused to embrace Islam.
- The 10th and last Sikh Guru, Guru Gobind Singh, son of Guru Teg Bahadur, organized his followers into militant force called Khalsa to avenge the murder of his father.
- Guru Gobind Singh was, however murdered in 1708 by an Afghan in Deccan. Banda Bahadur, the militant successor of Guru Gobind Singh continued the war against Mughals.



### *Religious policy of Aurangzeb:*

- He was called Zindapir or living saint
- Muhatasibs were appointed for regulation of moral conduct of the subjects
- He forbade singing in the court, but allowed musical instruments. He himself played Veena
- He ended Jhoraka darshan started by Akbar
- He ordered that no new Hindu temples were to be built. Old temples were allowed to be repaired
- The Viswanath temple at Kashi and the Keshav Rai temple of Bir Singh Bundela at Mathura were destroyed
- In 1679 he re-imposed Jaziya tax

### *CLASH WITH MARATHAS*

- Shivaji was the most powerful Maratha king and an arch enemy of Aurangzeb.
- When Aurangzeb could not eliminate him, he conspired with Jai Singh of Amber, a Rajput, to eliminate Shivaji in 1665.
- On the assurance given by Jai Singh, Shivaji visited Aurangzeb's court. Shivaji was imprisoned by Aurangzeb but he managed to escape and in 1674 proclaimed himself an independent monarch.

- Shivaji died in 1680 and was succeeded by his son Sambhaji, who was executed by Aurangzeb in 1689. Sambhaji was succeeded by his brother Rajaram and after his death in 1700, his widow Tarabai carried on the movements.

## Mughal administration

### *Mansabdari system:*

- Each Mughal officer was assigned a mansab (rank), there were 66 categories of Mansabdars
- Jahangir introduced Du-Aspah-Sih-Aspah system whereby the specific noble was to maintain double the number of horsemen.
- The landmark events that took place during the reign of Akbar
- 1562 Visited Ajmer first time
- 1562 Ban on forcible conversion of war-prisoners into slaves
- 1563 Abolition of Pilgrimage Tax
- 1564 Abolition of Jaziya
- 1571 Foundation of Fatehpur Sikri
- 1574 Mansabdari System introduced
- 1575 Ibadatkhana was built
- 1578 Parliament of Religions in Ibadatkhana
- 1579 Proclamation of 'Mazhar' (written by Faizi)
- 1580 Dahsala Bandobast introduced
- 1582 Din-i-Ilahi / Tauhid-i-Ilahi
- 1584 Ilahi Samvat i.e. Calender
- 1587 Ilahi Gaz i.e. Yard
- Mughal Literature
- Akbar Nama--Abul Fazl
- Tobaqat-i-Akbari--Khwajah Nazamuddin Ahmad Baksh
- Iqbalnama-i-Jahangiri—Muhammad Khan
- Ain-i-Akbari --Abul Fazl
- Padshah Namah-- Abdul Hamid Lahori
- Shahjahan Namah-- Muhammad Salih
- Surr-i-Akbar-- Dara Shikoh
- Safinat-ul-Auliya -- Dara Shikoh



- Majma-ul-Bahrain -- Dara Shikoh
- Raqqat-e-Alamgiri – Aurangzeb

### ***Bahadur Shah 1 (1707-12)***

- Muzam succeeded Aurungzeb after latter's death in 1707
- He acquired the title of Bahadur Shah.
- Though he was quite old (65) and his rule quite short there are many significant achievements he made
- He reversed the narrow minded and antagonistic policies of Aurungzeb
- Made agreements with Rajput states
- Granted sardeshmukhi tMarathas but not Chauth
- Released Shahuji (son of Sambhaji) from prison (who later fought with Tarabai)
- Tried to make peace with Guru Gobind Sahib by giving him a high Mansab.
- After Guru's death, Sikhs again revolted under the leadership of Banda Bahadur. This led to a prolonged war with the Sikhs.
- Made peace with Chhatarsal, the Bundela chief and Churaman, the Jat chief.
- State finances deteriorated

### ***Jahandar Shah (1712-13)***

- Death of Bahadur Shah plunged the empire into a civil war
- A noted feature of this time was the prominence of the nobles
- Jahandar Shah, son of Bahadur Shah, ascended the throne in 1712 with help from Zulfikar Khan
- Was a weak ruler devoted only to pleasures
- Zulfikar Khan, his wazir, was virtually the head of the administration
- ZK abolished jizyah
- Peace with Rajputs: Jai Singh of Amber was made the Governor of Malwa. Ajit
- Singh of Marwar was made the Governor of Gujarat.
- Chauth and Sardeshmukh granted to Marathas. However, Mughals were to collect it and then hand it over to the Marathas.
- Continued the policy of suppression towards Banda Bahadur and Sikhs
- Ijarah: (revenue farming) the government began tcontract with revenue farmers and middlemen to pay the government a fixed amount of money while they were left free to collect whatever they could from the peasants
- Jahandhar Shah defeated in January 1713 by his nephew Farrukh Siyar at Agra

### ***Farrukh Siyar (1713-19)***

- Owed his victory to Saiyid Brothers: Hussain Ali Khan Barahow and Abdullah Khan
- Abdullah Khan: Wazir, Hussain Ali: Mir Bakshi
- FS was an incapable ruler. Saiyid brothers were the real rulers.

### ***Muhammad Shah 'Rangeela' (1719-1748)***

- Weak-minded, frivolous and over-fond of a life of ease
- Neglected the affairs of the state
- Intrigued against his own ministers
- Naizam ul Mulk Qin Qulik Khan, the wazir, relinquished his office and founded the state of Hyderabad in 1724
- His departure was symbolic of the flight of loyalty and virtue from the Empire
- Hereditary nawabs arose in Bengal, Hyderabad, Awadh and Punjab
- Marathas conquered Malwa, Gujarat and Bundelkhand
- 1738: Invasion of Nadir Shah
- Nadir Shah's Invasion (1738)
- Attracted to India by its fabulous wealth. Continual campaigns had made Persia bankrupt
- Also, the Mughal empire was weak.
- Didn't meet any resistance as the defense of the north-west frontier had been neglected for years
- The twarmies met at Karnal on 13th Feb 1739. Mughal army was summarily defeated. MS taken prisoner
- Massacre in Delhi in response to the killing of some of his soldiers
- Plunder of about 70 crore rupees. Carried away the Peacock throne and Koh-inoor
- MS ceded thim all the provinces of the Empire west of the river Indus
- Significance: Nadir Shah's invasion exposed the hidden weakness of the empire to the Maratha sardars and the foreign trading companies

### ***Ahmed Shah Abdali***

- One of the generals of Nadir Shah
- Repeatedly invaded and plundered India right down to Delhi and Mathura between 1748 and 1761. He invaded India five times.
- 1761: Third battle of Panipat. Defeat of Marathas.
- As a result of invasions of Nadir Shah and Ahmed Shah, the Mughal empire ceased to be an all-India empire. By 1761 it was reduced merely to the Kingdom of Delhi



### *Shah Alam II (1759)*

- Ahmed Bahadur (1748-54) succeeded Muhammad Shah
- Ahmed Bahadur was succeeded by Alamgir II (1754-59)
- 1756: Abdali plundered Mathura
- Alamgir II was succeeded by Shah Jahan III
- Shah Jahan III succeeded by Shah Alam II in 1759
- Shah Alam spent initial years wandering for he lived under the fear of his wazir.
- In 1764, he joined forces with Mir Qasim of Bengal and Shuja-ud-Daula of Awadh in declaring a war upon the British East India company. This resulted in the Battle of Buxar
- Pensioned at Allahabad.
- Returned to Delhi in 1772 under the protection of Marathas.

### *Decline of the Mughal Empire*

- After 1759, Mughal empire ceased to be a military power.
- It continued from 1759 till 1857 only due to the powerful hold that the Mughal dynasty had on the minds of the people of India as a symbol of the political unity of the country
- In 1803, the British occupied Delhi
- From 1803 to 1857, the Mughal emperors merely served as a political front of the British.

The most important consequence of the fall of the Mughal empire was that it paved way for the British to conquer India as there was no other Indian power strong enough to unite and hold India.

## **The Marathas**

### *Shivaji (1627-80)*

- Shivaji was the son of Shahji and Jijabai and was born in the fort of Shivner.
- Shivaji inherited the Jagir of Poona from his father in 1637.
- His guru was Ramdas Samrath
- After the death of his guardian, Dadaji Kondadev, in 1647, he assumed full charge of his Jagir.
- He conquered many Forts viz.
  1. Singh Garh/ Kondana (1643)
  2. Rohind and Chakan (1644-45)
  3. Toran (1646)

4. Purandhar (1648)
  5. Rajgarh/ Raigarh (1656)
  6. Supa (1656)
  7. Panhala (1659).
- In 1657 Shivaji first confronted the Mughals, taking advantage of the Mughal invasion of Bijapur, he raided Ahamadnagar and plundered Junnar.
  - In 1659-60, Afzal Khan was deputed by Adil Shah of Bijapur to punish Shivaji; but the later Afzal Khan was murdered by Shivaji in 1659. The famous —baghnakhll episode is related with the death of Afzal Khan.
  - In 1660, Shaista Khan, governor of Deccan, was deputed by Aurangzeb to check Marathas. Shivaji lost Poona, Kalyan and Chakan also suffered several defeats till he made a bold attack on Shaista Khan(1663) and plundered Surat (1664) and later Ahmadnagar.
  - Raja Jai Singh of Amber and Diler Khan were then appointed by Aurangzeb to curb the rising power of Shivaji in 1665.
  - Jai Singh succeeded in beseiging Shivaji in the fort of Purandhar. Consequently the treaty of Purandhar (1665) was signed according to which Shivaji ceded some forts to the Mughals and paid a visit to the Mughal court at Agra.
  - In 1666, Shivaji visited Agra but there he was insulted
  - In 1670, Shivaji captured most of the forts lost by the treaty of Purandhar.
  - In 1674 Shivaji was coronated at capital Raigarh and assumed the title of Haindava Dharmodharak (Protector of Hinduism).
  - After that Shivaji continued the struggle with Mughals and Siddis (Janjira). He conquered Karnataka during 1677-80.
  - His last expedition was against Ginjee and Vellore.

### **Shambhaji: 1680-1689**

- Sambhaji, the elder son of Shivaji, defeated Rajaram, the younger son of Shivaji, in the war of succession.
- He provided protection and support to Akbar II, the rebellious son of Aurangzeb.
- He was captured at Sangameswar by a Mughal noble and executed(killed).

### **Rajaram: 1689-1700**

- He succeeded the throne with the help of the ministers at Rajgarh.
- He fled from Rajgarh to Jinji in 1689 due to a Mughal invasion in which Rajgarh was captured along with Sambhaji's wife and son (Shahu) by the Mughals.
- Rajaram died at Satara, which had become the capital after the fall of Jinji to Mughal in 1698.

- Rajaram created the new post of Pratinidhi, thus taking the total number of minister to nine (Pratinidhi+Ashtapradhan).

### **Tarabai: 1700-1707**

- Rajaram was succeeded by his minor son Shivaji II under the guardianship of his mother Tarabai.
- Tarabai continued the struggle with Mughals

### **Shahu : 1707-1749**

- Shahu was released by the Mughal emperor Bahadur Shah.
- Tarabai's army was defeated by Shahu at the battle of Khed (1700) and Shahu occupied Satara.
- Shahu's reign saw the rise of Peshwas and transformation of the Maratha kingdom into an empire based on the principle of confederacy.

### **Balaji Viswanath (1714-20): The First Peshwa**

- He began his carrier as a small revenue official and was given the title of Sena Karte (marker of the army) by Shahu in 1708.
- He became Peshwa in 1713 and made the post the most important and powerful as well as hereditary.
- He concluded an agreement with the Syed Brothers-King Maker (1719) by which the Mughal emperor Farrukhsiyar recognised Shahu as the king of the Swarajya.

### **Baji Rao I: 1720-40**

- Baji Rao, the eldest son of Balaji Viswanath, succeeded him as Peshwa at the young age of 20.
- He was considered the greatest exponent of guerrilla tactics after Shivaji and Maratha power reached its zenith under him.
- Under him several Maratha families became prominent and got themselves entrenched in different parts of India.
- He conquered Bassein and

### **Salsette from the Portuguese (1739).**

- He also defeated the Nizam-ul-Mulk near Bhopal and concluded the treaty of Doraha Sarai by which he got Malwa and Bundelkhand from the latter (1738).
- He said about Mughals: 'Let us strike at the trunk of the withering tree and the branches will fall of themselves'.

### **Balaji Baji Rao: 1740-61**

- Popularly known as Nana Saheb, he succeeded his father at the age of 20.
- After the death of Shahu (1749), the management of all state affairs was left in his hands.

- In an agreement with the Mughal emperor Ahmad Shah, the Peshwa was to protect the Mughal empire from internal and external enemies (like Ahmad Shah Abdali) in return for Chauth (1752).
- Third battle of Panipat (Jan 14, 1761) resulted in the defeat of the Marathas by Ahmad Shah Abdali and the death of Viswas Rao & Sadashiv Rao Bhau. This event shocked the Peshwa Balaji Baji Rao and after six months he also died. This battle ended the Maratha power.

### MODERN HISTORY

#### Portuguese

- Discovery of the New Sea Route The Cape route, was discovered from Europe to India by Vasco da Gama. He reached the port of Calicut on the May 17, 1498, and was received by the Hindu ruler of Calicut (known by the title of Zamorin). This led to the establishment of trading stations at Calicut, Cochin and Cannanore. Cochin was the early capital of the Portuguese in India. Later Goa replaced it.
- Alfonso d' Albuquerque arrived in India in 1503 as the governor of the Portuguese in India in 1509 (The first governor being Francisco de Almeida between 1503-09) . He captured Goa from the ruler of Bijapur in 1510.

#### Other Governors

- Nino da Cunha (1529-38)— transferred his capital from Cochin to Goa (1530) and acquired Diu and Bassein (1534) from Bahadur Shah of Gujarat.
- Martin Alfonso de Souza (1542-45) —the famous Jesuit saint Francisco Xavier arrived in India with him.
- The Portuguese rule began to decline afterwards & in the end they left only with GOA, DAMAN & DIU which they retained till 1961.

#### Dutch

- 1) Formation of the Company in March, 1602, by a charter of the Dutch parliament the Dutch East India Company. was formed with powers to make wars, conclude treaties, acquire territories and build fortresses.
- 2) Establishment of Factories
- 3) The Dutch set up factories at Masulipatam (1605). Pulicat (1610)-. Surat (1616), etc Bimilipatam( 1641), K.rikal( 1645), Chinsura (1653). Kasimbuzar. Baranagore, Patna. Balasore. Negapatam(all in 1658) and Cochin (1663).
- 4) The Dutch replaced the Portuguese as the most dominant power in European trade with the East, including India.
- 5) Pulicat was their main centre in India till 1690, after which Negapatam replaced it.

- 6) The Dutch conceded to English after their defeat in the Battle of Bedera in 1759.

### English

Before the East India Company established trade in the India.,

- 1) John Mildenhall a merchant adventurer, was the first Englishman who arrived in India in 1599 by the land route, for the purpose of trade with Indian merchants.
- 2) Popularly known as the 'English East India Company'. It was formed by a group of merchants known as the 'Merchant Adventurers' in 1599 & in 1600 the company was given rights to trade in the entire east by **QUEEN ELIZABETH I.**
- 1) Decision to open a factory at Surat
- 2) Following the decision of the East India Company to open a factory at Surat (1608). Captain Hawkins arrived at Jahangir's court (1609) to seek permission. A farman was issued by
- 3) Jahangir permitting the English to build a factory at Surat (1613).
- 4) Sir Thomas Roe came to India as ambassador of James I to Jahangir's court in 1615 to obtain the permission to trade and establish factories in different parts of the empire.

### Danish

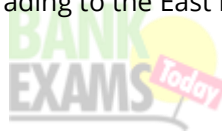
1. The Danes formed an East India Company and arrived in India in 1616. They established settlements at Tranquebar (in Tamil Nadu) in 1620 and at Serampore (Bengal) in 1676. Serampore was their headquarters in India.
2. They were forced to sell all their settlements in India to the British in 1854

### French

1. The French East India Company was formed by Colbert in 1664.
2. The first French factory was established at Surat by Francois Caron in 1664. A factory at Masulipatam was set up in 1669.
3. The French power in India was revived under Lenoir and Dumas (governors) between 1720 and 1742. They occupied Mahe in the Malabar, Yanam in Coromandal and Karikal in Tamil Nadu (1739).
4. The arrival of Dupleix as French governor in India in 1742 saw the beginning of Anglo-French conflict (Carnatic wars) resulting in their final defeat in India.

### EAST INDIA COMPANY

1. The East India Company acquired Bombay from Charles II on lease. Gerald Aungier was its first governor from
2. 1669 to 1677. The first factory was built at Surat in (1605). Later, Surat was replaced by Bombay as the headquarters of the Company on the west coast in 1687.
3. In 1639 Francis Day obtained the site of Madras from the Raja of Chandragiri with permission to build a fortified factory, which was named Fort St. George. Madras soon replaced Masulipatam as the headquarters of the English on the Coromandal coast.
4. In 1690 Job Charnock established a factory at Sutanuti and the zamindari of the three villages of Sutanuti, Kalikata and Govindpur was acquired by the British (1698). These villages later grew into the city of Calcutta. The factory at Sutanuti was fortified in 1696 and this new fortified settlement was named 'fort William' in 1700.
5. In 1694 the British Parliament passed a resolution giving equal rights to all Englishmen to trade in the East. A new rival company, known as the 'English Company of Merchants Trading to the East Indies' (1698) was formed. The final amalgamation of the company came in 1708 under the title of 'The United Company of Merchants of England Trading to the East Indies'. This new company continued its existence till 1858.



### IMPORTANT BATTLES

#### First Anglo- Sikh War (1845-1846)

The first battle between the Sikhs and the English was fought at Mudki on December 18, 1845. The Sikhs were defeated. The English again won the battle at Ferozpur on December 21. The Sikhs under Ranjit Singh Majithia however defeated the English at Buddwal in 1846. But the Sikhs were again defeated at Aliwal. The decisive battle was fought at Sobraon in 1846 and Sikhs were routed. The English then crossed the Sutlej and captured the capital of Lahore. The war came to an end by the treaty of Lahore which was signed in 1846. This treaty left the Sikhs with no capacity for resisting the English. Another treaty was made with Sikhs in 1846 this treaty is known as Second treaty of Lahore or the treaty of Bhairawal.

#### Second Anglo-Sikh War (1848-1849)

The Sikhs considered their defeat in the first Sikh War a great humiliation. They had been accustomed to victories in the time of Ranjit Singh and this defeat gave a rude shock to their pride. The Sikhs wanted to restore the fallen fortunes of their kingdom. Lord Gough the British Commander in Chief reached Lahore with the grand army of Punjab. Multan surrendered in 1849 and the Sikhs suffered a defeat at Chillianwala a few weeks later. The final and

decisive battle was won by the English at Gujarat and the whole of Punjab surrendered. The war resulted in the annexation of Punjab in 1849 by Lord Dalhousie and Dalip Singh was pensioned off and sent to England along with his mother Rani Jindan. The administration of the Punjab was entrusted to a Board of Commissioners. The annexation of Punjab extended the British territories in India up to the natural frontiers of India towards the north-west. Beside after the destruction of Sikh power there remained no active power which could pose a threat to the security of the English in India.

### **The First Anglo-Mysore War (1767-69)**

The main causes of this war were Haider's ambition to drive the British away from the Carnatic and finally from India and the British realization of the threat posed to them by Haider. A tripartite alliance was formed against Haider by the British, the Nizam and the Marathas. Haider's success in breaking the alliance and declaration of war on the British. The war ended with the defeat of British. The panic-stricken Madras government concluded the humiliating Treaty of Madras in 1769 on the basis of mutual restitution of each other's territories and a defensive alliance between the two parties committing the English to help Hyder Ali in case he was attacked by another power.

### **Treaty of Madras**

It was signed by Haider Ali and the allies consisting of the Company, the Raja of Tanjore, and the Malabar ruler. It provided that Mutual restitution of conquests takes place except for Karur and its districts which were to be retained by the Mysore ruler. In case either of the parties was attacked the other would rally to its assistance. All the captured employees of the Madras government were to be released by Haider Ali The trade privileges.

### **The Second Anglo-Mysore War (1780-1784)**

The treaty of 1769 between Hyder Ali and the English company proved more in the nature of a truce and Hyder Ali accused the company of not observing the terms of the defensive treaty by refusing to help him when the Marathas attacked Mysore in 1771. Haider found the French more helpful than the English. Further in 1778 English in India seized the French settlements including Mahe a port which was very crucial for Haider Ali for the entry of supplies. Haider Ali tried to take Mahe port but in vain. He arranged a joint front with the Nizam and the Marathas against the common enemy -the English East India Company. The war lasted from 1780-1784. But he died in 1782 and was succeeded by his son Tipu Sultan.

Tipu continued the war for another year but absolute success eluded both the sides. Tired of war the two sides concluded peace Treaty of Mangalore. By this Treaty it was decided that English would return Srirangapatnam to Tipu and Tipu would handover Fort of Badnur to English.

### **The Fourth Anglo-Mysore War (1799)**

With his defeat in the third Anglo-Mysore war, Tipu was burning with revenge. He wanted to get back his territory and to achieve that objective he carried on negotiations with the French and Zaman Shah of Kabul. Tipu wanted his allies to expel the English. Lord Wellesley after making Subsidiary Alliance with the Nizam asked Tipu Sultan to accept the same but he refused. Mysore was attacked from two sides. The main army under General Harris supported by Nizam's subsidiary force under Arthur Wellesley attacked Mysore from the east while another army advanced from Bombay. Tipu was at first defeated by the Bombay army and was later on defeated by the General Harris at Mallavalli. Tipu died fighting bravely. The members of his family were interned at Vellore. A boy of the earlier Mysore royal family was installed on the Gaddi of Mysore and a Subsidiary Alliance was imposed. Thus the fourth Mysore War destroyed the state of Mysore which was ruled by Haider Ali 33 years back.

### **First Anglo Maratha War (1775-82)**

The internal problems of the Marathas and the growing ambition of the English brought the beginning of the Anglo-Maratha struggle. The primary cause of the first Maratha war was the interference of the English government at Bombay in the internal affairs of the Marathas. Peshwa Madhav Rao died in 1772 and was succeeded by his younger brother Narain Rao. His uncle Raghoba wanted to become the Peshwa and got him murdered. The Maratha chiefs took up the cause of Madhav Rao Narain the son of Narain Rao. Ragobha approached British for help and signed the treaty of Surat hoping to gain the coveted Gaddi with the help of English subsidiary troops. By this treaty he also promised to cede Salsette and Bassein and refrain from entering into alliance with the enemies of the company.

In the war that followed nobody gained any success and two parties realized the futility of the struggle by concluding the Treaty of Salbai (1782). By the Treaty of Salbai, status quo was maintained which gave the British 20 years of peace with the Marathas. The treaty also enabled the British to exert pressure on Mysore with the help of the Marathas in recovering their territories from Haider Ali.

### **Second Anglo- Maratha War (1803-1806)**

Second Anglo- Maratha War (1803-1806) The second Maratha war was fought at the time of Lord Wellesley who wanted the Marathas to accept his Subsidiary Alliance system. The Marathas refused to accept it but were tricked by Wellesley due to their own internal differences. The Treaty of Bassein made conflict with the Marathas inevitable. The main provisions of the treated were the recognition of Peshwa's claim in Poona acceptance of Subsidiary Alliance by Baji Rao II and relinquishing of all rights of Surat by Baji Rao to the British.

For Marathas Treaty of Bassein was loss of national honor. Holkar and Scindia stopped fighting .Scindia and Bhonsle combined but Holkar and Gaikwad remained aloof. Scindia and Bhonsle were asked by the English to withdraw their troops to the north of the Narmada River but they refused and it led to war. Both Scindia and Peshwar had



accepted the sovereignty of the English. British turned their attention towards Holkar but Yashwant Rao Holkar proved more than a match for the British. Wellesley was recalled from India and the Company made peace with the Holkar in January 1806 by the Treaty of Rajghat giving back to the latter the greater part of the territories.

### Third Anglo-Maratha War (1817-1818)

Third Anglo-Maratha War (1817-1818) Maratha made a desperate last attempt to regain their independence and prestige in 1817. This led in organizing a united front of the Maratha Chiefs and was taken over by the Peshwa who was uneasy under the rigid control exercised by the British Resident. However once again the Marathas failed to evolve any plan of action. The Peshwa attacked the British Residency at Poona in 1817, Appa Saheb of Nagpur attacked the Residency at Nagpur and Madhav Rao Holkar made preparations for war.

The Maratha confederacy was altogether destroyed so many territories were taken from its various members that they were rendered powerless to do anything against the British. Thus the work was accomplished by Lord Hastings in 1818. Now the British Government became the supreme and paramount authority in India.

### The Revolt of 1857

The Revolt of 1857 is an important landmark in the history of India. As per the British historians it was the —Sepoy Mutiny, it was the —First war of independence.



### Causes of the Revolt

**Political**— The problem created during the reign of Lord Dalhousie. He annexed various states and Doctrine of Lapse became the most powerful instrument in annexation of Indian states. According to Doctrine of Lapse, an Indian state was annexed by British if the ruler had no natural heir.

**Economic**-- The economic policy of the British Raj destroyed the Indian economy on all fronts. The high tax rates from the cultivators, introduction of new land revenue arrangements in India without proper understanding of the ground realities, forcibly evictions and cruel methods to extract the land revenue resulted in breakdown of traditional agrarian economy.

**Socio-religious**--The racial discrimination by British against Indians, forceful conversion to Christianity and social reforms like abolition of sati, 1829; legalization of widow remarriage, 1856 etc. offended the orthodox elements of Indian society.

**Military**--British discriminated against the Indian soldiers and adopted the policy of exclusion in the service conditions and promotion by which the high and key posts were reserved only for the Europeans.

Immediate cause: 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 agitated both Hindu and Muslim soldiers and resulted in immediate launch of movement.

### *The course of events*

- On March 29, 1857, an Indian sepoy of 34 Native Infantry, Mangal Pandey, killed two British officers- Hugeson and Baugh-on parade at Barrackpore (near Calcutta).
- The mutiny really started at Merrut on 10th May 1857. The 3rd Native Infantry revolted. The occasion was the punishment of some sepoys for their refusal to use the greased cartridges. The soldiers alongwith other groups of civilians, went on a rampage shouting ‘\_Maro Firangi ko’. They broke open jails, murdered Europeans, burnt their houses and marched to Delhi after sunset.
- The appearance of the marching soldiers next morning (i.e. 11th May) in Delhi was a signal to the local soldiers, who in turn revolted, seized the city and proclaimed the 82-year old Bahadur Shah ‘\_Zafar’ , as Shahenshah-i-Hindustan (i.e. Emperor of India).
- The British allies during the revolt were Sindhia, the Nizam of Hyderabad and the Begum of Bhopal.

### **Impact of the Revolt of 1857**

- 1) The major impact of the revolt was the end of East India Company's rule in India. By the Government of India Act 1858, the British government took over the rule of India in its own hand. A minister of the British government, called the Secretary of state for India was made responsible for the governance of India.
- 2) The British Governor-General of India was now also given the title of Viceroy.

### **LEADERS OF REVOLT OF 1857 IN INDIA**

- Mangal Pandey: Mangal Pandey joined the sepoy force of the British East India Company in the year 1849 at the age of 22. Pandey was part of the 34th Bengal Native Infantry and is primarily known for his involvement in an attack on his senior British officers on 29th March 1857 at Barrackpore. This incident marked an opening stage of Sepoy Mutiny of 1857 or the First War of Indian Independence.
- Nana Sahib--At Kanpur, the revolt was led by Nana Sahib, the adopted son of exiled Maratha Peshwa Baji Rao II.
- Rani Lakshmbai-Rani Lakshmbai (Manikarnika) was married to Raja Gangadhar Rao Newalkar, the Maharaja of Jhansi in 1842, and became the queen of Jhansi. After their marriage, She gave birth to a son Damodar Rao in 1851.

- Tatya Tope--Tatya Tope was Nana Sahib's close associate and general. During the Siege of Cawnpore in 1857, Nana Sahib's forces attacked the British entrenchment at Kanpur in June 1857.
- Veer Kunwar Singh--Veer Kunwar Singh, the king of Jagdispur, currently a part of Bhojpur district, Bihar, was one of the leaders of the Indian revolt of 1857.
- Shah Mal--Shah Mal lived in a large village in pargana Barout in Uttar Pradesh. He mobilised the headmen and cultivators of chaurasee des, moving at night from village to village, urging people to rebel against the British.
- Maulvi Ahmadullah Shah--Maulvi Ahmadullah Shah was one of the many maulvis who played an important part in the revolt of 1857. Educated in Hyderabad, he became a preacher when young. In 1856, he was seen moving from village to village preaching jehad (religious war) against the British and
- urging people to rebel. When he reached Lucknow in 1856, he was stopped by the police from preaching in the city. Subsequently, in 1857, he was jailed in Faizabad.
- Delhi-Mughal Emperor, Bahadur Shah, but real command lay with Bakht Khan (was from the Barreilly unit of the army).
- Kanpur-Nana Sahib (from Kanpur, along with Tantia Tope and Azimullah)
- Lucknow-Begum Hazrat Mahal of Awadh (declared her son as the Nawab of Awadh).
- Bareilly--Khan Bahadur
- Bihar (Arrah)--Kunwar Singh, Zamindar of Jagdishpur.
- Jhansi - Rani Lakshmi Bai
- Allahabad - Liaquat ali

### **MODERN HISTORY (AFTER 1885)**

#### **The Indian National Congress**

- Formed in 1885 by A.O.Hume, an Englishman and a retired civil servant.
- First session in Bombay under W.C.Banerjee in 1885 (72 delegates attended it).

#### **Partition of Bengal:**

- By Lord Curzon on Oct 16, 1905, through a royal Proclamation, reducing the old province of Bengal in size by creating East Bengal and Assam out of rest of Bengal.
- The objective was to set up a communal gulf between Hindus and Muslims.

#### **Swadeshi Movement (1905):**

- Lal, Bal, Pal, and Aurobindo Ghosh played the important role.
- INC took the Swadeshi call first at the Banaras Session, 1905 presided over by G.K.Gokhale.

- Bonfires of foreign goods were conducted at various places.
- Formation of Muslim League (1906)

In December, 1906, All India Muslim League was set up under the leadership of Aga Khan, Nawab Salimullah of Dacca and Nawab Mohsin-ul-Mulk at Dacca.

### Calcutta Session of INC (1906)

- In Dec. 1906 at Calcutta, the INC under the leadership of Dada Bhai Naoroji adopted Swaraj' as the goal of Indian people.

### Surat Split (1907)

- The INC split into the two groups i.e. the extremists and the moderates at the Surat session in 1907.
- The extremists were led by Tilak, Lajpat Rai and Bipin Chandra Pal
- The moderates were led by G.K. Gokhale.

### Alipore Bomb Case 1908

- In 1908 a revolutionary conspiracy was intrigued to kill the Chief Presidency Magistrate D.H. Kingford of Muzaffarpur.
- The task was entrusted to Khudiram Bose and Prafulla Chaki. They threw the bombs on a vehicle coming out of the magistrate's home on April 30, 1908.

### Morley-Minto Reforms (1909)

- Morley-Minto Reforms were introduced in 1909 during the period when Lord Minto was the Viceroy of India while Morley was the secretary of the state.
- As per the provisions of the reform Muslims could only vote for Muslim candidates.

### Arrival of Lord Hardinge 1910

- From 1910 to 1916, Lord Hardinge served as India's Viceroy.
- The important event during his tenure was the Delhi Durbar of 1911.
- Ghadar Party (1913):
- Formed by Lala Hardayal, Taraknath Das and Sohan Singh Bhakna. HQ was at San Francisco.

### Home Rule Movement (1915-16)

- B.G Tilak was released from the Mandlay jail in the year 1914. In 1915 he reentered INC. B.G. Tilak founded Indian Home Rule League at Pune on 28 April, 1916.
- Annie Besant, inspired by the Irish rebellion, started Home Rule Movement in India in Sep., 1916.
- She started two newspapers i.e. Young India and Commonwealth.
- The leagues advocated passive resistance and civil disobedience.

## Arrival of Lord Chelmsford 1916

- On April 4, 1916, Lord Chelmsford took over as next Viceroy of India.
- Lucknow Pact-Congress-League Pact (1916)
- An important step forward in achieving Hindu- Muslim unity was the Lucknow Pact (1916).
- Anti- British feelings were generated among the Muslims following a war between Britain and Turkey which opened way for Congress and Muslim League unity. Both the Congress and the Muslim League held session at Lucknow in 1916 and concluded the famous Lucknow pact.
- The congress accepted the separate electorate and both organizations jointly demanded ‘\_dominion status’ for the country.

## Montagu Declaration (August Declaration of 1917)

- Montague made the landmark statement in the context of self rule in India in 1917.
- He said that the control over the Indian government would be transferred gradually to the Indian people. This was the result of Hindu-Muslim unity exhibited in Lucknow pact.

## The Champaran Satyagraha of 1917

- was Mahatma Gandhi's first Satyagraha. Champaran and Kheda Satyagraha were the events which later put Gandhi on the front seat of Indian National Revolution and made Satyagraha a powerful tool.

## Rowlatt Act (March 18, 1919)

- This gave unbridled powers to the govt. to arrest and imprison suspects without trial for two years maximum.

## Jallianwala Bagh Massacre (April 13, 1919):

- People were agitated over the arrest of Dr. Kitchlu and Dr. Satyapal on April 9, 1919.
- General O' Dyer fires at people who assembled in the Jallianwala Bagh, Amritsar on 13th April 1919.
- Rabindranath Tagore returned his Knighthood (title) in protest.
- Sir Shankaran Nair resigned from Viceroy's Executive Council after this.
- Hunter Commission was appointed to enquire into it.
- On March 13, 1940, Sardar Udham Singh killed O'Dyer when the later was addressing a meeting in Caxton Hall, London.

## Hunter Committee Report

- The Jallianwala Bagh massacre was followed by establishment of a non-official enquiry committee the Government established a committee headed by Lord Hunter a Senator of the "College of justice of Scotland".

### **Chaura Chouri incidence (1922)**

- On 5th February 1922, the Non Cooperation Movement was called off by Gandhi because of an unfortunate incidence at Chauri Chaura in Gorakhpur district of Uttar Pradesh.
- In this incidence the crowd participating in the Non Cooperation and Khilafat procession indulged into the violence with the police. As a result the crowd burnt a Police station and in the incidence 22 policemen were killed.

### **The Sawraj party (1922)**

- During this time a new political strategy; to carry forward the struggle against the colonial rule; was advocated by C.R. Das and Motilal Nehru. C.R. Das and Motilal Nehru put forward the changed strategy in Gaya session (1922) of the Congress.
- There were leaders in Congress like Vallabhbhai Patel, Rajendra Prasad and C.Rajgopalacharya who opposed these changes of council entry. C.R. Das and Motilal Nehru resigned from the Congress and formed the Swaraj Party.

### **Simon Commission (1927):**

- Constituted under John Simon, to review the political situation in India and to introduce further reforms and extension of parliamentary democracy.
- Indian leaders opposed the commission, as there were no Indians in it.
- At Lahore, Lala Lajpat Rai was severely beaten in a lathi-charge. He died in 1928.

### **14 Points of Jinnah (March 9, 1929)**

- Jinnah, the leader of Muslim League, did not accept the Nehru Report. Jinnah thereafter drew up a list of demands, which was called '14 points of Jinnah'.

### **Lahore Session(1929)**

- At its annual session held in Lahore in Dec. 1929, under the presidentship of Jawaharlal Nehru, the Indian National Congress passed a resolution declaring Poorna Swaraj' (Complete Independence) to be the goal of the national movement.
- On Dec. 31, 1929, the newly adopted tricolor flag was unfurled and Jan 26 fixed as the Independence Day which was to be celebrated every year, pleading to the people not to submit to British rule any longer.

### **First Round Table conference (1930):**

- It was the first conference arranged between the British and Indians as equals.
- It was held on Nov.12, 1930 in London to discuss Simon commission.
- Boycotted by INC, Muslim League, Hindu Mahasabha, Liberals and some others were there.

### Gandhi Irwin Pact (1931):

- The two (government represented by Irwin and INC by Gandhiji) signed a pact on March 5, 1931.
- In this the INC called off the civil disobedience movement and agreed to join the second round table conference. The government on its part released the political prisoners and conceded the right to make salt for consumption for villages along the coast.

### Second Round Table Conference(1931):

- Gandhiji represented the INC and went to London to meet British P.M. Ramsay Macdonald.
- However, the session was soon deadlocked on the minorities issue and this time separate electorates was demanded not only by Muslims but also by Depressed Classes, Indian Christians and Anglo – Indians.

### Poona Pact (September 25, 1932):

- After the announcement of communal award and subsequent fast of Gandhiji, mass meeting took place almost everywhere.
- Political leaders like Madan Mohan Malviya, B.R.Ambedkar and M.C.Rajah became active.
- Eventually Poona pact was reached and Gandhiji broke his fast on the sixth day (Sept 25, 1932). In this, the idea of separate electorate for the depressed classes was abandoned, but seats reserved to them in the provincial legislature were increased.



### Third Round Table Conference (1932):

- Proved fruitless as most of the national leaders were in prison. The discussions led to the passing of the Government of India Act, 1935.

### The Government of India Act, 1935

- The Simon Commission report submitted in 1930 formed the basis for the Government of India Act, 1935. The new Government of India Act received the royal assent on Aug. 4, 1935.
- The continued and extended all the existing features of earlier constitutional reforms. But in addition there were certain new principle introduced. It provided for a federal type of government. Thus, the act:
  1. Introduced provincial autonomy.
  2. Abolished dyarchy in provinces

### Pakistan Resolution/Lahore Resolution (March 24, 1940)

- It was 1930 that Iqbal suggested the union of the Frontier Province, Baluchistan, Sindh and Kashmir as Muslim state within the federations. The idealist Chaudhry Rehmat Ali developed this conception at Cambridge, where he inspired a group of young

- Muslims and invented the term ‘Pakstan’ (later ‘Pakistan’) in 1935. The ideology of Iqbal, the vision of Rehamat Ali, and the fears of Muslims were thus united by the practical genius of Jinnah to blind Muslim together. The Lahore session of the Muslim League, held on March 24, 1940, passed Pakistan Resolution and rejected the Federal scheme envisaged in the government of India Act, 1935.

### Quit India Movement

- The causes for the launch of Quit India Movement were:
- The failure of the Cripp’s Mission was an eye opener for the nationalist.
- The news of Allied reverses in World War and British withdrawal from South-East Asia and Burma leaving local people at the mercy of Japanese.

### Course of Events

- Quit India resolution was passed on 8th August 1942 at Bombay.
- The Congress envisaged a —mass struggle on the non-violent lines on the widest possible scale.
- Gandhi and all the leaders of the Congress working committee were arrested on the early hours of August 9, 1942.

### Mountbatten Plan (June 3, 1947):

- On June 3, 1947, Lord Mountbatten put forward his plan which outlined the steps for the solution of India’s political problem.
- India to be divided into India and Pakistan.
- Bengal and Punjab will be partitioned and a referendum in NEFP and Sylhet district of Assam would be held.
- There would be a separate constitutional assembly for Pakistan to frame its constitution.
- The Princely states would enjoy the liberty to join either India or Pakistan or even remain independent.
- Aug 15, 1947 was the date fixed for handing over power to India and Pakistan.
- The British govt. passed the Indian Independence Act of 1947 in July 1947, which contained the major provisions put forward by the Mountbatten plan.
- Partition and Independence (Aug 1947): All political parties accepted the Mountbatten plan.
- At the time of independence, there were 562 small and big Princely States in India.
- Sardar Vallabh Bhai Patel, the first home minister, used iron hand in this regard.
- By August 15, 1947, all the States, with a few exceptions like Kashmir, Hyderabad and Junagarh had signed the Instrument of Accession.
- Goa was with the Portuguese and Pondicherry with the French.



### British Viceroy in India

- Lord Canning (1856 – 1862) :
  - The last Governor General and the first Viceroy.
  - Mutiny (Revolt of 1857) took place in his time.
  - On November, 1858, the rule passed on to the crown.
  - Withdrew Doctrine of Lapse (introduced by Lord Dalhousie).
  - The Universities of Calcutta, Bombay and Madras were established in 1857.
  - Indian Councils Act was passed in 1861.
- Lord Elgin (1862 – 1863)
- Lord Lawrence (1864 – 1869) :
  - Telegraphic communication was opened with Europe.
  - High Courts were established at Calcutta, Bombay and Madras in 1865.
  - Expanded canal works and railways.
  - Created the Indian Forest department.

### Lord Mayo (1869 – 1872) :

- Started the process of financial decentralization in India.
- Established the Rajkot college at Kathiawar and Mayo College at Ajmer for the Indian princes.
- For the first time in Indian history, a census was held in 1871.
- Organised the Statistical Survey of India.
- Was the only Viceroy to be murdered in office by a Pathan convict in the Andamans in 1872.

### Lord Northbrook (1872 – 1876) :

- Lord Lytton (1876 – 1880) :
  - Known as the Viceroy to reverse characters.
  - Organised the Grand ‘Delhi Durbar’ in 1877 to decorate Queen Victoria with the title of ‘Kaiser I Hind’.
  - Arms act (1878) made it mandatory for Indians to acquire license for arms.
  - Passed the infamous Vernacular Press act (1878).

### Lord Ripon (1880 – 1884) :

- Liberal person, who sympathized with Indians.
- Repeated the Vernacular Press act (1882)
- Passed the local self-government act (1882)
- Took steps to improve primary & secondary education (on William Hunter Commission’s recommendations).
- I Factory act, 1881, aimed at prohibiting child labour.

- Passed the Indian Councils Act (1883) which enabled Indian district magistrates to try European criminals. But this was withdrawn later.

### **Lord Dufferin (1884 – 1888) :**

- Indian National Congress was formed during his tenure.

### **Lord Lansdowne (1888 – 1894) :**

- The Factory Act (1891) granted a weekly holiday and stipulated working hours for women and children, although it failed to address concerns such as work hours for men.
- Categorization of Civil Services into Imperial, Provincial and Subordinate.
- Indian Councils Act of 1892 was passed.
- Appointment of Durand Commission to define the line between British India and Afghanistan.

### **Lord Elgin II (1894 – 1899) :**

- Great famine of 1896 – 1897.
- Lyall Commission was appointed.

### **Lord Curzon (1899 – 1905) :**

- Passed the Indian Universities Act (1904) in which official control over the Universities was increased.
- Partitioned Bengal (October 16, 1905) into two provinces Bengal (proper) & East Bengal & Assam.
- Appointed a Police Commission under Sir Andrew Frazer to enquire into the police administration of every province.
- The risings of the frontier tribes in 1897 – 98 led him to create the North Western Frontier Province (NWFP).
- Passed the Ancient Monuments Protection Act (1904), to restore India's cultural heritage. Thus the Archaeological Survey of India was established.
- Passed the Indian Coinage and Paper Currency Act (1899) and put India on a gold standard.
- Extended railways to a great extent.
- History of Lord Minto (1905 – 1910) :
  - There was great political unrest in India.
  - Various acts were passed to curb the revolutionary activities.
  - Extremists like Lala Lajpat Rai and Ajit Singh (in May, 1907) and Bal Gangadhar Tilak (in July, 1908) were sent to Mandalay jail in Burma.
  - The Indian Councils Act of 1909 or the Morley Minto Reforms was passed.

### **Lord Hardinge (1910 – 1916) :**

- Held a durbar in December, 1911 to celebrate the coronation of King George V.

- Partition of Bengal was cancelled (1911),
- Capital shifted from Calcutta to Delhi (1912).
- bomb was thrown at him; but he escaped unhurt (December 23, 1912).
- Gandhiji came back to India from South Africa (1915).
- Annie Besant announced the Home Rule Movement.

### Lord Chelmsford (1916 – 1921) :

- August Declaration of 1917, whereby control over the Indian government would be gradually transferred to the Indian people.
- The government of India act in 1919 (Montague Chelmsford reforms) was passed.
- Rowlatt act of 1919; Jallianwala Bagh Massacre (April 13, 1919).
- Non Cooperation Movement.
- An Indian Sir S.P.Sinha was appointed the Governor of Bengal.
- A Women's university was founded at Poona in 1916.
- Saddle Commission was appointed in 1917 to envisage new educational policy.

### Lord Reading (1921 – 1926) :

- Rowlatt act was repealed along with the Press act of 1910.
- Suppressed non – cooperation movement.
- Prince of Wales visited India in November, 1921.
- Moplah rebellion (1921) took place in Kerala.
- Ahmedabad session of 1921.
- Formation of Swaraj Party.
- Vishwabharati University started functioning in 1922.
- Communist party was founded in 1921 by M.N. Roy.
- Kakory Train Robbery on August 9, 1925.
- Communal riots of 1923 – 25 in Multan, Amritsar, Delhi, etc. Swami Shradhanand, a great nationalist and a leader of the Arya Samajists, was murdered in communal orgy.

### Lord Irwin (1926 – 1931) :

- Simon Commission visited India in 1928.
- Congress passed the Indian Resolution in 1929.
- Dandi March (March 12, 1930).
- Civil Disobedience Movement (1930).
- First Round Table Conference held in England in 1930.

- Gandhi Irwin Pact (March 5, 1931) was signed and g) Civil Disobedience Movement was withdrawn.
- Martyrdorm of Jatin Das after 64 days hunger strike (1929).

### Lord Willingdon (1931 – 1936) :

- Second Round Table conference in London in 1931.
- On his return Gandhiji was again arrested and Civil Disobedience Movement was resumed in January, 1932.
- Communal Awards (August 16, 1932) assigned seats to different religious communities. Gandhiji went on a epic fast in protest against this division.
- Third Round Table conference in 1932.
- Poona Pact was signed.
- Government of India act (1935) was passed.

### Lord Linlithgow (1936 – 1944) :

- Government of India act enforced in the provinces.
- Lord Wavell (1944 – 1947) :
- Arranged the Shimla Conference on June 25, 1945 with Indian National Congress and Muslim League; failed.
- Cabinet Mission Plan (May 16, 1946).
- Elections to the constituent assembly were held and an
- Interim Government was appointed under Nehru.
- First meeting of the constituent assembly was held on December 9, 1946.
- Lord Mountbatten (March 1947 – August 1947)
- Last Viceroy of British India and the first Governor General of free India.
- Partition of India decided by the June 3 Plan.
- Indian Independence Act, 1947 passed by the British parliament on July 4, 1947, by which India became independent on August 15, 1947.
- Retried in June 1948 and was succeeded by C. Rajagopalachari (the first and the last Indian Governor General of free India).

### Important Acts

#### The Regulating Act, 1773

- First attempt by the British Parliament to regulate the affairs of the Company.
- End of Dual Government.
- Provided for centralization of Administration of Company's territories in India.
- Governor of Bengal became Governor-general for all British territories in India.

- Governor General and council of 4 members appointed for Bengal.
- Bombay and Madras Presidency subordinated to Bengal presidency.
- Supreme court to be set up at Calcutta.
- The Pitts India Act, 1784
- This Act gave the British government the supreme control over Company's affairs and its administration in India.
- Established dual system of governance. Court of directors consisting of 24 members was appointed to look after commercial functions.

### The Charter Act of 1793

- Company given monopoly of trade for 20 more years.
- Expenses and salaries of the Board of Control to be charged on Indian Revenue.
- Governor-General could override his Council.

### The Charter Act of 1813

- Company deprived of its trade monopoly in India except in tea and trade with China.
- All Englishmen could trade with India subject to few restrictions.
- Rules and procedures made for use of Indian revenue.
- A sum of Rs 1 lakh earmarked annually for education.

### The Charter Act of 1833

- End of company's trade monopoly even in tea and with China.
- Company was asked to close its business at the earliest.
- Governor-General of Bengal to be Governor-General of India. (1st Governor-General of India-Lord William Bentinck).
- Govt. of Madras and Bombay deprived of legislative powers.
- A fourth member, law member added to council of Governor-General.
- Government Service was thrown open to the people of India.
- All laws made by Governor General-in-council henceforth to be known as Acts and not regulations.

### The Charter Act of 1853

- Extended life of the Company for an unspecified period.
- First time separate legislative machinery consisting of 12 member legislative council was created.
- Law member was made a full member of the Executive Council of the Governor-General
- Recruitment to Civil Services was based on open annual competitive examination. (excluding Indians)

## The Govt of India Act, 1858

- Rule of Company in India ended and that of the Crown began.
- System of double Government ended. Court of Directors and Board of Control abolished.
- Secretary of State (a member of the British Cabinet) for India was created. He was assisted by a 15-member council (Indian Council). He was to exercise the powers of the Crown.

## Polity

### Constitutional Reforms in British India

#### Regulating Act, 1773:

- End of Dual govt.
- Governor of Bengal to be the Governor – General of British territories of India.
- Establishment of Supreme Court in Calcutta.
- Court of directors to be elected for 4 years
- Number of Directors fixed at 24, 1/4th retiring every year.
- In Bengal, collegiate govt was created with Governor General and 4 members of the council and were named in the act:- GG -> Warren Hastings and 4 members -> Philip Francis, Clavering, Monson, and Barwell.

#### Amending Act of 1781:

- Actions of public servants of the Company in their official capacity were exempted from the jurisdiction of Supreme Court.
- Jurisdiction of Supreme Court was defined. SC had to take into consideration and respect the religious and social customs and usages of the Indian while enforcing its decrees and processes.
- The rules and regulations made by GG-in-Council were not to be registered with SC.

#### Pitts Act of 1784:

- Introduced Dual System of Govt by the company and by a Parliamentary board of directors.
- gave the British Government a measure of control over the company's affairs
- company became a subordinate department of the State.
- Reduced the number of members of Executive Council of the GG to three.

### Act of 1786:

- Governor General given the power to over-ride the Council and was made the Commander-in-chief also to prevail upon Cornwallis to accept the GG-ship of India

### Charter Act of 1793:

- Company given monopoly of trade for 20 more years.
- laid the foundation of govt. by written laws, interpreted by courts.

### Charter Act of 1813:

- Company deprived of its trade monopoly in India except in tea and trade with China.
- An amount of one lakh rupees was set aside for the promotion of Education in India.

### Charter Act of 1833:

- End of Company's monopoly even in tea and trade with China.
- Company was asked to close its business at the earliest.
- Governor General of Bengal to be Governor General of India
- (1st Governor General of India was Lord William Bentinck).

### Charter Act of 1853:

- The Act renewed the powers of the Company and allowed it to retain the possession of Indian territories in trust of the British crown.
- Recruitment to Civil Services was based on open annual competition examination (excluding Indians).

### Government of India Act, 1858:

- Rule of Company in India ended and that of the Crown began.
- A post of Secretary of State (a member of the British cabinet) for India created.
- He was to exercise the powers of the Crown.
- Secretary of State governed India through the Governor General.
- Governor General received the title of Viceroy. He represented Secretary of State and was assisted by an Executive Council, which consisted of high officials of the Govt.
- The system of double govt introduced by Pitt's Act 1784 was finally abolished

### Indian Council Act, 1861:

- The Executive Council was now to be called Central Legislative Council.
- The Governor General was conferred power to promulgate ordinance.

### Indian Council Act, 1892:

- Indians found their way in the Provincial Legislative Councils.

- Element of Election was introduced.
- Indian Council Act, 1909 or Minto-Morley Reforms:
- It envisaged a separate electorate for Muslims.

### Government of India Act, 1935:

- Provided for the establishment of All-India Federation consisting of
- British Provinces
- Princely States.
- The joining of Princely States was voluntary and as a result the federation did not come into existence as the minimum number of princes required to join the federation did not give their assent to join the federation.
- Dyarchy was introduced at the Centre (e.g. Department of Foreign Affairs and Defence were reserved for the Governor General). Provincial autonomy replaced Dyarchy in provinces. They were granted separate legal identity.
- Burma (now Myanmar) separated from India.

### PARTS OF INDIAN CONSTITUTION

1. Part I Articles 1-4 Territory of India,, admission,, establishment or formation of new states
2. Part II Articles 5-11 Citizenship
3. Part III Articles 12-35 Fundamental Rights
4. Part IV Articles 36-51 Directive Principles of State Policy Part IV A Article 51-A Duties of a citizen of India. It was added by the 42nd Amendment in 1976
5. Part V Articles 52-151 Government at the Union level
6. Part VI Articles 152-237 Government at the State level
7. Part VII Article 238 Deals with states in Part B of the First Schedule. It was repealed by 7th Amendment in 1956
8. Part VIII Articles 239-241 Administration of Union Territories
9. Part IX Article 242-243 Territories in Part D of the First Schedule and other territories. It was repealed by 7th Amendment in 1956
10. Part X Articles 244-244 A Scheduled and tribal areas
11. Part XI Articles 245-263 Relations between the Union and States
12. Part XII Articles 264-300 Finance,, property,, contracts and suits
13. Part XIII Articles 301-307 Trade,, commerce and travel within the territory of India
14. Part XIV Articles 308-323 Services under the Union and States Part XIV-A Articles 323A-323B Added by the 42nd Amendment in 1976 and deals with administrative tribunals to hear disputes and other complaints



15. Part XV Articles 324-329 Election and Election Commission
16. Part XVI Articles 330-342 Special provision to certain classes ST/SC and Anglo Indians
17. Part XVII Articles 343-351 Official languages
18. Part XVIII Articles 352-360 Emergency provisions
19. Part XIX Articles 361-367 Miscellaneous provision regarding exemption of the President and governors from criminal proceedings
20. Part XX Article 368 Amendment of Constitution
21. Part XXI Articles 369-392 Temporary,, transitional and special provisions
22. Part XXII Articles 393-395 Short title, commencement and repeal of the Constitution

### **SCHEDULES OF INDIAN CONSTITUTION**

1. First Schedule - List of States & Union Territories
2. Second Schedule -Salary of President, Governors, Chief Judges, Judges of High Court and Supreme court, Comptroller and Auditor General
3. Third Schedule-Forms of Oaths and affirmations
4. Fourth Schedule-Allocate seats for each state of India in Rajya Sabha
5. Fifth Schedule-Administration and control of scheduled areas and tribes
6. Sixth Schedule-Provisions for administration of Tribal Area in Asom, Meghalaya, Tripura, Mizoram & Arunachal Pradesh
7. Seventh Schedule-Gives allocation of powers and functions between Union & States. It contains 3 lists-Union List (For central Govt) /States List (Powers of State Govt) /Concurrent List (Both Union & States).
8. Eighth Schedule-List of 22 languages of India recognized by Constitution
9. Ninth Schedule-Added by 1st amendment in 1951. Contains acts & orders related to land tenure, land tax, railways, industries.
10. Tenth Schedule-Added by 52nd amendment in 1985. Contains provisions of disqualification of grounds of defection
11. Eleventh Schedule-By 73rd amendment in 1992. Contains provisions of Panchayati Raj.
12. Twelfth Schedule-By 74th amendment in 1992. Contains provisions of Municipal Corporation.

### **Sources of our Constitution**

The Indian Constitution is borrowed from almost all the major countries of the world but has its own unique features too. Major sources are:

- 1) Government of India Act of 1935 - Federal Scheme, Office of Governor, Judiciary, Public Service Commission, Emergency provisions and administrative details.
- 2) British Constitution – Parliamentary System, Rule of law, Legislative Procedure, Single Citizenship, Cabinet System, Prerogative Writs, Parliamentary Privileges and Bicameralism.
- 3) US Constitution – Fundamental rights, independence of judiciary, judicial review, impeachment of president, removal of Supreme court and high court judges and post of vice president.
- 4) Irish Constitution- Directive Principles of State Policy, nomination of members of Rajya Sabha and method of election of president
- 5) Canadian Constitution- Federation with a strong centre, vesting of residuary power in the centre, appointment of state Governor by the centre and advisory jurisdiction of Supreme Court.
- 6) Australian Constitution- Concurrent list, joint sitting of two houses of Parliament.
- 7) Constitution of Germany- Suspension of fundamental rights during emergency.
- 8) French Constitution- Republic and ideals of liberty, equality and fraternity in the Preamble.
- 9) South African Constitution- Procedure for amendment of the constitution and election of members of Rajya Sabha.
- 10) 10.Japanese Constitution- Procedure established by Law.
- 11) 11.Constitution of former USSR: Procedure of five-year plan, fundamental duties, ideals of justice in Preamble.

### **Fundamental Rights**

They are justiciable, allowing persons to move the courts for their enforcement, if and when they are violated.

They are defended and guaranteed by the Supreme Court. Hence, the aggrieved person can directly go to the Supreme Court. They can be suspended during the operation of a National Emergency except the rights guaranteed by Articles 20 and 21. More, the six rights guaranteed by Article 19 can be suspended only when emergency is declared on the grounds of war or external aggression.

#### **Originally the Constitution provided for seven fundamental rights:**

- 1) Right to equality [Art. 14-18]
- 2) Right to freedom [Art. 19-22]
- 3) Right against exploitation [Art. 23-24].
- 4) Right to freedom [Art. 25-28]
- 5) Cultural and educational rights [Art. 29-30]
- 6) Right to property [Art. 31]

7) Right to constitutional remedies [Art. 32]

### **CITIZENSHIP**

A citizen is a person who enjoys full membership of the community or State in which he lives or ordinarily lives. The State demands extra duty from its citizen which cannot be asked to non-citizens. 42nd Constitution (Amendment) Act, 1976 has inserted 10 Fundamental Duties in Article 51-A.

Ways to acquire Indian Citizenship

Constitution of India under Citizenship (Amendment) Act, 1986 provides five ways to acquire citizenship of India.

These five ways are:

#### **a) Citizenship by Birth**

Every person born in India on or after 26th Jan 1950 shall be a citizen of India provided either, or both of his parents are citizens of India at the time of his birth. However, such a person shall not be a citizen of India if at the time of his birth:

His/her father is a foreign diplomat or

His/her father is an enemy alien.



#### **b) Citizenship by Descent**

A person born outside India on or after 26th Jan 1950 shall be a citizen of India by descent, if his father is a citizen of India at the time of his birth.

#### **c) Citizenship by Registration**

Any person who is not a citizen of India and belongs to any of the following categories; can apply for registration as a citizen (He must have resided in India for at least 5 years):

1. Person of Indian origin who are ordinarily resident in India for 5 years immediately before making an application for registration. PIO who are ordinarily resident in any country or place outside India.
2. Women who are married to citizens of India.
3. Minor children of persons who are citizen of India.
4. Persons of full age and capacity who are citizens of a country mentioned in the first Schedule to the Act.

#### **d) Citizenship by Naturalization**

1. A foreigner, on application for naturalization can acquire Indian citizenship provided he satisfies certain conditions:
2. He is not a citizen or subject of a country where Indian citizens are prevented from becoming citizens by naturalization.
3. He renounces his citizenship of the other country.
4. He has resided and/or bears in Govt. services for 12 months immediately preceding the date of application. During 7 years prior to these 12 months, he has resided and/or been in Govt. Service for not less than 4 years.
5. He is of good character.
6. He has an adequate knowledge of a language recognized by the Constitution of India.
7. After naturalization he intends to reside in India.
8. If the Central Govt. is of the opinion that the applicant has rendered distinguished service to the cause of Science, philosophy, art, literature, world peace or human progress generally, it may waive the condition for naturalization in his case.

### e) Citizenship by incorporation of Territory

If any new territory becomes a part of India, the Govt. of India shall notify the persons of that territory to be Indian citizens.



## The President

- Article 52 – There shall be a President of India.
- Article 53 – The executive power of the Union shall be vested in the President. He shall exercise the executive power directly or through subordinate officers in accordance with the constitution.

### Thus the President is:

Executive head of the Republic.

- All the executive actions are taken in his name. The executive power vested in the President is to be exercised on the aid and advice of the Council of Ministers [Article 74(1)]. It is obligatory on the part of President to accept the advice of the council of ministers as per the 42nd and 44th Constitutional Amendment Acts.
- He is the first citizen of India and occupies the first position under the warrant of precedence. Warrant of Precedence indicates the hierarchy of positions occupied by various dignitaries attending a state function.

- He is the Supreme Commander of Armed Forces.

### Qualification for election as President

- He must be a citizen of India.
- He must have completed the age of 35 years.
- He must be qualified for election as a Member of the House of the People.
- He must not hold any office of Profit under the Govt. of India or the Govt. of any State or under any local or other authority subject to the control of any of the said Govt.. However, following persons are not deemed to be holding any office of profit and hence they cannot be disqualified for election as the President: A sitting President or Vice-President of India/Governor of any state/A minister of the Union or of any State.

### Legislative powers of President

- 1) The legislative Powers of President are as follows:
- 2) The President summons both the Houses of the Parliament and prorogues them. He or she can dissolve the Lok Sabha according to the advice of the Council of Ministers headed by the Prime Minister.
- 3) President inaugurates the Parliament by addressing it after the general elections and also at the beginning of the first session each year.
- 4) All bills passed by the Parliament can become laws only after receiving the assent of the President. The President can return a bill to the Parliament, if it is not a money bill or a constitutional amendment bill, for reconsideration. When after reconsideration, the bill is passed and presented to the President, with or without amendments; President is obliged to assent to it.
- 5) The President can also withhold his assent to the bill thereby exercising pocket veto.
- 6) When both Houses of the Parliament are not in session and if Govt. feels the need for immediate action, President can promulgate ordinances which have the same force and effect as laws passed by Parliament.

### Vice President of India

- The Vice-President is elected by an electoral college consisting of members of both Houses of Parliament, in accordance with the system of proportional representation by means of the single transferable vote and the voting in such election is by secret ballot. The Electoral College to elect a person to the office of the Vice-President consists of all members of both Houses of Parliament.
- The Vice-President should not be a member of either House of Parliament or of a House of a Legislature of any state. If a member of either House of Parliament or of a House of a Legislature of any state is elected as Vice-President, he is deemed to have vacated his seat in that House on the date he/she enters his office as Vice-President.
- A person cannot be elected as Vice-President unless she/he-

- is a citizen of India has completed the age of 35 years
- is qualified for election as a member of the Council of States
- (Rajya Sabha). He holds any office of profit under the Govt. of India or a State Govt. or any subordinate local authority.

### **PRIME MINISTER**

- In the scheme of parliamentary system of government provided by the Constitution, the President is the nominal executive authority and Prime Minister is the real executive authority. The President is the head of the State while Prime Minister is the head of the government.
- Appointment of the Prime Minister
- Article 75 says that the Prime Minister shall be appointed by the President. The President appoints the leader of the majority party in the Lok Sabha as the Prime Minister. But, when no party has a clear majority in the Lok Sabha, then the President may exercise his personal discretion in the selection and appointment of the Prime Minister.

### **Powers and functions of Prime Minister**

The powers and functions of Prime Minister can be studied under the following heads:

- He recommends persons who can be appointed as ministers by the President.
- He can recommend dissolution of the Lok Sabha to the President at any time.
- He is the chairman of the Planning Commission, National Development Council, National Integration Council, Inter-State Council and National Water Resources Council.

### **Central Council of Minister**

- As the Constitution of India provides for a parliamentary system of government modelled on the British pattern, the council of ministers headed by the prime minister is the real executive authority is our politico-administrative system. Article 74 deals with the status of the council of ministers while
- Article 75 deals with the appointment, tenure, responsibility, qualification, oath and salaries and allowances of the ministers.

#### **Note:**

- The total number of ministers, including the Prime Minister, in the Council of Ministers shall not exceed 15% of the total strength of the Lok Sabha. [91st Constitutional Amendment Act, 2003]

- The council of ministers shall be collectively responsible to the Lok Sabha. A person who is not a member of either House can also become a minister but he cannot continue as minister for more than six months unless he secures a seat in either House of Parliament (by election/nomination). [Art. 75(5)]

### PARLIAMENT OF INDIA

#### The House of the People (Lok Sabha)

The Lok Sabha is the popular house of the parliament because its members are directly elected by the common electorates of India. All the members of this House are popularly elected, except not more than two from the Anglo-Indian community, who can be nominated by the President. In the Constitution, the strength of the Lok Sabha is provisioned under Art. 81 to be not more than 552 (530 from the States, 20 from the Union Territories and 2 may be nominated from the Anglo-Indian community). Recently again, the Govt. has extended this freeze in the Lok Sabha seats till the year 2026 by Constitution (84th Amendment Act, 2001).

#### Special Powers of the Lok Sabha

There are certain powers, which are constitutionally granted to the Lok Sabha and not to the Rajya Sabha. These powers are-

- 1) Money and Financial Bills can only originate in the Lok Sabha.
- 2) In case of a Money Bill, the Rajya Sabha has only the right to make recommendation and the Lok Sabha may or may not accept the recommendation. Also, a Money Bill must be passed by the Upper House within a period of 14 days. Otherwise, the Bill shall be automatically deemed to be passed by the House. Thus, the Lok Sabha enjoys exclusive legislative jurisdiction over the passage of the Money Bills.

#### RAJYA SABHA

- The Rajya Sabha (RS) or Council of States is the upper house of the Parliament of India. Membership is limited to 250 members, 12 of whom are nominated by the President of India for their contributions to art, literature, science, and social services.
- The remainder of the body is elected by the state and territorial legislatures. Members sit for six-year terms, with one third of the members retiring every two years. The Rajya Sabha meets in continuous sessions and, unlike the Lok Sabha, the lower house of Parliament, is not subject to dissolution. The Vice President of India (currently, Hamid Ansari) is the ex-officio Chairman of the Rajya Sabha, who presides over its sessions. The Deputy Chairman who is elected from amongst the RS's members, takes care of the day-to-day matters of the house in the absence of the Chairman. The Rajya Sabha held its first sitting on 13 May 1952.
- Leader of the House

- Besides the Chairman (Vice-President of India) and the Deputy Chairman, there is also a function called Leader of the House. This is a cabinet minister - the prime minister if he is a member of the House, or another nominated minister. The Leader has a seat next to the Chairman, in the front row.

### MEMBER

A person in order to be elected to the Rajya Sabha must

- (a) be a citizen of India,
- (b) be 30 years of age or more,
- (c) not be holding any office of profit under the central or state Govt. or local body and
- (d) possess all other qualifications prescribed by the act of parliament from time to time.

### Powers of Rajya Sabha

So far as powers of Rajya Sabha are concerned it enjoys co-equal power with the Lok Sabha in respect of all bills other than money bills. In case of Money Bills Rajya Sabha has no powers. Money Bills can only be introduced in the Lok Sabha. When it comes to the Rajya Sabha after being passed by the Lok Sabha, the former can keep it maximum for a period of 14 days only after which it is deemed to be passed.

### Governor

The Governor is merely appointed by the President which really means, by the Union Council of Ministers. The Governor holds office during the pleasure of the President, there is no security of his tenure. He can be removed by the President at any time. There is no impeachment process for removal of Governors as prescribed in constitution in the case of President.

### The powers of Governors

#### Executive Powers

- The Governor appoints the Chief Minister who enjoys the support of the majority in the Vidhan Sabha.
- The Governor also appoints the other members of the Council of Ministers and distributes portfolios to them on the advice of the Chief Minister.
- He/she also appoints the Advocate General and the chairman and members of the State Public Service Commission.
- The Governor appoints the judges of the District Courts.

#### Legislative Powers

- The Governor summons the sessions of both houses of the state legislature and prorogues them.



- The Governor inaugurates the state legislature by addressing it after the assembly elections and also at the beginning of the first session every year.
- The Governor can even dissolve the Vidhan Sabha. These powers are formal and the Governor while using these powers must act according to the advice of the Council of Ministers headed by the Chief Minister.

### Supreme Court of India

- Supreme Court of India is the highest judicial forum and final court of appeal. According to the Constitution of India, the role of the Supreme Court is that of a federal court and guardian of the Constitution.
- Composition of Supreme Court
- Under Article 124(1) the constitution originally provided for 1 Chief Justice of India and not more than 6 other judges. The constitution authorizes the Parliament to provide by law in fixing the Strength of the judges of the Supreme Court.
- The Parliament passed the Supreme Court (Number of Judges) thus accordingly, a Constitutional Amendment Act in 2008 has increased the strength of Supreme Court to 31 (1 Chief Justice + 30 other judges).

### Qualification to be a judge of Supreme Court

1. A person must be a citizen of India
2. He/she must have been, for at least five years, a Judge of a High Court or of two or more such Courts in succession
3. Or an Advocate of a High Court or of two or more such Courts in succession for at least ten years
4. Or the person must be, in the opinion of the President, a distinguished jurist.

### Removal of judges of Supreme Court

- Article 124(4) provides for the removal of a judge of the Supreme Court. He is removed by the President upon an address by both the Houses of the Parliament supported by a majority of not less than 2/3rd of members present and voting and a majority of total strength of the House on the ground of misbehavior or incapacity.
- The President shall pass the order of removal in the same session in which the Parliament passed the resolution. Article 124(5) confers the power on the Parliament to provide by law for the procedure for the Presentation of an address and for the investigation for proof of misbehavior or incapacity of a judge. Accordingly the Parliament passed Judges (Inquiry) Act 1968 which states that a resolution seeking the removal of a judge of
  - Supreme Court can be introduced in either House of Parliament.
  - It should be supported by not less than 100 member of Lok Sabha.

- If it is to be introduced in Rajya Sabha it should be supported by no less than 50 members of Rajya Sabha.

### Some Important Points on SC

1. The first woman judge of the Supreme Court was Justice Fatima Beevi in 1987. However, there has been no female Chief Justice
2. Ad hoc Judges:
  - a) Ad hoc Judges are non-Supreme Court judges who sit in the Supreme Court when there is insufficient quorum to perform the judicial duties.
  - b) Ad hoc Judges are appointed by the Chief Justice after obtaining consent from the President.
  - c) Serving(HC) and retired(SC & HC) judges of the Supreme Court (and High Courts) can sit and act as ad hoc Judges of the Supreme Court.
  - d) Only such persons can be appointed as ad hoc Judges who are qualified to be appointed as a regular Judge of the Supreme Court
3. The Chief Justice administers the oath in front of the President.
4. The first Chief Justice of India was H J Kania (1950 – 1951).
5. The shortest tenure was for K N Singh (Nov 1991 – Dec 1991, UP)
6. The longest tenure was for Y V Chandrachud (1978 – 1985, Bombay)

## Geography

### THE EARTH

#### Nebular Theory

There are many ideas about the formation and evolution of the Solar System. The accepted idea is that 4.6 billion years ago, there was a very big cloud of gas in our area of space, known as a nebula. The Nebula eventually became so big that gravity pulled all the gas to the center. Eventually because of all the gas it became so hot there that some hydrogen atoms fused together to make helium. As they did this a lot of energy was let out. All this energy eventually made the Sun. The leftover gas and dust made the planets, their moons, asteroids and all other objects

in the Solar System. Scientists think now that solar systems are created out of a huge cloud of gas. The process by which the solar systems are created is called the Nebular Theory.

### **THE ORIGIN OF EARTH**

- The formation of Earth occurred as part of the formation of the Solar System. It started as a large rotating cloud of dust and gas.
- This cloud, the solar nebula, was composed of hydrogen and helium produced in the Big Bang, as well as heavier elements produced in supernovas. Then, about  $4.68 \times 10^9$  years ago, the solar nebula began to contract, rotate and gain angular momentum.
- This may have been triggered by a star in the region exploding as a supernova, and sending a shock wave through the solar nebula.
- As the cloud rotated, it became a flat disc perpendicular to its axis of rotation. Most of the mass concentrated in the middle and began to heat up. Meanwhile, the rest of the disc began to break up into rings, with gravity causing matter to condense around dust particles. Small fragments collided to become larger fragments, including one collection about 150 million kilometers from the center: this would become the Earth.
- THE LAST 2½ BILLION YEARS OR SO
- As soon as the oxygen was produced by photosynthesis it was taken out again by reacting with other elements (such as iron). This continued until about 2.1 billion years ago when the concentration of oxygen increased markedly. As oxygen levels built up and then . . . . . The ozone layer was formed which started to filter out harmful ultraviolet rays. This allowed the evolution of new living organisms in the shallow seas.

### **Earth Solar System**

**Earth solar system consists of :**

- The Sun • The Planets
- Dwarf Planets and countless fragments of left – overs called asteroids, meteors, comets and satellites of the planets (Called small solar system Bodies).

### **Solar System Some Facts**

- Biggest Planet : Jupiter
- Smallest Planet : Mercury
- Nearest Planet to Sun : Mercury
- Farthest Planet from Sun : Neptune
- Nearest Planet to Earth : Venus

- Brightest Planet : Venus
- Brightest star after Sun : Sirius
- Planet with maximum satellites: Jupiter
- Coldest Planet : Neptune
- Hottest Planet : Venus
- Heaviest Planet : Jupiter
- Red Planet : Mars
- Biggest Satellite : Gannymede
- Smallest Satellite : Deimos
- Blue Planet: Earth
- Morning/Evening Star : Venus
- Earth's Twin : Venus
- Green Planet : Neptune
- Planet with a big red spot : Jupiter
- Lord of the Heavens : Jupiter
- Greatest Diurnal Temperature: Mercury



### **Important Parallels of Latitude**

- 1) 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.
- 2) 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.
- 3) The Arctic Circle : It lies at a distance of  $66\frac{1}{2}^{\circ}$  ( $66^{\circ}30'N$ ) north of the equator.
- 4) 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  $0^{\circ}$

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.

**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 1/2°E Meridian, a place near Allahabad. It is 5 1/2 hours ahead of Greenwich Mean Time.

### Facts about earth

- The Earth also called Blue Planet. It is the densest of all planets.
- Earth Circumference: 40,232 Kilometers.
- Earth Area: 510 million Square Kilometers
- Average distance from sun: 149 million Kilometers.
- Earth Perihelion: Nearest position of earth to sun. The earth reaches its perihelion on January 3 every year at a distance of about 147 million-Kilometers.
- Aphelion: Farthest position of earth from sun. The earth reaches its aphelion on July 4, when the earth is at a distance of 152 million Kilometers.
- The shape of the earth is oblate spheroid or oblate ellipsoid (i.e. almost spherical, flattened a little at the poles with a slight bulge at the centre).

### Types of Earth Movements:

- 1) Rotation or daily movement.
- 2) Revolution or annual movement.

### Earth Rotation

- Spins on its imaginary axis from west to east in 23 hrs, 56 min and 40.91 sec.
- Rotational velocity at equator is 1667 Kilometers/h and it decreases towards the poles, where it is zero.

### Earth's rotation results in

- Causation of days and nights;
- A difference of one hour between two meridians which are 15° apart;
- Change in the direction of wind and ocean currents; Rise and fall of tides everyday.

- The longest day in North Hemisphere is June 21, while shortest day is on 22 Dec (Vice-versa in S.Hemisphere).
- Days and nights are almost equal at the equator.

### Earth Revolution

- It is earth's motion in elliptical orbit around the sun. Earth's average orbital velocity is 29.79 Kilometers/s.
- Takes 365 days, 5 hrs, 48 min and 45.51 sec. It results in one extra day every fourth year.

### Earth Eclipses

#### Earth Lunar Eclipse

- When earth comes between sun and moon.
- Occurs only on a full moon day. However, it does not occur on every full moon day because the moon is so small and the plane of its orbit is tilted about  $5^\circ$  with respect to the plane of the earth's orbit. It is for this reason that eclipses do not occur every month.
- This light is red because the atmosphere scatters the other colors present in sunlight in greater amounts than it does red.

#### Earth Solar Eclipse

A solar eclipse is a type of eclipse that occurs when the Moon passes between the Sun and Earth, and the Moon fully or partially blocks ("occults") the Sun. This can happen only at new moon. The layering of Earth is categorized as Lithosphere, Asthenosphere, Upper mantle, Lower mantle, Outer core, and the Inner core.

The earth's interior has three different layers; they are

(i) the crust (ii) mantle and (iii) the core.

a) Earth's Crust:

All of the Earth's landforms (mountains, plains, and plateaus) are contained within it, along with the oceans, seas, lakes and rivers. There are two different types of crust: thin oceanic crust that underlies the ocean basins and thicker continental crust that underlies the continents. These two different types of crust are made up of different types of rock. The boundary between the crust and the mantle is Mohorovicic Discontinuity.

b) Earth's Mantle: It is the thick, dense rocky matter that surrounds the core with a radius of about 2885 km. The mantle covers the majority of the Earth's volume. This is basically composed of silicate rock rich in iron and magnesium. This layer is separated from the core by Gutenberg-Wiechert Discontinuity. The outer and the inner mantle are separated by another discontinuity named Repetti discontinuity.

c) Earth's Core: Earth's Core is thought to be composed mainly of an iron and nickel alloy. The core is earth's source of internal heat because it contains radioactive materials which release heat as they break down into more stable substances.

### ATMOSPHERE

Atmosphere is a thick gaseous envelope that surrounds the earth and extends thousands of kilometers above the earth's surface. Much of the life on the earth exists because of the atmosphere otherwise the earth would have been barren. Nitrogen and Oxygen comprise 99% of the total volume of the atmosphere.

### Structure of the Atmosphere

The atmosphere consists of almost concentric layers of air with varying density and temperature.

#### a) Troposphere:

- Lowest layer of the atmosphere.
- The height of troposphere is 16 km thick over the equator and 10 km thick at the poles.
- All weather phenomena are confined to troposphere (e.g. fog, cloud, frost, rainfall, storms, etc.)
- Temperature decreases with height in this layer roughly at the rate of  $6.5^\circ$  per 1000 metres, which is called normal lapse rate.
- Upper limit of the troposphere is called tropopause which is about 1.5 km.

#### b) Stratosphere:

- The stratosphere is more or less devoid of major weather phenomenon but there is circulation of feeble winds and cirrus cloud in the lower stratosphere.
- Jet aircrafts fly through the lower stratosphere because it provides perfect flying conditions.
- Ozone layer lies within the stratosphere mostly at the altitude of 15 to 35 km above earth's surface.
- Ozone layer acts as a protective cover as it absorbs ultra-violet rays of solar radiation.
- Depletion of ozone may result in rise of temperature of ground surface and lower atmosphere.
- Temperature rises from  $-60^\circ\text{C}$  at the base of the stratosphere to its upper boundary as it absorbs ultra-violet rays.
- Upper limit of the Stratosphere is called stratopause.

#### c) Mesosphere

- Mesosphere extends to the height of 50-90 km.
- Temperature decreases with height. It reaches a minimum of  $-80^\circ\text{C}$  at an altitude of 80-90 km
- The upper limit is called mesopause.

### d) Thermosphere

- It lies at 80 km to 640 km above the earth's surface.
- It is also known as ionosphere.
- Temperature increases rapidly with increasing height.
- It is an electrically charged layer. This layer is produced due to interaction of solar radiation and the chemicals present, thus disappears with the sunset.
- There are a number of layers in thermosphere e.g. D-layer, E-layer, F-layer and G-layer.
- Radio waves transmitted from earth are reflected back to the earth by these layers.

### e) Exosphere

- This is the uppermost layer of the atmosphere extending beyond the ionosphere.
- The density is very low and temperature becomes 5568°C.
- This layer merges with the outer space.

### About Ionosphere

At heights of 80 km (50 miles), the gas is so thin that free electrons can exist for short periods of time before they are captured by a nearby positive ion. This portion of the atmosphere is ionized and contains plasma which is referred to as the ionosphere. The Ultraviolet (UV), X-Ray and shorter wavelengths of solar radiation ionizes the atmosphere. The ionosphere is broken down into the D, E and F regions.

### PRESSURE AND WIND BELTS

Air pressure is thus defined as total weight of a mass of column of air above per unit area at sea level. The amount of pressure exerted by air at a particular point is determined by temperature and density which is measured as a force per unit area.

- Aneroid Barometer-It is the most common type barometer used in homes.

### OCEANS

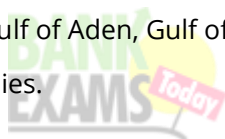
- Arctic Ocean-- The Arctic Ocean is the smallest of the world's five oceans. The Northwest Passage (US and Canada) and Northern Sea Route (Norway and Russia) are two important seasonal waterways.
- It is a body of water between Europe, Asia, and North America, mostly north of the Arctic Circle.
- Lowest point: Fram Basin
- Major chokepoint is the Southern Chukchi Sea
- Ports and harbors: Churchill (Canada), Murmansk (Russia), Prudhoe Bay (US)



- Atlantic Ocean-- The Atlantic Ocean is the second largest of the world's five oceans. The Kiel Canal (Germany), Oresund (Denmark-Sweden), Bosphorus (Turkey), Strait of Gibraltar (Morocco-Spain), and the Saint Lawrence Seaway (Canada-US) are important strategic access waterways.
- It is a body of water between Africa, Europe, the Southern Ocean, and the Western Hemisphere. It includes includes Baltic Sea, Black Sea, Caribbean Sea, part of the Drake Passage, Gulf of Mexico, Mediterranean Sea, and other tributary water bodies.
- Lowest point: Milwaukee Deep in the Puerto Rico Trench
- Major chokepoints include the Dardanelles, Strait of Gibraltar, access to the Panama and Suez Canals.
- The Equator divides the Atlantic Ocean into the North Atlantic Ocean and South Atlantic Ocean. Kiel Canal and Saint Lawrence Seaway are two important waterways.

### Indian Ocean

- The Indian Ocean is the third largest of the world's five oceans. Four critically important access waterways are the Suez Canal (Egypt), Bab-el Mandeb (Djibouti-Yemen), Strait of Hormuz (Iran-Oman), and Strait of Malacca (Indonesia-Malaysia).
- It is a body of water between Africa, the Southern Ocean, Asia, and Australia. It includes Andaman Sea, Arabian Sea, Bay of Bengal, Flores Sea, Gulf of Aden, Gulf of Oman, Java Sea, Red Sea, Strait of Malacca, Timor Sea, and other tributary water bodies.



### Pacific Ocean

- The Pacific Ocean is the largest of the world's five oceans. Strategically important access waterways include the La Perouse, Tsugaru, Tsushima, Taiwan, Singapore, and Torres Straits.
- It is body of water between the Southern Ocean, Asia, Australia, and the Western Hemisphere. It includes Bali Sea, Bering Sea, Coral Sea, East China Sea, Gulf of Alaska, Philippine Sea, Sea of Japan, Sea of Okhotsk, Tasman Sea, and other tributary water bodies.

### Lowest point: Challenger Deep in the Mariana Trench.

- The major chokepoints are the Bering Strait, Panama Canal, Luzon Strait, and the Singapore Strait; the Equator divides the Pacific Ocean into the North Pacific Ocean and the South Pacific Ocean.
- Ports and harbors: Bangkok (Thailand), Los Angeles (US), Manila (Philippines), Pusan (South Korea), San Francisco (US), Seattle (US), Shanghai (China), Singapore, Sydney (Australia), Vladivostok (Russia).
- SOUTHERN OCEAN--The Southern Ocean is the fourth largest of the world's five oceans. It is a body of water between 60 degrees south latitude and Antarctica. It includes Amundsen Sea, Bellingshausen Sea, part of the Drake Passage, Ross Sea, a small part of the Scotia Sea, Weddell Sea, and other tributary water bodies.
- Lowest point: southern end of the South Sandwich Trench.

- The major chokepoint is the Drake Passage between South America and Antarctica.
- Ports and harbors: McMurdo, Palmer, and offshore anchorages in Antarctica.

### TIDES

- The tide is the periodic rise and fall of the sea levels caused by the combined effects of the gravitational forces exerted by the Moon and Sun and rotation of the earth. Most places in the ocean usually experience two high tides and two low tides each day (semidiurnal tide), but some locations experience only one high and one low tide each day (diurnal tide). The times and amplitude of the tides at the coast are influenced by the alignment of the Sun and Moon, by the depth of the ocean, and by the shape of the coastline and near-shore bathymetry.
- When the moon exerts gravitational force on the earth the tidal bulge moves out and causes high tide. Simultaneously on the side
- opposite to that place on the earth i.e. just at  $180^\circ$  to it, also experiences the tidal bulge due to reactionary force (centrifugal) of the gravitational (centripetal) force. Thus two tides are experienced twice at every place on the earth's water surface within 24 hours.
- Due to the cyclic rotation of the earth and moon, the tidal cycle is 24 hours and 52 minutes long.

### RIVERS OF INDIA

- In India, the rivers can be divided into two main groups:
- Himalayan Rivers--1) Indus 2) Ganga 3) Bhramputra
- Peninsular Rivers--1) East flowing 2) West flowing

### HIMALAYAN RIVERS OF INDIA

#### THE INDUS SYSTEM

- It has a total length of 2880 km (709 km in India). Rises in Tibet (China) near Mansarovar Lake. In Jammu and Kashmir, its Himalayan tributaries are: Zaskar, Dras, Gartang, Shyok, Shigar, Nubra, Gilgit, etc. Its most important tributaries, which join Indus at various places, are: Jhelum, Chenab (1800 km), Ravi, Beas & Satluj.
- Sources: Jhelum from Verinag (SE Kashmir), Ravi from Kullu Hills near Rohtang Pass in Himachal Pradesh, Beas from a place near Rohtang Pass in Himachal Pradesh and Satluj from Mansarovar – Rakas lakes in W. Tibet.

#### THE GANGA SYSTEM

- It is 2525 km long of which 1450 km is in Uttarakhand and UP, 445 km in Bihar and 520 km in West Bengal. The Ganga, the head stream is constituted of two main rivers – Bhagirathi and Alaknanda, which combine at Devprayag to form Ganga.

- Sources: Bhagirathi from Gaumukh, Alaknanda from Badrinath, Mandakini from Kedarnath (all from Uttarakhand).
- Yamuna (1375 km) is its most important tributary (on right bank). It rises at the Yamunotri glacier in Uttarakhand. It runs parallel to Ganga for 800km and joins it at Allahabad. Important tributaries of Yamuna are Chambal, Betwa (480 km) and Ken (all from south).
- Apart from Yamuna, other tributaries of Ganga are Ghaghra (1080 km), Son (780 km), Gandak (425 km), Kosi (730 km), Gomti (805 km), Damodar (541 km). Kosi is infamous as ‘Sorrow of Bihar’, while Damodar gets the name ‘Sorrow of Bengal’ as these cause floods in these regions. Hooghli is a distributary of Ganga flowing through Kolkata.

### THE BRAHMAPUTRA SYSTEM

- It has a total length of 2900 km. It rises in Tibet (from Chemayungdung glacier), where it is called Tsangpo, and enters the Indian territory (in Arunachal Pradesh) under the name Dihang. Important Tributaries: Subansiri, Kameng, Dhansiri, Manas, Teesta. In Bangladesh, Brahmaputra is known by the name of Jamuna while Ganga gets the name Padma. Their combined stream is known as Padma only. Meghna is the most important distributary before it enters the Bay of Bengal.
- The combined stream of Ganga and Brahmaputra forms the biggest delta in the world, the Sundarbans, covering an area of 58,752 sq. km. Its major part is in Bangladesh.
- On Brahmaputra is the river island, Majuli in Assam, the biggest river island in the world.
- Brahmaputra, or the Red River, is navigable for a distance of 1384 km up to Dibrugarh and serves as an excellent inland water transport route.

### RIVERS OF THE PENINSULA IN INDIA

#### A. EAST FLOWING RIVERS OF INDIA (OR DELTA FORMING RIVERS)

- Mahanadi River (858 km) : Rises in Raipur distt. in Chhatisgarh. Godavari River (1465 km) : Also called Vriddha Ganga or Dakshina Ganga. It is the longest peninsular river. Rises in Nasik. Main tributaries: Manjra, Penganga, Wardha, Indravati, Wainganga, etc.
- Krishna River (1327 km) : Rises in Western Ghats near Mahabaleshwar. Main tributaries: Koyna, Dudhganga, Panchganga, Malprabha, Bhima, Tungabhadra, etc.
- Cauvery River (805 km) : It is the largest peninsular river (maximum amount of water). Infact, it is the only peninsular river which flows almost throughout the year. Known as the ‘Ganga of the South’. It rises from the Brahmagir range of Western Ghats. Main tributaries: Hemavati, Lokpawni, Shimsa.
- Swarnarekha River (395 km) and Brahmani (705 km) : Rises from Ranchi Plateau.

### B. WEST FLOWING RIVERS IN INDIA

- Narmada River (1057 km) : Rises in Amarkantak Plateau and flows into Gulf of Khambat. It forms the famous Dhuandhar Falls near Jabalpur. Main tributaries: Hiran, Burhanpur, Banjar, Sharada, Shakkar, Tawa, etc.
- Tapi River (724 km) : Rises from Betul district in Maharashtra. Also known as twin or handmaid of Narmada. Main tributaries: Purna, Betul, Arunavati, Ganjal, etc.
- Sabarmati River (416 km) : Rises from Aravallis in Rajasthan.
- Mahi River (560 km) : Rises from Vindhya in Maharashtra.
- Luni River (450 km) : Rises from Aravallis. Also called Salt River. It is finally lost in the marshy grounds at the head of the Rann of Kutch.
- Sharavati is a west flowing river of the Sahyadris. It forms the famous Jog or Gersoppa or Mahatma Gandhi Falls (289 m), which is the highest waterfall in India.
- Note: The largest man-made lake in India is Indira Sagar Lake, which is the reservoir of Sardar Sarovar Project, Onkareshwar Project and Maheshwar Project in Gujarat-MP.
- Chilka Lake (Orissa) is the largest brackish water lake of India. Otherwise also, it is the largest lake of India.
- Wular Lake (J & K) is the largest fresh water lake of India. Dal Lake is also there in J & K. From Sambhar and Didwana Lake (Rajasthan), salt is produced. Other important lakes are Vembanad in Kerala and Kolleru & Pulicat in Andhra Pradesh.
- The three important Gulfs in the Indian Territory are:
  - Gulf of Kutch (west of Gujarat) : Region with highest potential of tidal energy generation
  - Gulf of Cambay or Gulf of Khambat (Gujarat) : Narmada, Tapi, Mahi and Sabarmati drain into it.
  - Gulf of Mannar (south east of Tamil Nadu) : Asia's first marine biosphere reserve.

### IMPORTANT RIVER VALLEY PROJECTS IN INDIA

- Bhakra Nangal Project: On Sutlej in Punjab. Highest in India. Ht 226 m. Reservoir is called Gobind Sagar Lake \
- Mandi Project: On Beas in H.P
- Chambal Valley Project: On Chambal in M.P & Rajasthan. 3 dams are there: Gandhi Sagar Dam, Rana Pratap Sagar Dam and Jawahar Sagar dam
- Damodar Valley Project: On Damodar in Bihar.
- Hirakud: On Mahanadi in Orissa. World's longest dam: 4801 m
- Rihand : On Son(river) in Mirzapur. Reservoir is called Govind Vallabh Pant reservoir
- Mayurkashi Project : On Mayurkashi in W.B
- Kakrapar Project : On Tapi in Gujarat
- Nizamsagar Project: On Manjira in A.P

- Nagarjuna Sagar Project : On Krishna in A.P
- Farakka Project: On Ganga in W.B. Apart from power and irrigation it helps to remove silt for easy navigation

### **Climate of INDIA**

- India has tropical monsoon type of climate.

### **CLIMATE SEASONS IN INDIA**

- In India, the year can be divided into four seasons, resulting from the monsoons which occur mainly due to the differential heating of land and movement of the sun's vertical rays.
- The highest temperature experienced in South is in April while in North it is in May and June. 'Cherry Blossoms' are there in Karnataka, beneficial to coffee plantation and 'Mango showers' in elsewhere South India, which are beneficial to mango crops.
- The south - west monsoon enters the country in two currents, one blowing over the Bay of Bengal and the other over the Arabian Sea. This monsoon causes rainfall over most of the country (except Tamil Nadu and Thar Desert area).
- The Bay of Bengal branch after crossing the deltaic region enters the Khasi valley in Meghalaya and gets entrapped in it due to funnel shape of the region. It strikes Cherrapunji in a perpendicular direction causing heaviest rainfall in Mawsynram (Approx. 1400 cm). From mid-Sept to mid-Dec, the monsoon retreats. As the sun's vertical rays start shifting towards the Tropic of Capricorn, the low pressure area starts moving south and winds finally start blowing from land to sea. This is called north-east monsoon. The withdrawal of monsoon is a much more gradual process than its onset. It causes rainfall in Tamil Nadu as the winds pick some moisture from Bay of Bengal. This explains the phenomenon why Tamil Nadu remains dry when the entire country receives rain and why it gets rain when practically the entire country is dry.

### **CLIMATIC REGIONS OF INDIA**

- India can be divided into a number of climatic regions.
- Tropical Rain Forests in India : Found in the west coastal plains, the Western Ghats and parts of Assam. Characterised by high temperatures throughout the year. Rainfall, though seasonal, is heavy- about 200 cm annually during May-November.
- Tropical Savanna Climate : In most of the peninsula region except the semi-arid zone in the leeward side of the Western Ghats. It is characterized by long dry weather throughout winter and early summer and high temperature (above 18.2 Deg.c); annual rainfall varies from 76 cm in the west to 150 cm in the east.
- Tropical Semi-Arid Steppe Climate : It prevails in the rain-shadow belt running southward from Central Maharashtra to Tamil Nadu in the leeward side of the Western Ghats and the Cardamom Hills. It is characterized by low rainfall which varies from 38 cm to 80 cm, high temperature between 20 and 30.

- Tropical and Subtropical Steppes : Large areas in Punjab, Haryana and Kutch region. Temperature varies from 12-35 Deg.

### Soils

#### 1. Alluvial Soil:

- In India it covers about 40 per cent of the total land area. It is very fertile and contributes the largest share of agricultural wealth. Found mostly in the Northern Plains, starting from Punjab in the west to West Bengal and Assam in the east. The northern parts and the coastal areas of Gujarat also have some deposits of alluvial soil.
- The fine particles of sand, silt and clay are called alluvium. The alluvial soil can be divided into a. Old alluvium, called bangar b. New alluvium, called khadar.
- Alluvial soil is most suited to irrigation and can produce bumper crops of rice, wheat, maize, sugarcane, tobacco, cotton, jute, oilseeds, etc.

#### 2. Black Soil:

- The black soil is locally called regur, a word derived from Telugu word 'reguda'. It is also called the Black Cotton Soil, as cotton is the most important crop grown in this soil. The black soil is mostly found in the Deccan Trap, covering large areas of Maharashtra, Gujarat and western Madhya Pradesh. The black soil is well-known for its capacity to hold moisture. Black soil is widely used for producing cotton, wheat, linseed, millets, tobacco and oilseeds.

#### 3. Red Soil:

- The red soil occupies about 10 per cent area of India, mostly in the south-eastern part of the Peninsular India. The red soil is found in Tamil Nadu, parts of Karnataka, southeast Maharashtra, eastern parts of Andhra Pradesh, Madhya Pradesh, Orissa and Jharkhand. The red colour is due to the high percentage of iron contents.

#### 4. Laterite Soil:

- The word 'laterite' has been derived from a Latin word meaning 'brick'. It is mainly found on the summits of the Western Ghats, Eastern Ghats, Rajmahal Hills, Vindhyas, Satpuras and Malwa plateau. It is well-developed in southern Maharashtra, and parts of Orissa, West Bengal, Karnataka, Andhra Pradesh, Kerala, Bihar, Assam and Meghalaya. Such climatic conditions promote leaching of soil. Leaching is a process in which heavy rains wash away the fertile part of the soil. The laterite soil is red in colour and composed of little clay and much gravel of red sandstones.

- Due to intensive leaching, the laterite soil generally lacks fertility and is of low value for crop production. But when manured and timely irrigated, the soil is suitable for producing plantation crops like tea, coffee, rubber, coconut, arecanut, etc.

### 5. Mountain Soil:

- The mountain soil is generally found on the hill slopes covered with forests. This soil is also found in the Western and Eastern Ghats and in some parts of the Peninsular India. This soil is rich in humus, but poor in potash, phosphorus and lime.
- In the Himalayan region wheat, maize, barley and temperate fruits are grown on this soil. This soil is especially suitable for producing plantation crops, such as tea, coffee, spices and tropical fruits in Karnataka, Tamil Nadu and Kerala.

### 6. Desert Soil:

- The desert soil is found mostly in the arid and semi-arid regions, receiving less than 50 cm of annual rainfall. Such regions are mostly found in Rajasthan and the adjoining areas of Haryana and Punjab. The Rann of Kachchh in Gujarat is an extension of this region. The desert soil has sand (90 to 95 per cent) and clay (5 to 10 per cent). Desert soil can produce a variety of crops, such as wheat, millets, barley, maize, pulses, cotton, etc.



## NATIONAL PARKS AND WILD LIFE SANCTUARIES

- There are 96 National Parks and 510 Wildlife Sanctuaries in India.
- Madhya Pradesh and Andaman and Nicobar Islands have the maximum number of National Parks (9 each) while Andaman and Nicobar Islands has 96 and Maharashtra has 36 Wildlife Sanctuaries (maximum in India).
- CROPPING SEASONS IN INDIA
- Kharif Crops of India
- Sown in summers between May and July, and harvested after the rains, in September and October.
- Eg: Rice, Jowar, Bajra, Maize, Cotton, Jute, Sugarcane, Tobacco, Groundnut, Pulses, etc.
- Rabi Crops of India
- Sown at the beginning of winter and harvested before the onset of the summer season, between Feb and April.
- Eg: Wheat, barley, oilseeds, gram, potatoes, etc.
- Zaid Crops
- They are raised between April and June.
- E.g. : Melon, watermelon, cucumber, toris, leafy and other vegetables.

- Cash Crops of India (Commercial Crops)
- Grown mainly for the market, only a small portion of the product is consumed by the farmers themselves (cotton, sugarcane etc.)

### **RAILWAYS IN INDIA**

- Indian railway system is the largest in Asia and the fourth largest in the world. It is the biggest departmental public undertaking in the country. The first train ran in India between Bombay and Thane, a stretch of 34 km. on April 16th 1853.
- The second train ran between Howrah and Hooghly in 1854.
- The headquarters of Indian Railway is in New Delhi.
- The first electric train in India was ‘Deccan Queen’. It was introduced in 1929 between Bombay and Poona.
- Indian Railways has the second biggest electrified system in the world after Russia.
- The fastest train in India is the Shatabadi Express whose maximum speed is 140 km/hr.
- The total route covered is approx 63,000 km.
- The total number of railway stations in India is 7,100.
- The longest railway platforms are: Gorakhpur railway station, Uttar Pradesh, India:1,366.33 m (4,483 ft) (longest in the world).
- Mumbai is the destination where maximum number of trains in India head for.
- The first Metro Rail was introduced in Kolkata (W.Bengal) on October 24, 1984. The two stations connected were Dumdum and Belgachhia.
- Konkan Railways India : It is a project to shorten the distance between Maharashtra, Goa and Karnataka. The total route length is 786 km between Apta (Maharashtra) and Mangalore (Karnataka).



## BOUNDRY LINES

<b>LINES Durand Line</b>	<b>Pakistan &amp; Afghanistan</b>
MacMohan Line	India & China
Radcliffe Line	India & Pakistan
Maginot Line	France & Germany
Oder Niesse Line	Germany & Poland
Hindenberg Line	Poland & Germany (at the time of First World War)
38th Parallel	North & South Korea
49th Parallel	USA & Canada

## Area Geography & Boundaries OF INDIA

1. India stretches 3,214 km from North to South & 2,933 km from East to West.
2. Geography Area of India : 32,87,263 sq. km. Accounts for 2.4% of the total world area and roughly 16% of the world population.
3. Mainland India has a coastline of 6,100 km. Including the Lakshadweep and Andaman and Nicobar Islands, the coastline measures about 7516.6 km.
4. In India, of the total land mass:
  - Plains Geography: 43.3%
  - Plateaus: 27.7% • Hills: 18.6%
  - Mountains Geography: 10.7%
5. In the South, on the eastern side, the Gulf of Mannar & the Palk Strait separate India from Sri Lanka.
6. Total land neighbours: 7 (Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar).
7. India's Islands include the Andaman & Nicobar Islands in Bay of Bengal and Lakshadweep, Minicoy & Amindive Islands in the Arabian Sea.

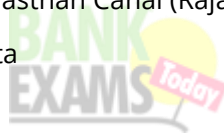
## INDIA FACTS

- Highest Award-Bharat Ratna
- Highest Gallantry Award-Param Vir Chakra
- Longest Tributary river of India-Yamuna

- Largest Lake-Wular Lake, Kashmir
- Largest Lake (Saline Water)-Chilka Lake, Orissa
- Largest Man-Made Lake-Govind Vallabh Pant Sagar (Rihand Dam)
- Highest Lake-Devtal Lake, Gadhwal (Uttarakhand)
- Highest Peak-Karkoram-2 of K-2(8,611 meters)
- Largest Populated City-Mumbai
- Largest State(Area)-Rajasthan
- Largest State(Population)-Uttar Pradesh
- Highest rainfall-Cherrapunji (426 inches per annum)

### State wise largest area under forest-Madhya Pradesh

- Largest Delta-Sunderbans Delta
- Longest River Bridge-Mahatma Gandhi Setu, Patna
- Biggest Cave temple-Ellora
- Longest Road-Grand Trunk Road
- Longest Canal-Indira Gandhi Canal or Rajasthan Canal (Rajasthan)
- Largest Museum-India Museum at Kolkata
- Longest Dam-Hirakud Dam (Orissa)
- Highest Dam-Tehri Dam ( 260 meters , 850 ft )
- Largest District-Kutch district
- Longest Highway NH-44 (NH-7) which turns from Varanasi to Kanyakumari
- Smallest State (Population)-Sikkim
- Smallest State (Area)-Goa
- Largest State (Area)-Rajasthan
- Largest State (Population)-Uttar Pradesh
- Largest Cave Temple-Kailash Temple, Ellora (Maharashtra)
- Largest Port-Mumbai
- Largest Church-Saint Cathedral (Goa)
- Longest Beach-Marina Beach, Chennai
- Highest Airport-Leh (Laddakh)
- Largest River Island-Majuli (Brahmaputra River, Asom)



## Continents of the World

### World Continents

- Asia, Africa, North America, South America, Europe, Australia and Antarctica are the seven continents of the world.
- These seven continents were believed to be part of Pangaea which was a single landmass around 250 million years ago.
- Due to the tectonic movement, the landmass broke up and the component continents separated and moved away to its present position. All these took around 1 million years to complete.

### The Continents of the World,

- Asia Continents Countries
- Africa Continents Countries
- North America Continents Countries
- South America Continents Countries
- Europe Continents Countries
- Australia Continents Countries
- Antarctica Continents Countries



### ASIA

1) Area: 44,485,900 sq Kms

2) Straits Strait of Malacca, Bering Strait.

3) Mountains

Pamir Knot, Himalayas, Karakoram, Kunlun, Tien Shan, Altai, Hindu Kush, Elburz, Pontic, Sulaiman, Zagros, Taurus, Urals, Yablonovoi, Stanovoi.

4) Highest Point Everest (8,848 m)

5) Lowest Point Dead Sea (396.8 m)

6) Islands---Kurile, Sakhalin, Honshu, Hokkaido, Taiwan, Borneo, Sumatra, Java, Celebes, New Guinea, Philippines, Sri Lanka, Bahrain, Cyprus.

- 7) Rivers-Eupharates, Tigris, Indus, Ganga, Brahmaputra, Hwang-Ho, Yang-tse, Si-kiang, Amur, Lena-Yenisei, Ob, Irrawady, Salween, Mekong.
- 8) Plateaus--Anatolia Plateau, Plateau of Iran, Plateau of Arabia, Plateau Of Tibet, Tarim Basin, Plateau of Mongolia, Plateau of Yunnan, Deccan Plateau.
- 9) Peninsulas—Kamchatka Peninsula, Peninsula of Korea, Peninsula of Indo-China, Malay Peninsula. Indian Peninsula, Arabian Peninsula.
- 10) Deserts-Arab, Thar

### **Africa**

- 1 Area 30,259,680 sq Kms
- 2 Straits--Strait of Bab-el-Mandeb, Straits of Gibraltar
- 3 Mountains-- Atlas, Drakensberg, Kilimanjaro
- 4 Highest Point- Kilimanjaro (5,894 m)
- 5 Lowest Point-Lake Assai (-156.1 m.)
- 6 Islands--Madagascar, Cape Verde Islands, The Comoros, Mauritius, Seychelles
- 7 Plateaus--The whole continent is a plateau
- 8 Deserts-- Kalahari, Sahara Namib



### **North America**

- 1 Area-- 24,235,280 sq Kms
- 2 Straits-- Bering Strait
- 3 Mountains-- Rockies, Appalachain, Brooks, Kuskolkwim, Alaska Range, Cascade Range, Coastal Range, Sierra Nevada, Sierra Madre
- 4 Highest Point-- Mckinley (6,194 m.)
- 5 Lowest Point--Death Valley(-85.9 m)
- 6 Islands--Greenland, Baffin, Victoria,

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Newfoundland, Cuba, Jamaica, Haiti

7 Rivers--Mississippi, Missouri, St. Lawrence, Mackenzie, Colorado, Hudson, Potomac, Ohio

8 Plateaus-- Columbia Plateau, Colorado Plateau, Mexican Plateau, Canadian Shield.

9 Deserts--Chihuahuan, Colorado, Mojave, Sonoran

### South America

1 Area-- 17,820,770 sq Kms

2 Straits-- Straits of Magellan

3 Mountains-- Andes

4 Highest Point- Aconcagua (6,960 m)

5 Lowest-Point Valdes Penin (-39.9 m)

6 Islands-Galapagos, Falkland, Tierra del Fuego.

7 Rivers--Amazon, Orinoco, Paraguay, Parana, Uruguay



8 Plateaus-- Plateau of Bolivia, Plateau of Equador

9 Deserts-- Atacama, Pantagonia

### Europe

1 Area -- 10,530,750 sq Kms

2 Straits-- Straits of Gibraltar

3 Mountains-- Alps, Pyrenes, Appenines, Dinaric Alps, Carpathians, Transylvanian Mountains, Balkans, Caucasus, Urals

4 Highest Point-- Elbrus (5,663 M.)

5 Lowest Point--Caspian Sea (-28.0 m)

6 Islands--British Isles, Iceland, Sardinia, Sicily, Crete.

7 Rivers--Volga, Danube, Rhine, Po, Dnieper, Don, Vistula, Elbe, Oder, Seine, Loire, Garrone, Douro, Tagus, Ural

8 Plateaus--Plateau of Bohemia, Plateau of Spain, Central Massif

### Australia

1 Area-- 7,830,682 sq Kms

2 Straits-- Bass Strait

3 Mountains-- Great Dividing Range

4 Highest Point-- Kosclusko (2,228 m.)

5 Lowest Point-- Lake Eyre (-15.8 m.)

6 Islands-- Tasmania

7 Plateaus-- Western Plateau

8 Deserts-- Gibson Desert, Great Sandy Desert, Great Victoria Desert, Simpson Desert.

### Important mountain ranges

- Andes -- South America
- Rockies -- North America
- Atlas --- Africa
- Kilimancharo --- Africa
- Appalechian--- America
- Ural ---Europe
- Alps ---Europe
- Karpathyan ---Europe
- Mount Eribus --- Antartica
- Himalayam --- Asia



### LAKES

- Important Lakes
- Superior -- North America
- Ladol --Europe
- Caspian -- Asia
- Victoria --Africa

- Ayar --Australia
- Marakkoiba -- South America
- Vozthok --Antartica
- Azad --Syria
- Nazar --Egypt
- Land of ten thousand lakes --Minazotta
- Land of thousand lakes -- Finland
- Oldest lake, Deepest lake -- Baikkal (Russia)
- Largest Island Lake -- Manitollin
- Largest freshwater lake --Superior
- Largest salt water lake -- Caspian sea
- Largest artificial lake -- Volta (Ghana)

### General Science

#### Newton's first law

- When a car or train starts suddenly, the passengers bends backward.
- When a running horse stops suddenly, the rider bends forward.
- When a coat/blanket is beaten by a stick, the dust particles are removed.

#### Newton's second law

- It is easier for a strong adult to push a full shopping cart than it is for a baby to push the same cart. Also, it is easier for a person to push an empty shopping cart than a full one.
- Train wreck. If a train hits another train of equal force and speed, they will both go the same distance and feel the same force. But if the first train is hooked to a second, the single train will go twice the distance of the double train and will feel twice the force.
- A bowling ball and a marble dropping at the same time.

#### Newton's third law

- When a bullet is fired from a gun with a certain force (action), there is an equal and opposite force exerted on the gun in the backward direction (reaction).

- When a man jumps from a boat to the shore, the boat moves away from him. The force he exerts on the boat (action) is responsible for its motion and his motion to the shore is due to the force of reaction exerted by the boat on him.
- The swimmer pushes the water in the backward direction with a certain force (action) and the water pushes the swimmer in the forward direction with an equal and opposite force (reaction).
- The value of G is  $6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$ .
- The acceleration produced in a body due to force of gravity is called acceleration due to gravity (denoted as g) and its value is  $9.8 \text{ m/s}^2$

### Kepler's laws of planetary motion:

- All planets move around the sun in elliptical orbits, with the sun being at rest at one focus of the orbit
- The position vector of the planet with sun at the origin sweeps out equal area in equal time i.e. The areal velocity of planet around the sun always remains constant.
- Speed of a planet is maximum when it is at perigee and minimum when it is at apogee.
- The orbital speed of a satellite revolving near the surface of earth is  $7.9 \text{ km/s}$ .
- For earth, escape velocity =  $11.2 \text{ km/s}$ .
- For moon, escape velocity =  $2.4 \text{ km/s}$ .



### MAGNETISM

Magnetic Substance : On the basis of magnetic behavior, substances can be divided into three categories.

- Diamagnetic substance: Diamagnetic substances are such substances which when placed in a magnetic field, acquire feeble magnetism opposite to the direction of magnetic field.

**Examples :** Bismuth, Zinc, Copper, Silver, Gold, Diamond, Water, Mercury, Water etc.

- Paramagnetic Substance : Paramagnetic substances are such substances which when placed in a magnetic field acquire a feeble magnetism in the direction of the field.

**Examples :** Aluminum, Platinum, Manganese, Sodium, Oxygen etc.

- Ferromagnetic substance : Ferromagnetic substances are those substance, which when placed in a magnetic field, are strongly magnetized in the direction of field.

**Examples :** Iron, Cobalt, Nickel etc.



### COALS:

- Bituminous : Black, hard, smoky, flame, domestic fuel
- Lignite : High moisture content burns easily, low calorific value.
- Peat : Low grade coal produces less heat & more smoke & ash
- Anthracite : Superior quality, hardest form, high calorific value

### Compounds of metal and non-metal and their uses :

- Ferrous oxide (FeO):In green glass, Ferrous salt.
- Ferric oxide (Fe<sub>2</sub>O<sub>3</sub>) : In electroplating of ornaments and formation of ferric slat
- Ferrous sulphate (FeSO<sub>4</sub>. 7H<sub>2</sub>O) : In dye industry, and Mohr's salt
- Ferric hydroxide [(Fe(OH)<sub>3</sub>] : In laboratory reagent and in making medicines.
- Iodine (I<sub>2</sub>):Antiseptic, In making tincture of iodine.
- Bromine (Br<sub>2</sub>):In dye industry, laboratory reagent
- Chlorine (Cl<sub>2</sub>) :Mustard gas, Bleaching powder.
- Hydrochloric acid (HCl) : In the formation of aquaregiaand dyes
- Sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) : As a reagent ,In purification of petroleum,In lead storage battery.
- Sulphur dioxide (SO<sub>2</sub>) : As oxidants & reductants , bleaching agent
- Hydrogen Sulphides (H<sub>2</sub>S) : In qualitative analysis of basic radical (group separation)
- Sulphur (S) : Antiseptics, vulcanization of rubber, gun powder, medicine.
- Ammonia (NH<sub>3</sub>) : As reagent in ice factory.
- Nitrous oxide (N<sub>2</sub>O) : Laughing gas, Surgery.
- Carbon dioxide (CO<sub>2</sub>) :Soda water, Fire extinguisher.
- Carbon monoxide (CO) : In phosgene gas
- Graphite : As electrodes.
- Diamond : Ornaments, Glass cutting, Rock drilling.
- Alum [K<sub>2</sub>SO<sub>4</sub> Al<sub>2</sub> (SO<sub>4</sub>)<sub>3</sub>. 24 H<sub>2</sub>O] : (i) Purification of water (ii) Leather industry.

### SOME IMPORTANT FACTS ABOUT BIOLOGY

- Many short branched parts called dendrites.
- Father of Biology and Zoology – Aristotle
- Father of Botany – Theophrastus
- Father of Taxonomy – Carolus Linnaeus
- Father of Medicine – Hippocrates

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- Euglena is an organism which exhibits the characteristic of both plants and animals .
- The Cell was firstly invented by an English Scientist Robert Hook in 1665.
- Cell Theory- The cell theory was jointly propounded by a botanist Schleden and a Zoologist Schwan in 1838-1839.
- Lysosome destroys itself in such a process so it is called suicide vesicle (bag) of the cell
- Mitochondria is called Power House of the cell.
- Ribosome is called the factory of protein.
- Chloroplast is called Kitchen of cell.
- The smallest cell is Mycoplasma Gallosepticum, while the largest cell is Ostrich's egg .
- Cell -wall is completely developed and which is composed of cellulose.
- The blue- green algae is a special type of bacteria which are called cyanobacteria.
- Lichen is a micro-organism which co-exist between cyanobacteria and fungi.
- Lichens are the indicators of the air pollution and for the maximum pollution there exist no lichens.
- The algae which appear on the ice are called Cryptophytes,while which appear on the rock are called Lithophytes.
- The Largest banyan tree of Indian Botanical Garden, Shivpur (Howarah)
- Pitcher plant leaves accommodate to trap the insects and modified themselves in the form of bags.
- The metal magnesium is found in the chlorophyll of plant leave and in the nucleus of the chlorophyll the atom of magnesium exists.

### **WORK AND ENERGY**

† Work : In physics work is defined if force applied on object displaces the object in direction of force. We define the

work as Product of the force and displacement in the direction of applied force or Product of displacement and force in the

direction of displacement.

$W = \text{Force} \times \text{displacement}$

† Unit of Work : The SI unit of force is a newton and the unit of length is a metre (m). So the SI unit of work is newtonmeter

which is written as Nm. This unit (Nm) is also called joule (J), i.e. 1 joule = 1 newton . 1 metre

Abbreviated, this is  $1 \text{ J} = 1 \text{ Nm}$

When a force of 1 newton moves a body through a distance of 1 metre in its own direction the work done is 1 Joule.

† Energy : Anything which has the capacity to do work is said to possess energy. This implies that work can be done only at the expense (cost) of energy i.e., to do work, we need to spend energy, whatsoever be its form.

Unit of Energy : Same as that of work i.e., Joules(J) Relation between kinetic energy and momentum:

$$p = 2mk$$

where  $p$  = momentum,  $k$  = kinetic energy,  $m$  = mass

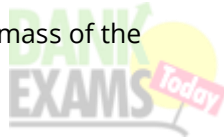
(i) For same momentum :

K-energy varies inversely as the mass  $K \propto \frac{1}{m}$

(ii) For same K-energy

Momentum varies directly as the square root of mass of the

body.  $p \propto \sqrt{m}$



† Power : The time rate of doing work is defined as power (P).

If equal works are done in different times, power will be different. More quickly work is done, power will be more.

† Unit of Power : The unit of power is the joule per second and this is called the watt (W). When large amounts of power

are involved, a more convenient unit is the kilowatt (kW)

where  $1 \text{ kW} = 1000 \text{ W}$ .

1 Megawatt =  $10^6$  watt

Power was also measured earlier in a unit called horse power.

Even these days, the unit of horse power is in common use.

1 horse power = 746 watt

The unit kilowatt-hour means one kilowatt of power supplied for one hour. It is, therefore, the unit of energy.

$$1 \text{ KWh} = (1000 \text{ J/s}) \times 60 \times 60\text{s} = 3.6 \times 10^6 \text{ J}$$

### **MORE ABOUT SOLID, LIQUID AND GASES**

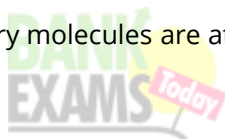
† Surface Tension : A molecule of the liquid near the surface is attracted by fewer molecules of the liquid (there is only

air on one side) than molecule deep inside. Therefore, the molecule of the free surface has less attractive force than the deeper one, and so it is energetically unfavourable for a liquid to have a surface. This property of liquid surface is

called surface tension.

† When the water touches the glass, it 'rises up' the glass surface then forms a concave meniscus.

† Mercury behaves in a different manner. Mercury molecules are attracted more strongly to other mercury molecules than



they are attracted to glass molecules. Here, the cohesive force is stronger than adhesive force. That is why, when mercury touches the glass surface, it 'rises down' the glass forming a convex meniscus.

† Pascal Law : When pressure is applied to an enclosed fluid, it is transmitted equally to all parts of the fluid. This is called Pascal's law. Pascal's law holds, both for liquid and gases.

† Buoyancy : Every liquid exerts an upwards force on objects immersed in it. This upward force is called Buoyant force and this phenomenon is called Buoyancy.

† Archimedes' Principle states that the buoyant force is equal to the weight of this displaced liquid. The buoyant force

exerted by a liquid, therefore, depends on the volume of the object immersed on it.

† When a body is wholly or partially immersed in a liquid, there is apparent loss in weight of the body, which is equal to the weight of the displaced liquid by the body. The rise or depression of liquids in small diameter tubes is called capillarity.

† The faster the air, the lower the pressure.

### **REFRACTION**

- Whenever a wave is bounced back into same medium at an interface reflection is said to have occurred. Transmission of a wave into the second medium at an interface is called refraction.
- Twinkling of stars, appearance of sun before actual sunrise and after actual sunset etc. are due to atmospheric refraction.

† Rainbow : Rainbows are generated through refraction and reflection of light in small rain drops. The sun is always behind you when you face a rainbow, and that the center of the circular arc of the rainbow is in the direction opposite to that of the sun. The rain, of course, is in the direction of the rainbow i.e. rain drops must be ahead of you and the angle between your line-of-sight and the sunlight will be  $40^\circ - 42^\circ$ .

† Moon is seen red during total lunar eclipse

Solar radiation will be refracted when passing through the earth's atmosphere. Therefore part of the sunlight can still reach the shadow of the earth. Besides, the earth atmosphere scatters most of the blue light , so there will be more red light reaching the moon. The red light will be reflected back to earth. That is the reason why you can see a red moon rather than total darkness.

### **ELECTRICITY**

† The electrical devices we encounter most often in modern life such as computers, lights and telephones involve moving charges which we call electric currents.

† Electric Current : We define the electric current, or simply the current, to be the net amount of positive charge passing per unit time across any section through the conductor in the sense from the positive toward the negative terminal.

† The SI unit of current is the ampere (A), where  $1\text{A} = 1\text{ C/s}$  that is, 1A of current is equivalent to 1C of charge passing through the surface in 1s. In practice, smaller units of current are often used, such as the milliampere ( $1\text{mA} = 10^{-3}\text{ A}$ ) and the microampere ( $1\mu\text{A} = 10^{-6}\text{ A}$ )

### **METAL & NON-METAL**

1. All the materials found in the earth's crust are made up of chemical elements.

2. All these elements can be broadly divided into two classes: Metals and Non-metals

**Note :** Out of 117 elements 83 are naturally occurring. Out of total 117 elements about 24 are non-metals and rest are metals.

### 3. Physical Properties of Metals

- Metals, in their pure state, possess a shining surface (metallic lustre). Freshly cut metals have a bright metallic lustre.
- Metals are solid at room temperature. Mercury is the only metal that is liquid at room temperature.
- Metals are generally hard and strong. But metals like sodium and potassium are exceptionally very soft and can be cut with a knife.
- Metals have high melting and boiling points. Sodium, potassium, gallium and mercury have low melting and boiling points.
- Metals are good conductors of heat. Silver, followed by copper and aluminium, is the best conductor of heat. These days, cooking vessels and other utensils are made up of copper and aluminium.
- Metals are also good conductors of electricity. Silver, followed by copper, gold and aluminium, is the best conductor of electricity. Copper and aluminium are used for making electrical wires.
- Metals are sonorous. They make a ringing sound when struck.
- Metals are usually malleable. They can be hammered into thin sheets and rolled into different shapes without breaking. Gold and silver are the most malleable metals.
- Metals are generally ductile. They can be easily drawn into wires. Gold and silver are most ductile metals. Copper wires are used for electrical purposes.
- Metals have high tensile strength, i.e. they can hold heavy loads without breaking.
- Metals have high densities i.e. they are heavy in nature. Sodium and potassium metals are exceptions as they have low densities and float on water.

4. Corrosion is the process of slowly eating away of metal due to attack of atmospheric gases and water on the surface of metal. The most common example of corrosion is the rusting of iron.

### SOAPS AND DETERGENTS

#### Soaps

- Sodium or potassium salts of long chain fatty acids, e.g., stearicoleic and palmitic acids. Soaps containing sodium salts are formed
- by heating fat (*i.e.*, glyceryl ester of fatty acid) with aqueous sodium hydroxide solution. This process is called saponification.
- Soaps do not work in hard water. Hard water contains  $\text{Ca}^{+2}$  and  $\text{Mg}^{+2}$  ions. These ions form insoluble calcium and magnesium soaps respectively when sodium or potassium soaps are dissolved in hard water. These insoluble soaps separate as scum in water and are useless as cleansing agent.

#### Synthetic Detergents

Sodium salts of alkylbenzene sulphonic acids. They are better cleansing agents than soap. These are of three types:

(a) Anion detergents are those detergent which contain large part of anion.

(i) For preparing anionic detergent, long chain alcohols are first treated with concentrated  $\text{H}_2\text{S}$ , giving alkyl hydrogen sulphates. These are neutralized with alkali to give anionic detergent.

(ii) They are also effective in slightly acidic solutions. In acidic solution, they form alkyl hydrogen sulphate which is soluble in water whereas soaps form insoluble fatty acids.

(b) Cationic detergents are mostly acetates or chlorides of quaternary amines. These detergents have germicidal properties and are extensively used as germicides.

(c) Non-ionic detergents are esters of high molecular mass.

### LIST OF SCIENTIFIC INSTRUMENT

1. An instrument used in aircrafts for measuring altitudes is called - Altimeter

2. An instrument used to measure the strength of an electric current is called - Ammeter

3. An instrument to measure the speed, direction and pressure of the wind is called- Anemometer

4. An instrument used to measure difference in hearing is called - Audiometer
5. An instrument to measure atmospheric pressure and conditions is called - Barometer
6. An instrument used to measure potential difference between two points is called - Voltmeter
7. An optical instrument used for magnified view of distant objects is called-Binoculars
8. An instrument used to measure the diameters of wire, tube or rod is called-Callipers
9. An instrument used to measure quantities of Heat is called - Calorimeter
10. An apparatus used for charging air with petrol vapours in an internal combustion engine is called – Carburettor
11. An instrument used for measuring the temperature of the human body is called-Thermometer
12. A device which converts mechanical energy into electrical energy is called- Dynamo
13. An instrument used for measuring electrical potential differences is called- Electrometer
14. An instrument used for detecting the presence of electric charge is called- Electroscopes
15. An instrument used for measuring Electric Current is called - Galvanometer
16. An instrument used for measuring depth of the ocean is called - Fathometer
17. An instrument used for relative density of liquids is called - Hydrometer
18. An instrument used for relative density of milk is called - Lactometer
19. An instrument used for magnified view of very small objects is called - Microscope
20. An apparatus used in submarines for viewing objects lying above the eye level of the observer is called - Periscope
21. An instrument used for comparing the luminous intensity of two sources of light is Called - Photometer
22. An instrument used to measure high temperature is called - Pyrometer
23. An instrument used to measure Rainfall is called - Rain Gauge
24. An instrument used for recording the intensity and origin of earthquakes shocks is called – Siesmograph



25. An instrument used for measuring angular distance between two objects is called - Sextant
26. An instrument used for measuring speed of the vehicle is called - Speedometer
27. An apparatus used for converting high voltage to low and vice-versa is called- Transformer
28. An instrument that continuously records a barometer's reading of atmospheric pressure. - Barograph
29. An instrument used to measure infrared, or heat, radiation. - Bolometer
30. An instrument used for measuring growth in plants.- Crescograph
31. An instrument used for tracing movement of heart.-Cardiograph
32. A clock that keeps very accurate time and determines longitude of a vessel at sea. - Chronometer
33. An instrument used to examine internal parts of the body. - Endoscope
34. A glass tube for measuring volumes changes in the chemical reactions between gases -Eudiometer
35. A machine for reproducing recorded sound. - Gramophone
36. An instrument used to measure the moisture content or the humidity of air or any gas. - Hygrometer
37. A microphone designed to be used underwater for recording or listening to underwater sound.- Hydrophone
38. A device used to measure atmospheric pressure - Manometer
39. A device which converts sound waves into electrical signals. - Microphone
40. An instrument attached to the wheel of a vehicle, to measure the distance traversed. - Odometer
41. An instrument used for reproducing sound.-Phonograph
42. An instrument used for measuring Solar radiation is called - Pyrheliometer
43. An instrument used for taking angular measurements of altitude in astronomy and navigation is called - Quadrant
44. An instrument for measuring a Refractive Index of a substance is called - Refractometer
45. An instrument used for Spectrum analysis is called- Spectroscope

46. An instrument for measuring blood pressure is called - Sphygmomanometer

47. An instrument for measuring and indicating temperature is called - Thermometer

48. A medical instrument used for hearing and analysing the sound of Heart is called - Stethoscope

### Vitamins and Minerals

**Balance Diet:-** It means a diet which contains right amount and types of foods and drink to provide essential nutrients and energy required for proper development of the body cells, tissue and organs. Balance diet should contain right amount of vitamins and minerals for overall development of the body.

**Vitamins:** Vitamins are organic compounds required in small quantities for optimal health. It enhances the metabolism of proteins, carbohydrates and fats. Vitamins are required for growth in children, formation of hormones, blood cells, tissues and bones. Vitamins cannot be synthesised/produced by the human body, thus, our diet must contain vitamins.

### Important Scientific Laws and Theories:

1. Archimede's principle - It states that a body when wholly or partially immersed in a liquid, experiences an upward thrust which is equal to the weight of the liquid displaced by it. Thus, the body appears to lose a part of its weight. This loss in weight is equal to the weight of the liquid displaced by the body.

2. Aufbau principle - It states that in an unexcited atom, electrons reside in the lowest energy orbitals available to them.

3. Avogadro's Law - It states that equal volumes of all gases under similar conditions of temperature and pressure contain equal number of molecules.

4. Brownian motion - It is a zigzag, irregular motion exhibited by small solid particles when suspended in a liquid or gas due to irregular bombardment by the liquid or gas molecules.

5. Bernoulli's principle - It states that as the speed of a moving fluid, liquid or gas, increases, the pressure within the fluid decreases. The aerodynamic lift on the wing of an aeroplane is also explained in part by this principle.

6. Boyles's Law - It states that temperature remaining constant, volume of a given mass of a gas varies inversely with the pressure of the gas. Thus,

$PV = K$  (constant), where, P = Pressure and V = Volume.

7. Charles's Law - It states that pressure remaining constant, the volume of a given mass of gas increases or decreases by  $\frac{1}{273}$  part of its volume at 0 degree celsius for each degree celsius rise or fall of its temperature.
8. Coulomb's Law - It states that force of attraction or repulsion between two charges is proportional to the amount of charge on both charges and inversely proportional to the square of the distance between them.
9. Heisenberg principle (uncertainty principle) - It is impossible to determine with accuracy both the position and the momentum of a particle such as electron simultaneously.
10. Gay-Lussac's Law of combining volumes - Gases react together in volumes which bear simple whole number ratios to one another and also to the volumes of the products, if gaseous — all the volumes being measured under similar conditions of temperature and pressure.
11. Graham's Law of Diffusion - It states that the rates of diffusion of gases are inversely proportional to the square roots of their densities under similar conditions of temperature and pressure.

### CURRENT AFFAIRS

- Railway Minister Suresh Prabhu announced "Lifeline Express is all set to get 2 additional coaches for cancer treatment".
- The India-Russia Indra NAVY-2016 naval exercise held in the city of Visakhapatnam and in the Bay of Bengal.
- Dr BR Ambedkar's birth anniversary to be observed on Water Day.
- Vijaya Bank has been adjudged 'Best Bank for SME Lending' by ASSOCHAM.
- Reserve Bank of India keeps rates unchanged in its 5th Bi-monthly monetary policy.
- US President elect Donald Trump named as Time Magazine's Person of the Year 2016
- US President elect Donald Trump appoints ex-CEO of WWW Linda McMahon to head the government's small business Admin.
- US President-elect Donald Trump appoints oil giant Exxon Mobil's CEO Rex Tillerson as the next Secretary of State
- Shah Rukh Khan named as "Kids Ikon of the Year"
- Justice JS Khehar to be the next Chief Justice of India
- Justice Mian Saqib Nisar appointed as next Chief Justice of Pakistan
- Chief Minister of West Bengal forms anti-child trafficking panel
- "Mahila E-haat" ties up with India Post and SBI for more payment options to buyers.
- IOC, BPCL, HPCL has signed a pact to set up India's biggest oil refinery

## GK Digest for RRB NTPC 2017

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- Bharat Earth Movers Limited Ltd (BEML) has bagged the 'CII National Quality 2016 Award'.
- French Capital Paris has successfully implemented an odd even formula to tackle air pollution.
- Union Government Gives approval of 31.25 KM Pune Metro Rail Project at the total costs of Rs.11,420 Cr.
- Venezuela to launch a New Currency of 20,000 bolivar banknotes to help during country's economic crisis.
- ISRO launched Remote sensing satellite Resourcesat-2A into the orbit by using PSLV-C36 from Satish Dhawan Space Center in Sriharikota.
- Union Government announces package for promotion of digital & cashless economy in India with a discount of 0.75% on purchase of Petrol/Diesel through ATM Cards
- Uttarakhand Banned liquor in 3 districts i.e. Uttarkashi, Rudraprayag, Chamoli.
- The World Bank has cancelled \$100 million (Rs.674 crore) loan to Pakistan for natural gas efficiency project.
- Union Government scrapped its 10% import duty on wheat.
- The Food Safety and Standards Authority of India (FSSAI) bans use of newspapers for packing foods
- Bluetooth-5 came up with double speed and four times longer range
- Japan Launched a spaceship "Magnetic Fishing Net" to collect space garbage from Earth's orbit out into the atmosphere.
- India and Vietnam signed MoU on Civil nuclear cooperation deal.
- India's Rank 7th among 163 countries in Global Terrorism Index 2016. Iraq Topped in this List followed by Afghanistan.
- Ranveer part of Men Of The Year list by Man's World magazine
- Union Government decides to print plastic currency notes
- Union Gov. launched a 24hours free Tv channel "Digi Shala" for cashless economy.
- Anandeshwar Temple in Kanpur adopts e-wallets for donation.
- Union Gov. launched Toll Free No. 14444 for e-payment to support cashless transactions.
- Iqbal Sayed(Civil Engineer) from Mumbai becomes 1st Indian to win medal at Mr. Olympia
- 57 Km Long World Longest Tunnel i.e. Gotthard Base Tunnel (GBT) officially opened in Switzerland.
- "Paolo Gentiloni" appointed as new Italian Prime Minister
- President launched a campaign '100 Million for 100 Million Campaign', on his 81st birthday, to end child labour, child slavery and violence against children.
- Narmada Sewa Yatra begins from Amarkantak from where the River Originates is aimed at making the Narmada, the lifeline of MP to become pollution free.
- The "Ryan Gosling" and "Emma Stone" starrer 'La La Land' has won the 'Best Picture' at 22nd Critics' Choice Award

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- "Casey Affleck" has won "Best Actor" award at 22nd Critics' Choice Award for 'Manchester by the Sea'.
- "Natalie Portman" has won "Best Actress" award at 22nd Critics' Choice Award for 'Jackie'.
- "Game of Thrones" has won the award for 'Best Drama Series' at 22nd Critics' Choice Award.
- "Varun Aditya" from Indian has won first place for 'Animal Portraits' by National Geography.
- EU & Cuba MoU on political dialogue and cooperation.
- Cristiano Ronaldo named world's best footballer of 2016 after winning the Ballon d'Or award.
- An mobile app on breastfeeding protection called "Stanpan Suraksha" launched.
- English as the most powerful language followed by Mandarin by WEF.
- IDFC Bank appoints Veena Mankar as Non-Executive Chairperson.
- Harry Potter tops Amazon's best-selling books of 2016.
- John Glenn, first American in orbit, dies at 95.
- Bill English appointed as New-Zealand's Prime Minister
- Pankaj Advani clinches World Billiards Title at IBSF World Billiards Championship.
- António Guterres sworn in as the 9th UN Secretary-General.
- India-UK Conference on Ease of Doing Business inaugurated in Delhi.
- Michael Jordan highest-paid athlete according to Forbes Lists.
- Google parent Alphabet named company of the year by Fortune
- PR Sreejesh Appointed as Goalkeeping Mentor of Indian Junior Hockey Team.
- Pakistan Lifts Undeclared Ban on Import of Ginned Cotton from India.
- Akbar Ebrahim elected as the president of the Federation of Motor Sports Clubs of India
- India becomes world's 4th largest defence spender
- Priyanka Chopra appointed as UNICEF Global Goodwill Ambassador
- Facebook CEO Mark Zuckerberg named America's Richest Entrepreneur under 40
- Gujarat tops list of states in LED bulb distribution
- Malaysia enthrones new King "Sultan Muhammad V" (15th King) in Kuala Lumpur.
- Yes Bank tied-up with grocery delivery startup Grofers to deliver up to Rs. 2,000 cash to customers when they order grocery worth minimum Rs. 1,000 online.
- Smriti Mandhana named as the first-ever ICC Women's Team of the Year
- Olympian Shiva Thapa wins gold in national boxing c'ships.
- Two Banks of Abu Dhabi i.e. FGB and NBAD to Merge as the Biggest Bank in Gulf Nation
- Himachal Pradesh becomes the 18th Indian State to join UDAY SCHEME.
- Suresh Prabhakar Prabhu has launched a website of National Rail Plan, 2030 (NRP-2030)

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- Union govt ties up with Intel for water, air quality monitoring systems.
- L&T bags the contract of Sardar Patel Stadium in Gujarat to become the world's biggest cricket stadium in terms of seating capacity.
- PV Sindhu wins Most Improved Player of the Year award
- Goggle CEO "Larry Page" named world's most powerful CEO in Forbes Lists.
- Russian President Vladimir Putin named World's Most Powerful Person in Forbes Lists.
- Dipa Karmakar's biography to be co-authored by her coach Bishweshwar Nandi.
- China launches advanced weather satellite Fengyun-4.
- Gov. of Uttar Pradesh and Tata Trust Ties to Strengthen Public Distribution System.
- First India China Think-Tanks Forum held in New Delhi.
- Virat Kohli Becomes First Indian Captain To Score Three Double Centuries.
- Goa can have only one official language i.e. "Konkani".
- India has topped Asia in innovation and has emerged as the third biggest country worldwide in terms of new innovation centres, according to research by consulting firm Capgemini.
- AR Rahman's soundtrack for footballer Pele's biopic 'Pele: Birth of a Legend' shortlist for 'Best Original Score' By Oscar 2017.
- Mumbai teacher nominated for Global Teacher Prize 2017 in UK
- Shahid Kapoor & Sonam Kapoor named PETA's hottest vegetarians of 2016
- Saina Nehwal named an 'Integrity Ambassador' by the Badminton World Federation to promote "clean, fair and honourable sport."
- Miss Puerto Rico crowned Miss World 2016.
- Justice JS Khehar to be the 1st Sikh Chief Justice of India.
- Bipin Rawat named new Army chief, Air Marshal Birender Singh Dhanoa new IAF head.
- Rajiv Jain to be new Intelligence Bureau chief, Anil Dhasmana to head RAW.
- Punit Goenka honoured with Business Today 'Best CEO Award'.
- Barcelona's Lionel Messi to be awarded as 2016's FIFA Best Player of the Year award.
- China bans sharing user-generated content on social media.
- China launched a global carbon dioxide monitoring satellite to understand climate change.
- Japan successfully launches solid fuel rocket "Epsilon-2"
- Bangalore based Team Indus and Japan's Hakuto combine for Moon mission
- Dictionary Merriam-Webster has named "surreal" as its word of the year.
- The world's first solar road opens in France.

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- Google in collaboration with Railtel Completes The Target Of 100 Free WiFi Railway Stations, Newest One In Ooty.
- Mary Kom and Vikas Krishan to get awards at AIBA 70th anniversary for their extra ordinary performance.
- Girija Vaidyanathan's appointment as new chief secretary of Tamil Nadu.
- Delhi named India's most well-read city of 2016 by Amazon.
- PM Narendra Modi Will Lay Foundation For Rs. 3,600 Crore Shivaji Memorial in the Arabian Sea off Mumbai coast.
- The Punjab government has finally notified the "Sunam's railway station" to be named after martyr Udham Singh.
- Ravichandran Ashwin named ICC Cricketer of the Year.
- Virat Kohli named captain of ICC ODI Team of the Year.
- Misbah-Ul-Haq wins ICC Spirit of Cricket Award.
- South Africa's de Kock named ICC ODI Cricketer of the Year.
- Argentina win FIFA Team of the Year title.
- Jeje Lalpekhlua was named 2016's AIFF Player of the Year.
- Sunny Leone to receive PETA's Person of the Year award.
- Indian wins gold medal at "Asian Luge Championships" held in Japan.
- American Tourister appoints Kohli as its brand ambassador.
- Roger Federer named 2016's 'Most Stylish Man' by GQ, a leading men's magazine.
- Sangita Kumari clinch bronze medal at fourth Women's Under-18 Asia Cup hockey tournament.
- The Indian Under-19 cricket team clinched U-19 Asia Cup Title defeating Srilanka.
- National Mathematics Day celebrated on December 22 to pay tribute to S Ramanujan and celebrate his birth anniversary.
- Union Minister Venkaiah Naidu launches Google Toilet Locator app as part of the 'Swachh Bharat Abhiyan' to help people locate the nearest toilet.
- Kochi's Sahaj International School will become India's first transgender school.
- Mumbai airport first in India to introduce self bag-drop facility.
- Bharatanatyam guru K. Kalyana Sundaram receives Nadhabrahmam title award.
- V K Sharma appointed as Chief of LIC for 5 years.
- Saurabh Varma appointed as CEO of Publicis Communications' India.
- Founder of Sulabh International, Bindeshwar Pathak, has been nominated as a Member of the Central Authority of National Legal Services Authority (NALSA).

## GK Digest for RRB NTPC 2017

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- Himachal Pradesh 6th state to attain 100% Aadhaar coverage.
- "The Rights of Persons with Disabilities Bill - 2016" passed by Parliament of India.
- Pradhan Mantri Garib Kalyan Yojana comes into effect from 17 December 2016 to notified along with other provisions of Taxation Laws.
- RBI lowers charges on debit card payments to promote digital transactions by 0.25% to Maximum of 1%.
- India crowned "Junior Hockey World champions" in Lucknow defeating Belgium.
- India, Tajikistan sign four agreement to limit terror-funding.
- "Henry Heimlich" the Developer of life saving technique dies.
- The island of Bali named most popular year-end destination in Asia.
- India's first Beer Mile festival to be held in Bengaluru.
- Jodhpur listed in top 10 preferred tourist places for 2017 according to 'TripAdvisor Travellers' Choice Awards for Destinations on the Rise'.
- The 42nd annual cake show organised by the National Consumer Fair began in Bengaluru.
- 5th edition of India's "International Clown Festival" begins at Mumbai, Hyderabad, Bengaluru and Vadodara.
- Real Madrid crowned Club World Cup champions.
- Priyanka Chopra has been ranked 55th on IMDb's most popular celebrities' list.
- Priyanka chosen as Assam's tourism ambassador for 2 years
- Priyanka 1st Indian to be chosen as Pantene's global ambassador.
- Paris opens 'world's largest non-permanent indoor ice rink'.
- Indian boxer Vijender Singh retained his WBO Super Middleweight Asia-Pacific title.
- Union minister for Textiles Smriti Irani is set to launch India's second centre of excellence for sericulture in Bengaluru. First center at Ranchi.
- The Centre has selected 3 states namely Amritsar, Ludhiana and Jalandhar for launching the 'Lucky Grahak Yojana' and 'Digi Dhan Vyapar Yojana' to promote digital payments in Punjab.
- India's boxing fed gets permanent membership in world.
- Govt launches GARV-II app for tracking rural electrification on real time basis.
- SBI launches digital wallet "MobiCash" in alliance with BSNL
- ANDY MURRAY named as BBC Sports Personality of the Year awards 2016.
- Mumbai's Elphinstone Road station to be renamed as "Prabhadevi".
- Bollywood actor Govinda inaugurated the Jaipur Wax Museum at Nahargarh Fort.
- Maharashtra forest department will launch a state-wide call centre facility 24x7. Toll Free No.1926.



## GK Digest for RRB NTPC 2017

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- India's First Nepali transgender model to walk the ramp at Lakmé Fashion Week.
- Kapil Sharma ranked 11th in Forbes India Celebrity 100 list.
- Salman Khan tops 2016 Forbes India Celebrity 100 List.
- India appointed "Vijay Sazawal's" to Civil Nuclear Trade Advisory Committee Head.
- UK (Britain) becomes first country to approve three-parent babies.
- Oracle CEO Safra Catz joins Trump's advisory team.
- Gujarat-born activist Jayaben Desai has been included in BBC's most influential women of the past 70 years list.
- NITI Aayog announces daily, weekly, and mega-awards on digital transactions to promote cashless payments.
- Card Manufacturer "Hyundai India" wins Indian Manufacturer of the Year award.
- New Zealand women's team captain Suzie Bates became the first female cricketer to win both ICC's ODI and T20I Player of the Year awards.
- UP Chief Minister Akhilesh Yadav laid the foundation stone of the 15-km-long metro link from Noida's Sector 71 to Greater Noida's Knowledge Park-V.
- US President-elect Donald Trump has picked Peter Navarro, economist and author of 'Death by China', to head the newly-formed White House National Trade Council.

