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Objective GENERAL STUDIES

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Objective GENERAL STUDIES

PART - 1

History

History

01

The history of India includes the prehistoric settlements and societies in the Indian subcontinent; the advancement of civilisation from the Indus Valley Civilisation to the eventual blending of the Indo-Aryan culture, to form the Vedic Civilisation. The rise of Hinduism, Jainism and Buddhism, the onset of succession of powerful dynasties and empires for more than three millennia throughout various geographical areas of the Indian subcontinent, including the growth of Muslim dominions during the Medieval period intertwined with Hindu powers, the advent of European traders and privateers, resulting in the establishment of British rule in India and the subsequent independence movement that led to Partition of India and the creation of the Republic of India.

THE PRE HISTORIC PERIOD

The pre-historic period in the history of mankind can be roughly dated from 20000 BC to 2500 BC, when the first civilisations began to take shape.

The age when the pre-historic man began to use stones for utilitarian purpose is termed as the Stone Age. The Stone Age is divided into the following broad divisions based on the specialization of stone tools made at that time.

CHALCOLITHIC PHASE (1800 BC-1000 BC)

Also known as the eneolithic period, this period saw the use of copper and bronze to make utilitarian tools Chalcolithic cultures extended from chotanagpur plateau to upper Gangetic basin.

Period	**Age**		
	Paleolithic (Old Stone Age)	**Mesolithic (Middle Stone Age)**	**Neolithic (New Stone Age)**
	Unknown - 8000 BC	**8000 BC-4000 BC**	**4000 BC-2500 BC**
FEATURES OF TOOLS	• Rough	• Stone tools were sharp and pointed.	• Small stone tools which were finely flaked and were known as blades and burins.
	• Crude tools made by flaking sides of a stone with a heavier stone.	• Stone tools attached to thick branches and tied with rope made of animal skin.	• They had smooth surface and cutting edges.
HIGH-LIGHTS	• Humans had come to make and use fire.	• Bhimbetka caves near Bhopal famous for cave paintings belong to this age.	• This age saw domestication of cattle farm animals. Which were used for dairy and meat products.
			• Important invention was making of wheel.

- Polygamy was prevalent among the royal and noble families. There was no child marriage and the practice of sati was absent.
- Women were given equal opportunities as men for their spiritual and intellectual development.
- There were women poets like Apala, Viswavara, Ghosa and Lopamudra during the Rig Vedic period. Women could even attend the popular assemblies.
- Wheat and Barley, milk and its products like curd and ghee, vegetables and fruits were the chief articles of food.
- The staple crop was 'yava', which meant Barley.
- Chariot racing, horse racing, dicing, music and dance were the favourite pastimes.
- Gradually, the tribal society got divided into three groups warriors, priests and commoners. Later, the fourth division called dasas or shudra was also added.
- The fourth division appeared towards the end of the Rig Vedic period because it is mentioned for the first time in the tenth book of the Rig Veda.
- The term varna was used for color, the Aryans being fair and the dasas being dark.

Economic Condition

- The Aryans came to India as semi-nomadic people with a mixed pastoral and agricultural economy, in which cattle-rearing played an important role.
- The cow was, in fact, a sort of currency and values were reckoned in heads of cattle.
- Importance of the cow can be measured from the fact that many early linguistic expressions were associated with cattle.
- The cow is described in one or two places in Rigveda as 'aghnya', not to be killed; but this may imply only its economic importance.
- Whenever gifts were given to priests, it was in terms of cows and never in terms of measurement of land.
- Gavyuti was used as a measure of distance and Godhuli, as a measure of time.
- Of the other animals reared by the Aryans, the horse was the most important of them.
- Among other domestic animals, the early Aryans knew goat and sheep which provided wool, their chief textile.

LATER VEDIC AGE

- The Aryans further moved towards east in the Later Vedic Period.
- The Satapatha Brahmana refers to the expansion of Aryans to the eastern Gangetic plains.
- Kuru and Panchala kingdoms flourished in the beginning.
- After the fall of Kurus and Panchalas, other kingdoms like Kosala, Kasi and Videha came into prominence.
- The later Vedic texts also refer to the three divisions of India – Aryavarta (northern India), Madhyadesa (central India) and Dakshinapatha (southern India).

Geographical Expansion

- The later Vedic works show a wider knowledge of Indian geography that is found in the Rigveda.
- They mention the 'two seas' – the Arabian Sea and the Indian Ocean.
- Several Himalayan peaks are also mentioned.
- The Vindhya mountains indirectly referred in the text and archaeology, shows that the Aryans expanded from Punjab over the whole of Western Uttar Pradesh covered by the Ganga – Yamuna doab and even to the borders of Bengal in the east.
- The Aryans cleared the land mainly by means of fire.
- Burning may have been supplemented by the use of the iron axe for cutting the forests in some areas towards the end of the Vedic period when this metal is referred to as Shyama Ayas (dark or black metal).

Society

- Male ancestor worship began to be practiced and the position of women started to decline.
- They could not attend the Sabha and were excluded from immolation by the widow at the death of her husband. Inheritance right were taken.
- A reference to self-immolate, the origin of the later practice of Sati, may be traced to this period. But it is certain that this practice did not prevail on any considerable scale.
- Brahmanas claimed both social and political privileges.
- With the emergence of caste system certain social norms developed.
- Marriage between the members of the same Gotra was not permitted.

- The term 'Gotra' first appeared in Rigaveda with the meaning of 'a clan'. Later, it came to signify descent from a common ancestor. Gotra was primarily a Brahmanical institution adopted rather half-heartedly by other twice-born classes and hardly affecting the lower orders.
- Marriage monogamy remained the general rule. Eight types of marriages were listed for the first time.

Brahma	Marriage of a girl with the boy of the same Varna with Vedic rite and rituals.
Daiva	The father gives a daughter to a sacrificial priest as a part of Dakshina.
Arsha	A token bride price of a cow and a bull is given in the place of dowry.
Prajapatya	The father gives the girl without dowry and without demanding bride price.
Gandharva	Marriage by the consent of the two parties (love marriage).
Asura	Marriage in which the bride was bought from her father.
Rakshasha	Marriage by capture, practiced especially by warriors.
Paishacha	Marriage by seduction.

Polity

- The material and social developments of the later vedic age were amply reflected in the contemporary political system.
- The expression like 'kingdom for ten generations' suggests strengthening of hereditary succession of the king with increasing royal power.
- Formation of wider territory-based kingdoms increased the royal power. Sabha and Samiti lost its importance and Vidatha completely disappeared.
- The king's influence was strengthened by the rituals like Rajasuya, Ashvamedha, Vajepeya, etc.
- A rudimentary taxation system began with 'Sangrahitri' as treasurer of taxes and 'Bhagaduha' as tax collector.

Imp Ratnas/Officials in Later Vedic Period

Purohita	Chief Priest, also sometimes referred to as Rashtragopa
Senani	Supreme commander of army
Vrajapati	Officer-in-Charge of pasture land
Jivagribha	Police Officer
Spasas/Dutas	Spies who sometimes worked as messengers
Gramini	Head of the village
Kulapati	Head of the family
Madhyamasi	Mediator on disputes
Bhagaduha	Revenue collector
Sangrahitr	Treasurer of taxes
Mahishi	Chief Queen
Suta	Charioteer and court ministerial
Govikartana	Keeper of games and forests
Palagala	Messenger
Kshatri	Chamberlain
Akshavapa	Accountant
Athapati	Chief Justice

Economy

- With the discovery of iron, agriculture became the chief means of livelihood, but largely remained primitive.
- People continued to produce barley, but, rice and wheat became their chief crop.
- Rice was called 'Vrihi' and its use was recommended in rituals.
- The term for wheat was 'Godhume'.
- Plough became large and heavy and sometimes required as many as 24 oxen to draw it. Manure was known.
- In this period, the Vaishyas engaged in trade. Reference to moneylending first occurred in the Shatapatha Brahmana, which describes a user as 'Kusidin', though definite evidence of the use of money is wanting.
- The term 'Niska' occurring in contemporary literature has often been taken as coin. But so far no actual specimen of the coins of the vedic period have come to light.
- Bali, Sulka, Bhaga were the main heads of taxation to be paid to the king.

- Knowledge of metals advanced, in addition to gold and ayas.

THE VEDAS

The Rig-Veda

- "Knowledge of the Hymns of Praise", for recitation.
- The most important and, according to scholars, oldest of the Vedas.
- It is divided into ten books (called mandalas) and has 1028 hymns in praise of various deities.
- These include Indra, Agni, Vishnu, Rudra, Varuna, and other early 'Vedic gods'.
- It also contains the famous Gayatri mantra and the prayer called the Purusha Shukta (the story of Primal Man).

The Yajur-Veda

- "Knowledge of the Melodies", for chanting
- The Yajur-Veda is divided into the 'Shukl and Krishna' Yajur-Veda and contains explanatory prose commentaries on how to perform religious rituals and sacrifices.

Sama-Veda

- "Knowledge of the Sacrificial formulas", for liturgy.
- The Sama-Veda has verses that are almost entirely from the Rig-Veda, but are arranged in a different way since they are meant to be chanted.

Atharva-Veda

- "Knowledge of the Magic formulas", named after a kind of group of priests.
- The Atharva-Veda contains charms and magical incantations and has a more folkloristic style.

Each Veda consists of four parts

- The Samhitas – literary "collections," in this case of hymns and mantras. They form the proper veda.
- The Brahmanas – prose manuals of rituals and prayers for the guiding priests. They tend to explain the Samhitas. They also contain early versions of some stories.
- The Aranyakas – literary "forest books" for hermits and saints. They are philosophical treatises.
- The Upanishads – books on philosophy, also called "Vedanta," the end or conclusion of the Vedas.

SIX SYSTEMS OF PHILOSOPHY

Nyaya Darshan	Gautam
Vaisesika	Kanada
Sankhya (Enumeration)	Kapil
Yoga (Application)	Patanjali
Purva Mimamsa (Enquiry)	Jaimini
Uttar Mimamsa (Vedanta)	Badarayana

In the narrowest of senses, only the Samhitas comprise the true Vedas. The first two divisions relate to the performance of sacrificial rituals (the karma-kanda section), whereas the second pair consists of philosophy (and belong to the jnana-kanda section).
There are also two important bodies of supplementary literature, related closely to the Vedas themselves.
The Vedangas, which expound the sciences required to understand and apply the Vedas.
The Upavedas (usually considered smriti) which deal with the four traditional arts and sciences.

The Six Vedangas (limbs of the Vedas)

- Kalpa (ritual detail)
- Siksha (pronunciation)
- Vyakarana (grammar)
- Nirukti (etymology)
- Chandas (metre)
- Jyotisha (astronomy/astrology)

The Four Upavedas (following the Vedas) explain arts and sciences

- Ayur-veda (medicine)
- Gandharva-veda (music and dance)
- Dhanur-veda (warfare)
- Shilpa-veda (architecture)

THE ORIGIN OF BUDDHISM AND JAINISM

- During Later Vedic period, the society was divided into four Varnas namely, Brahmins, Kshatriyas, Vaishyas and Shudras. Brahmins and Kshatriyas, who were the two dominating Varnas at that time, competed for supremacy. Kshatriyas were the rulers who disliked the domination of the Brahmin priests. Both Gautam Buddha and Mahavira Jain challenged the hegemony of Brahmins. Moreover, the importance of Vaishyas grew as the importance of trade increased.

- Siddhartha was married to Yashodhara. He also had a son named Rahul. But neither his wife nor his son were able to tie him to the worldly life.
- He left his home and became an ascetic at the age of 29 in search of truth and end of sorrows . This event in Buddha's life is known as "Mahabhinishkramana".
- Buddha's teachers were – Alar and Udyak.
- After seven years of roaming around, at the age of 35, Siddhartha got enlightenment at Uruvela while meditating on the bank of river Niranjana under a Peepal(Banyan) tree. This tree is called the Bodhi Tree. The place is known as Bodh gaya.
- Buddha attained the knowledge on the Poornima of Vaishakha month.
- He then gave his first sermon at Sarnath (Varanasi). This historic event in buddha's life is known as "Dhammachakra Pravartan".
- Buddha passed away in 486 BC at the age of 80 under a Sal tree in Kushinagar (Kushinagar was under Licchhavi Kingdom).
- Various notable rulers of his time were Buddha's disciples such as Prasenjit, Bimbisara and Ajatsatru.
- Some famous Bikshuks of Budhdhism were Sariputra, Ananda, Mahakassapa, Annuradha, Upali, and Rahul.
- Vardhman Mahavir(Jainism) was a contemporary of Gautam Buddha(Buddhism).

The events in Buddha's life are depicted by various symbols in Buddhism:

Event in Life of Buddha	Symbolised By
Buddha's Birth	Lotus and Bull
The Great Departure (Mahabhinishkramana)	Horse
Enlightment	Bodhi Tree
First Sermon (Dhammachakraparivartan)	Wheel
Death (Nirvana or Mahaparinirvana)	Stupa

Buddhist Sects

- The Theravada
- The Mahayana
- The Vajrayana

Buddhist Literature

- Vinaya Pitaka – Rules of the order or Buddha's disciplinary code
- Sutta Pitaka – Sermons on matter of doctrines and ethics, Buddha's teachings
- Abhidhamma Pitaka – On metaphysics and philosophy.

Buddhist Councils

There were four councils/Sangeethis of Buddhism organised under different regimes:

First Council

- It was held under the patronage of Ajatashatru (Haryak Dynasty) in 483 BC.
- Monk Mahakasapa presided over the first council.
- It was held at Sattapani caves in Rajgriha just after the death of Buddha.
- Compilation of Vinaya Pitaka and Sutta Pitaka was accomplished here.

Second Council

- In 383 BC. under the patronage of Kalashoka (Shishunaga Dynasty).
- It was held at Vaishali after one century of Buddha's death(parinirvana).
- The second council was presided over by Sabbakami.
- First division in Sangha took place. Theravedin and Mahasamghika split up here.

Third Council

- In 250 BC; under the patronage of King Ashoka.
- It was held at Pataliputra
- It was presided by Mogaliputta Tissa.
- Compilation of Abhidhamma Pitaka was done.

Fourth Council

- In the 1st century AD, under patronage of King Kanishka(Kushan dynasty).
- It was held in Kundalvana of Kashmir.
- Under the presidency of Vasumitra along with his deputy Asvaghosha.
- Buddhism was divided into two sects namely, Hinayana and Mahayana.

The Doctrine of Buddha

The four noble truths are:

- The world is full of sorrow and misery.
- The cause of all pain and misery is desire
- Pain and misery can be ended by controlling the desire.
- Desire can be controlled by following Eight-Fold path.

The Eight-Fold Path (Ashtang Marga):

- Samyak Dristi: Right Understanding
- Samyak Sankalpa: Right Resolve

commemorate this victory, Alexander is said to have laid the foundation of two cities Bucephala and Nicaea at the site of the battle.

- Alexander had proceeded up to the Beas with a view to conquer the Magadh Empire, but here his fatigued army refused to cross the river. Alexander tried his best to rouse the morale of his soldiers but to no avail.

Effects of Invasion

- Although Alexander's invasion failed to Hellenize India and did not leave any direct effect of great importance yet it produced many indirect consequences, some of which are the following:
  - Alexander's invasion brought India in close contact with the European countries. Now four new routes (three by land and one by sea) were found by which Indian scholars, merchants and religious leaders began to go to European countries.
  - The date of Alexander's invasion of India (i.e., 326 BC) has helped us a lot in solving the Indian chronology.
  - The Indians learnt a good deal from the Greeks in the field of coinage, astronomy, architecture and sculpture.
  - In the religious field, the Hindu religion and philosophy affected the Greek a lot and many Greeks adopted the Hindu religion and Hindu names.

MAGADHA

Magadha Empire

- Of all the kingdoms that flourished in the sixth century BC, the kingdom of Magadha was the first to make a successful bid for supremacy and establish its suzerainty.
- With Rajgriha as its capital, this kingdom was situated in the Patna and Gaya districts of Bihar.
- Its political power and prosperity reached its zenith in the reign of Bimbisara and Ajatashatru who one-by-one conquered all the neighbouring states and extended/their empires.

Haryak Dynasty (544 BC-413 BC)

- The first important ruler of Magadha was Bimbisara of Haryak Dynasty, a contemporary of Buddha and patronised Buddhism.
- He conquered Anga and strengthened his position by marriage alliances, keeping three wives - first from Kosala (sister of Prasenajit), second from Vajji (a Lichchavi princess) and third from the chief of Madra clan of Punjab.
- Magadha's most serious rival was Avanti with its capital at Ujjain. Its king Chanaprodyata Mahasena fought Bimbisara. But ultimately the two became friends and Bimbisara sent royal physician (Jivaka) to Ujjain.
- The earliest capital of Magadha was at Rajgriha.
- Ajatashatru (493-460 BC) seized the throne after killing his father Bimbisara and pursued an aggressive policy of expansion.
- He subdued the Kosal king and enlarged his kingdom by conquering Kashi and Vaishali.
- Udayin (460-444 BC) succeeded Ajatashatru and is remembered for building the fort upon the confluence of the Ganga and the Son at Patna. The famous city of Pataliputra was founded in this way.

Shishunaga Dynasty (412 BC-344 BC)

- It is said that Udayin was among the five successor kings who had acquired throne by patricides; the people of Magadha finally outraged by this, deposed the last of the five in 412 BC and appointed Shishunaga, a Viceroy of Banaras, as king.
- The most famous event was the shifting of capital to Vaishali. Their greatest achievement was the destruction of the power of Avanti and its incorporation into the Magadha empire.

Nanda Dynasty (344 BC-321 BC)

- The founder of the dynasty was Mahapadmananda. He added to the Magadha kingdom, Kalinga, from where he brought an image of the Jina as a victory trophy.
- Mahapadmananda claimed to be 'ekarat', the sole sovereign who destroyed all the ruling princes.
- The Nandas were fabulously rich and enormously powerful. They had developed an effective taxation system, built canals and carried out irrigation projects and had a strong army.
- The Nandas were overthrown by the Maurya dynasty, under whom the Magadha empire reached the apex of its glory.

Causes of the Rise of Magadha

- Advantageous strategic geographical location both at Rajgriha and Pataliputra. Rajgriha was surrounded by a group of five hills rendering it impregnable. Pataliputra was a water fort (Jaladurga). Besides, it occupied a pivotal position

- Feudatories: Jalandhar, Kashmir, Kamarupa, Sind, Nepal
- Even the feudatories were under the tight command of Harsha. Harsha's reign marked the beginning of feudalism in India.
- Hiuen Tsang visited India during Harsha's reign. He has given a very favourable account of king Harsha and his empire. He praises his generosity and justice.
- Harsha was a great patron of arts. He himself was an accomplished writer. He is credited with the Sanskrit works Ratnavali, Priyadarshika and Nagananda.
- Banabhatta was his court poet and he composed 'Harshacharita' which gives an account of Harsha's life and deeds.
- Harsha generously supported the Nalanda University.
- He had a good tax structure. 1/4th of all the taxes collected were used for charity and for cultural purposes.
- Harsha was the last king to rule over a vast empire in India before the invasions by the Muslims.
- Harsha died in 647 AD after ruling for 41 years
- Since he died without any heirs, his empire disintegrated very soon after his death.

The Chalukyas

- Pulakesin I was the first ruler of the Chalukyas.
- The Chalukya dynasty reached its peak during the reign of Pulakesin II.
- His grandfather Pulakeshin I had created an empire around Vatapi and performed Ashvamedha.
- Pulakeshin II subjugated the Kadambas, the Ganges of Mysore, the Mauravas of North Konkan, the Latas of Gujarat, the Malavas and the Gurjars.
- He also succeeded in getting submission from the Chola, Chera and Pandya kings.
- He had also defeated King Harsha of Kannauj and the Pallava king Mahendravarman.

Pulakesin II (610 AD-642 AD)

- The greatest of the Chalukya kings.
- Extended the Chalukya rule to most parts of the Deccan.
- His birth name was Eraya. Information about him is obtained from the Aihole citation dated 634 AD. This poetic inscription was written by his court poet Ravikirti in Sanskrit language using the Kannada script.
- Hiuen Tsang visited his kingdom. He has praised Pulakesin II as a good and authoritative king.
- Though a Hindu, he was tolerant of Buddhism and Jainism.
- He conquered almost entire south-central India.
- He is famous for stopping Northern king Harsha in his tracks while he was trying to conquer southern parts of the country.
- He had defeated the Pallava king Mahendravarman I but he was defeated and killed by Mahendravarman's son and successor Narasimhavarman I in a series of battles he had with the Pallavas.
- For the next 13 years, Badami remained under Pallava control.
- Pulakesin II received a Persian mission as depicted in an Ajanta cave painting. He maintained diplomatic relations with the King of Persia Khusru II.
- His death saw a lapse in Chalukya power.

The Pallavas

- Capital of this kingdom was Kanchipuram and which was spread around Kaveri delta.
- The Pallavas established a powerful kingdom in South India after the fall of Satvahanas and ruled from sixth century to late eighth century.
- They moved into Andhra and then to Kanchi where they established the mighty Pallava Empire.

Origin of Pallavas

- There are controversies with regard to the origin of the Pallavas. Important among them are as follows
  - Possibly they were the descendents of the Greek Parthians who came to India after Alexander's invasion.
  - They might have belonged to a local tribal clan who established their authority in 'Tondainnadu' or the land of creepers.
  - They originated from Chola –Naga's marriage.
  - They were orthodox Brahmans of the North and their capital was Kanchi.

IMPORTANT RULERS OF PALLAVA DYNASTY

Simhavishnu: was the first important ruler of this dynasty. Simhavishnu captured the territory of the Cholas and later humiliated other southern regions including Ceylon.

- Akbar introduced the Mansabdari system in his administration. Under this system, every officer was assigned a rank (mansab).

Jahangir (1605-1627 AD)

- Prince Salim who assumed the title of Noor-ud-din Muhammad Jahangir was born in 1569 AD at Fatehpur Sikri near Agra.
- Rahim Khan-i-Khana was appointed his tutor
- His son Khusrau revolted but was defeated and imprisoned.
- One of his supporters, Guru Arjan Dev, the fifth Sikh Guru, was beheaded.
- Jahangir occupied Kangra fort in 1620.

Nur Jahan

- In 1611, Jahangir married Mehr-Un-Nisa who was known as Nur Jahan (Light of World).
- Nur Jahan's elder brother Asaf Khan was appointed as Khan-i-Saman, a post reserved for the nobles. In 1612, Asaf Khan's daughter, Arjumand Banu Begum (later known as Mumtaj), married Jahangir's third son, prince Khurram (later Shah Jahan).
- It is clear that Nur Jahan dominated the royal household and set new fashions based on Persian traditions
- She was a constant companion of Jahangir and even joined him in his hunting
- The rise of Shah Jahan was due to his personal ambitions. He rose in revolt against his father who ordered him to go to Kandahar.

Shah Jahan (1627-1658 AD)

- He was born in Lahore in 1592.
- In 1612, he got married to Arjumand Bano Begum, daughter of Asaf Khan.
- She was given the title of Mumtaz Mahal and Mallika-i-Zamani.
- She died while giving birth to their child and Shah Jahan constructed Tajmahal in her memory.
- Shah Jahan ordered Qasim Khan in 1632 to drive Portuguese out of Hughli.
- In 1636, the Ahom king was defeated and Guwahati came under Mughal king along with Kamrup.
- The last years of Shah Jahan's reign were clouded by a bitter war of succession among his four sons – Dara Shikoh (crown prince), Shuja (governor of Bengal), Aurangzeb (governor of Deccan) and Murad Baksh (governor of Malwa and Gujarat).
- Aurangzeb emerged victorious in this struggle. He entered the Agra fort after defeating Dara. He forced Shah Jahan to surrender.
- Shah Jahan was confined to the female apartments in the Agra fort and strictly put under vigil. But he was not ill-treated.
- Shah Jahan lived for eight long years lovingly nursed by his daughter Jahanara. He died in 1666 and buried beside his wife's grave in the Taj Mahal.

Aurangzeb (1658-1707)

- Aurangzeb became victorious after the brutal war of succession among his brother Dara, Shuja and Murad.
- Rebellions during his rule – Jat Peasantry at Mathura, Satnami peasantry in Punjab and Bundelas in Bundelkhand.
- The annexation of Marwar in AD 1658 led to a serious rift between Rajputs and Mughals after the death of Raja Jaswant Singh.
- Ninth Sikh Guru, Guru Tegh Bahadur was executed by him in AD 1675.
- Mughal conquests reached territorial climax during his reign.
- It stretched from Kashmir in North to Jinji in South, from the Hindukush in West to Chittagong in East.
- He was called Zinda Pir or a living saint. He forbade Sati. Conquered Bijapur (AD 1686) and Golconda (AD 1687) and reimposed Jizya in AD 1679.
- He built Bibi ka Maqbara on the tomb of his queen Rabia-ud-Daurani at Aurangabad; Moti Masjid within Red Fort, Delhi; and the Jami or Badshahi Mosque at Lahore.

Mughal Nobility

- The nobles of the Mughal period formed a privileged class. Most of them were foreigners such as Turks and Afghans Many of them settled down in India and made it their permanent home.

Agriculture

- An estimate claims that the population of India at the beginning of the seventeenth century was about 125 million.
- During the seventeenth century two new crops, namely, tobacco and maize were added. Potato and red chillies came later in the eighteenth century.

- He was the first Mughal ruler who was under the British protection.
- During his tenure, Mughal Empire shrunk to Red Fort only.

Bahadur Shah (AD 1837-1862)

- He was the son of Akbar II and Rajput princess Lal Bai and was the last ruler of Mughal Empire.
- During his reign, 1857 revolt took place; he was sent to Rangoon as captive where he died in 1862.
- He was a very good Urdu poet and his pen name was Zafar.

CAUSES OF MUGHAL'S DECLINE

The Vastness of the Empire: It was not possible to rule over the entire area without any cooperative federalism. Hence, the Empire began to sink due to its own reason.

Centralized Administration: The vast Empire cannot rule without decentralization and their coordination.

Responsibility of Aurangzeb: His religious policy, Rajput Policy, and Deccan Policy led disappointments to his subjects who made way to disintegration.

Wars of Succession: Prolong war of succession fractured the administrative unit of Mughals.

Weakness of the Nobility: Mughal's nobles were well known for their loyalty but war of succession degenerated the nobility.

THE MARATHAS (1649-1748 AD)

- The Marathas rose to power under Shivaji. He was born at Shivneri Fort in 1627.
- His father was Shahji Bhonsle and mother was Jijabai. He inherited the Jagir of Poona from his father.
- He conquered many forts like Torna, Rajgarh and Panhala.
- The Bijapur Sultan sent Afzal Khan against Shivaji, but he was murdered by Shivaji in 1659.
- Shaista Khan, was sent by Aurangzeb against Shivaji. Shaista Khan defeated Shivaji and captured Poona. But Shivaji made a bold attack on Shaista Khan and plundered Surat and Ahmednagar.
- Raja Jai Singh of Amer was sent by Aurangzeb to put down Shivaji in 1665. He succeeded in besieging the Fort of Purandar and opened negotiations with Shivaji.
- The Treaty of Purandar was signed in 1665, according to which, Shivaji had to surrender 23 forts out of 35 forts held by him to Mughals.
- The remaining forts were to be left to Shivaji on condition of service and loyalty to Mughal emperor. When Shivaji visited Agra, he was imprisoned there.
- Shivaji escaped from Agra and began military preparations. He then captured all his lost territories from the Mughals.
- In 1674, he assumed the title of Chhatrapati. He conquered Karnataka during 1677-80 before his death.

Administration under Shivaji

- He was a great administrator. He had a council of ministers called Asthapradhan. Each minister was directly responsible to Shivaji.
- He divided the Maratha territory into three provinces under a viceroy. Provinces were then divided into prants, further subdivided into Paraganas.
- The lowest unit was village, headed by Patel.

The ministers in Shivaji's council of ministers:

- Peshwa: Initially finance and general administration. Later became Prime Minister.
- Sar-i-Naubat or Senapati: Military commander.
- Majumdar(Amatya): Revenue and accounts
- Waqia-Nawis(Mantri): Intelligence, postand home affairs.
- Sur Nawis(Sachiv): Head of Royal corresponsence
- Sumant(Dabir): foreign affairs
- Nyayadhish: justice
- Pandit Rao(Sadar): Religious administration

THE PESHWAS

Balaji Vishwanath (1713-1720 AD)

- He was the first Peshwa. He made the post of Peshwa hereditary.
- Balaji Vishwanath gained certain rights from the Mughal emperor Farrukhsiyar.
- Firstly the Mughal emperor recognized Shahu as the Maratha king.
- Secondly, he allowed Shahu to collect Chauth (regularly tax) and Sardeshmukhi from six Mughal provinces in Deccan.

Balaji Rao I (1720-1740 AD)

- He was the eldest son of Balaji Vishwanath. The Maratha power reached its zenith under him.

Kanishka in Bharhut and Sanchi are examples of Gandhara art.

100. Which ruler of Bengal had relations with China?
(A) Ghiyasuddin Azamshah
(B) Sikandar Shah
(C) Nusrat Shah
(D) Hussein Shah

Ans.100(A) Ghiyasuddin Azam Shah was the third Sultan of Bengal and the Ilyas Shahi dynasty. He was one of the most prominent medieval Bengali sultans. He established diplomatic relations with the Ming Empire of China.

101. The Kathopanishad captures the conversation between a young boy named Nachiketas and a god. Which of the following gods is talking to Nachiketas?
(A) Lord Yama **(B)** Lord Karthikeya
(C) Lord Indra **(D)** Lord Shiva

Ans.101(A) The Kathopanishad captures the conversation between a young boy named Nachiketas and Lord Yama.

102. The earliest reference to sati custom is made in which of the following inscriptions?
(A) Allahabad Pillar inscription
(B) Eran inscription of Bhanugupta
(C) Aihole inscription of Pulkesin II
(D) Bhitan inscription of Skandgupta

Ans.102(B) Although the emergence of the practice of Sati in Indian (predominantly Hindu) society is considered since ancient times, its horrific form can be seen even in modern times. The first archival evidence of sati practice is found in 510AD Eran inscription.

103. The famous Dilwara temples of Mount Abu are a sacred pilgrimage place for the _____.
(A) Buddhists **(B)** Jains
(C) Sikhs **(D)** Parsis

Ans.103(B) The Jain Dilwara temples of India are located about 2½ kilometers from Mount Abu, Rajasthan's only hill station. These temples dating back from the 11th to the 13th century AD are world famous for their stunning use of marble. The five legendary marble temples of Dilwara are a sacred pilgrimage of the Jains.

104. Which dynasty was ruling in Vijaynagar empire at the time of the Battle of Talikota?
(A) Sangam **(B)** Aniridu
(C) Tuluva **(D)** Saluva

Ans.104(C) The Battle of Talikota was fought between the Deccan Sultanates and Vijaynagar Kingdom. Sadasiva Raya of Tuluva dynasty was the emperor of Vijaynagar at the time of the Battle of Talikota.

105. Ustad Mansur was a famous painter of which Mughal ruler's regime?
(A) Akbar **(B)** Jahangir
(C) Shah Jahan **(D)** Aurangzeb
Ans.105(B) Ustad Mansur (flourished 1590-1624) was a seventeenth-century Mughal painter and court artist. He grew up during the reign of Jahangir (1605 - 1627) during which period he excelled at depicting plants and animals.

106. In which year, Akbar built a hall called the Ibadat Khana ("House of Worship") at Fatehpur Sikri.
(A) 1562 **(B)** 1580
(C) 1582 **(D)** 1575

Ans.106(D) In 1575, he built a hall called the Ibadat Khana ("House of Worship") at Fatehpur Sikri, to which he invited theologians, mystics and selected courtiers renowned for their intellectual achievements and discussed matters of spirituality with them

107. Which of the following is the religious text of the Jews?
(A) Dhammapada **(B)** Torah
(C) Sahib **(D)** Tripatika

Ans.107(B) The Torah is part of the larger text known as the Tanakh or the Hebrew Bible, and supplemental oral tradition represented by later texts such as the Midrash

141. The most important source of information about the agrarian conditions during Mughals is _____?
(A) Ain-i-Akbari **(B)** Akbarnama
(C) Baburnama
(D) Tarikh-i-Ferishta

Ans.141(A) Ain-i-Akbari by Abul Fazal is the main source for today's historians to know about the structure of agrarian relations from the time of Akbar onwards.

142. The British East India Company ceased to be a trading Company via which among the following legislation?
(A) Pitts India Act of 1784
(B) Charter Act of 1833
(C) Charter Act of 1813
(D) Government of India Act 1858

Ans.142(B) The charter act 1833: It is considered to be an attempt to codify all Indian Laws. The Governor General of Bengal now became the The Governor General of India. One of the provisions of this act – "the East India Company now lost its trading privilege like tea and monopoly in China, henceforth it became a purely administrative body under the crown."

143. Who among the following was the 23rd Jain Tirthankara?
(A) Nemi Natha **(B)** Mahavira
(C) Parshvanath **(D)** Rishabhanatha

Ans.143(C) Parshvanath was the twenty third Jain Tirthankara. He was a Kshatriya and son of Ashvasena, King of Banaras (Varanasi).

144. The first victim of the British policy of Subsidiary Alliance was _____.
(A) Avadh **(B)** Mewar
(C) Mysore **(D)** Hyderabad

Ans.144(D) A subsidiary alliance is an alliance between a dominant nation and a nation that it dominates. The 1st victim of the policy of subsidiary alliance of Lord Wellesley was the Hyderabad.

145. The author of Tabqat-i-Akbari was___.
(A) Badauni
(B) Khwaja Nizamuddin Ahmad
(C) Abul Fazl
(D) Abdul Rahim Khan-I-Khana

Ans.145(B) Khwaja Nizamuddin Ahmad was a Muslim historian of late medieval India, is the writer of 'Tabqat-i-Akbari'. The work is a general history of India covering the time from the Ghaznavids up to 1593-94.

146. Who among the following edited and published the newspaper Indian Mirror in 1861?
(A) Amitava Ghosh
(B) Ravindranath Tagore
(C) Sumit Ganguly
(D) Manmohan Ghosh and Devendranath Tagore

Ans.146(D) In 1861, the newspaper, Indian Mirror, was edited and published by Manmohan Ghosh and Devendranath Tagore from Calcutta.

147. Which one of the following was the port city of the Indus Valley Civilisation?
(A) Harappa **(B)** Kalibangan
(C) Lothal **(D)** Mohenjodara

Ans.147(C) Lothal and Dhaulavira located in Gujarat are the port cities of the Indus Valley Civilization.

148. Who among the following preached the doctrine of "One religion, one caste and one God for mankind"?
(A) Jyotiba Phule **(B)** Vivekananda
(C) Sri Narayan Guru **(D)** B. R. Ambedkar

Ans.148(C) Sri Narayana Guru preached the doctrine of 'One caste, One religion, One God.' Its worth note that one of his athiest disciples, Sahadaran Ayyapan, changed into 'no religion, no caste and no God for mankind.

149. Which king established most of the temples of Khajurahas?
(A) Raja Yashovarman
(B) Raja Chandravarman

426. Consider the following statements:
1. The Hunter Commission was appointed by the then Governor-General of India on 3 February 1882.
2. In 1917 to 1919, Sadler led the "Sadler Commission" which looked at the state of Indian Education.
Which of the statements given above is/are not correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

Ans.426(D) Lord Ripon appointed the Indian Education Commission on 3rd February 1882, with Sir Willium Hunter as its Chairman. It is known as Hunter Commission of 1882.
In 1917 the Government appointed the Calcutta University Commission to study and report on the problem of university education. The commission was also known as the Sadler Commission after the name of its chairman Dr. Michael E. Sadler, the Vice Chancellor of the university of Leeds.

427. Consider the following statements Regarding to Dadabhai Naoroji:
1. He became a member of the Legislative Council of Mumbai during 1885 – 88.
2. He was the President of the Congress Party in 1886, 1893 and 1906.
Which of the statements given above is/are not correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

Ans.427(D) Dadabhai Naoroji became a member of the Legislative Council of Mumbai during 1885 – 88 and He was the President of the Congress Party in 1886, 1893 and 1906.

428. Consider the following statements regarding Mahatma Gandhi:
1. In 1930, Gandhi ji was named the Man of the Year by the Time Magazine.
2. Gandhi ji wrote his autobiography, The Story of My Experiments with Truth.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

Ans.428(C) In 1930, Gandhi was named the Man of the Year by the Time Magazine and In 2011, Time magazine named Gandhi as one of the top 25 political icons of all time.
The Story of My Experiments with Truth is the autobiography of Mohandas K. Gandhi, covering his life from early childhood through to 1921.

429. Consider the following statements regarding Home Rule League:
1. Annie Besant started the Home Rule League in September, 1916, and Tilak started it in April 1916.
2. Tilak's movement was confined to Maharashtra and Karnataka. And Annie Besant movement spread to other parts of India.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

Ans.429(C) Besant launched the All India Home Rule League in 1916 along with Bal Gangadhar Tilak. The League was the first Indian political party which advocated self-rule as its motto. And in contrast to the INC which met once a year, the League worked throughout the year.

430. Consider the following statements:
1. Megasthenes was the Greek ambassador at Chandragupta's court.
2. Chanakya was teacher of Chandragupta Maurya, who was also his Chief Minister.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

Ans.430(C) Megasthenes was the Greek ambassador at Chandragupta's court. The hellenistic king Seleucus I sent him as an ambassador to the court of King Chandragupta Maurya in India.
Chanakya is credited to be the master strategist behind the usurping of the Nanda throne and the rise of the Mauryan Empire through his student, Chandragupta.

Objective
GENERAL STUDIES

PART - 2
Polity

Polity

02

Indian Polity is a discipline that includes a wide range of topics such as the development of the Constitution, Citizenship, Fundamental Rights, Fundamental Duties, Directive Principles of state policy, the executive and legislative power of the President, the Prime Minister and Council of Ministers, Judiciary, Executive and legislative powers of Governor, State Governments, Local Government, Election system, and many more. Indian Polity is one of the essential disciplines of Social Science that makes us understand our democratic governance as well as our rights.

THE CABINET MISSION

World War II in Europe came to an end on May 9,1945. Three British cabinet ministers were sent to find a solution to the question of India's Independence. This team of ministers (Lord Pethick Lawrence, Stafford Cripps, A V Alexander) was called the Cabinet Mission. The Mission was in India from March 1946 to May 1946. The Cabinet Mission discussed the framework of the constitution and laid down in detail the procedure to be followed by the constitution drafting body. The constituent Assembly began work on 9 December 1946.

INDIAN POLITY: FRAMING THE CONSITITUTION (1946-1950)

- The Constitution of India was drawn up by the Constituent Assembly.
- The Assembly met for the first time on December 9, 1946.
- The Assembly constituted a Drafting Committee, under the chairmanship of Dr.B.R.Ambedkar, to frame a Constitution for India.
- Indian Constitution was adopted on November 26, 1949 and came into effect on January 26, 1950.
- It is the longest written Constitution in the world containing 395 Articles, 22 Parts and 12 Schedules.
- Dr. Rajendra Prasad was elected its Permanent Chairman on December 11,1946
- The Draft Constitution was published in January, 1948. The people of India were given 8 months to discuss the draft and propose amendments. As many as 7,635 amendments were proposed and 2,473 were actually discussed.
- The Constituent Assembly held 11 sessions.
- The Draft Constitution was considered for 114 days. In all, the Constitutional Assembly sat for 2 years, 11 months and 18 days to draft the constitution.
- The New Constitution of India was adopted by the Constituent Assembly on 26th November, 1949 and signed by the President, Dr. Rajendra Prasad. 15 Articles (5,6,7,8,9,60,324,366,367,372, 380, 388, 391,392 and 393) came into force at once.
- The remaining provisions of the Constitution came into force on 26th January, 1950 which is the date of the commencement of the Constitution and is also celebrated as 'Republic day'.
- On January 26, 1950, the Indian Government also adopted National Emblem of India depicting wheel, bull and horse. Currently it can be seen at sarnath, which is also lion capital of Ashoka.
- The design of the National Flag was adopted by the Constituent Assembly of India on 22 July 1947.
- The National Calendar based on the Saka Era, with Chaitra as its first month and a normal year of 365 days was adopted from 22 March 1957
- Jana-gana-mana, composed originally in Bengali by Rabindranath Tagore, was adopted in its Hindi version by the Constituent Assembly as the National Anthem of India on 24 January 1950. It was first sung on 27 December 1911 at the Calcuta (Kolkata) Session of the Indian National Congress.

SOURCES OF INDIAN CONSITITUTION

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

Government of India Act, 1935	Federal Scheme, office of Governor, Judiciary, Public Service Commission, Emergency

	Provisions and administrative details.
British Constitution	Parliamentary System, Rule of law, Legislative Procedure, Single Citizenship, Cabinet System, Prerogative Writs, Parliamentary Privileges and Bicameralism.
US Constitution	Fundamental rights, independence of judiciary, judicial review, impeachment of President, removal of Supreme court and high court judges and parts of Vice President.
Irish Constitution	Directive Principles of State Policy, nomination of members to Rajya Sabha and method of election of President
Canadian Constitution	Federation with a strong Centre, vesting of residuary powers in the centre, appointment of State Governor by the Centre and advisory jurisdiction of Supreme Court.
Australian Constitution	Concurrent list, joint sitting of two Houses of Parliament, Freedom of trade commerce and intercourse.
Wiemar Constitution of Germany	Suspension of Fundamental Rights during Emergency.
French Constitution	Ideals of liberty, equality and fraternity in the Preamble and republic.
South African Constitution	Procedure for amendment of the constitution and election of members of Rajya Sabha.
Japanese Constitution	Procedure established by Law.
Constitution of former USSR (now Russia)	Fundamental duties, ideals of justice (social, economic and political) in Preamble.

PARTS DESCRIBED IN THE CONSTITUTION

There are 395 articles in Indian Constitution with 22 parts and 12 Schedules.

Part	Subject	Articles
Part I	The Union and its territory	Art. 1 to 4
Part II	Citizenship	Art. 5 to 11
Part III	Fundamental Rights	Art. 12 to 35
Part IV	Directive Principles of State Policy	Art. 36 to 51
Part IVA	Fundamental Duties	Art. 51A
Part V	The Union Government	Art. 52 to 151
Part VI	The State Government	Art. 152 to 237
Part VII	Repealed by Constitution (7th Amendment) Act, 1956 Art. 238	
Part VIII	The Union Territories	Art. 239 to 242
Part IX	The Panchayats	Art. 243 to 243O
Part IXA	The Municipalities	Art. 243P to 243ZG
Part IXB	The Co-operative Societies	Art. 243ZH to 243ZT
Part X	The Scheduled and Tribal Areas	Art. 244 to 244A
Part XI	Relations between the Union and the States	Art. 245 to 263
Part XII	Finance, Property, Contracts and Suits	Art. 264 to 300A
Part XIII	Trade, Commerce and Intercourse within the Territory of India	Art. 301 to 307
Part XIV	Services under the Union and the States	Art. 308 to 323
Part XIVA	Tribunals	Art. 323A to 323B
Part XV	Elections	Art. 324 to 329A
Part XVI	Special provisions relating to certain classes	Art. 330 to 342
Part XVII	Official Language	Art. 343 to 351
Part XVIII	Emergency Provisions	Art. 352 to 360
Part XIX	Miscellaneous	Art. 361 to 367
Part XX	Amendment of the Constitution	Art. 368
Part XXI	Temporary, Transitional and Special Provisions	Art. 369 to 392

- While disagreement between the two Houses of the Parliament over ordinary and financial bills is resolved by "Joint Sitting", there is no such provision of solving the deadlock at the state level. The upper house at the state level can just delay the bill for the maximum period of 4 months i.e. 3 months in first journey and 1 month in second journey.
- While the period for passing a Bill (other than money Bill) from Rajya Sabha is six months in the case of Legislative Councils it is just three months.

Legislative council (Article 169)

The Vidhan Parishad (or Legislative Council) is the upper house in those states of India that have a bicameral legislature. As of 2019, Six states have a Legislative Council: Andhra Pradesh, Bihar, Karnataka, Maharashtra, Telangana and Uttar Pradesh

- Legislative councils are formed, if the legislative assembly of the concerned state passes a resolution by special majority, that is a majority of total membership of the assembly and a majority of not less than two-thirds of the members of assembly present and voting.
- After this Parliament approves this resolution by simple majority. This Act of Parliament is not to be deemed as an amendment of the constitution.
- The maximum strength of the council is fixed at 1/3rd of total strength of assembly and minimum strength is fixed at 40.
- The Council shall be a continuing House and it is not subject to dissolution but one third of its members shall retire every two years
- The Council has a Chairman and Deputy Chairman elected by the Council.

Qualification to be a member of Vidhan Parishad

- She/he must be citizen of India
- She/he must have attained at least 30 years of age
- She/he must be listed in the voters list of the state for which he or she is contesting an election.

Election of members of Legislative Council

- One-third of the members are elected by members of local bodies such as corporations, municipalities, and Zila Parishads.
- One-third of the members are elected by members of Legislative Assembly from among the persons who are not members of the Assembly.
- One-twelfth of the members are elected by the persons who are graduates of three years' standing residing with in that state.
- One-twelfth are elected by persons engaged for at least three years in teaching in educational institutions within the state not lower than secondary schools, including colleges and universities.
- One-sixth are nominated by the governor from persons having knowledge or practical experience in fields such as literature, science, arts, the co-operative movement and social service.

GOVERNOR

The Governor is appointed by the President. 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 the Constitution in the case of President.

Powers of Governors

Executive Powers

- The Governor appoints the Chief Minister who enjoys the support of the majority in the Legislative Assembly (Vidhan Sabha).
- The Governor also appoints 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

- Summons the sessions of both Houses of the State legislature and prorogues them.
- Inaugurates the State Legislature by addressing it after the assembly elections and also at the beginning of the first session every year.
- 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.
- The Governor's address on these occasions generally outlines new policies of the state Government.
- A bill that the state legislature has passed can become a law only after the Governor gives his assent.
- He can return a bill to the State Legislature, if it is not a money bill, for reconsideration
- He has the power to reserve certain bills for the consideration of President.

- When the State Legislature is not in session and the Governor considers it necessary to have a law, then the Governor can promulgate ordinances.

Financial Powers

- Money bills can be introduced in the State Legislative Assembly only on the prior recommendation of the Governor.
- Governor also causes to be laid before the State Legislature the annual financial statement i.e., State Budget.
- Further no demand for grant shall be made except on his/her recommendation.
- He can also make advances out of the Contingency Fund of the State to meet any unforeseen expenditure.
- Governor constitutes the State Finance Commission to review financial positions of Panchayats and Municipalities.

Discretionary Powers

There are situations when the Governor has to act as per his/her own judgment and take decisions on his own. Such powers are called discretionary Powers:

- When no party gets a majority in the Vidhan Sabha, the Governor can either ask the leader of the single largest party or the consensus leader of two or more to form the Government. The Governor then appoints the leader of the largest party as Chief Minister.
- The Governor can send a report to the President informing him or her that the State's constitutional functioning has been compromised and recommending the President to impose "President's rule" (state emergency) upon the state.
- Governor can reserve any Bill for the President.

Veto Power of Governor

When a Bill is presented before the Governor after its passage by the House(s) of the State Legislature, the Governor may take any of the following steps:

- He may gives his assent to the Bill
- He may withholds his assent to the Bill
- He may (in case of a Bill other than money Bill), return the Bill for reconsideration.
- The Governor may also reserve a Bill for the consideration of President.

The President enjoys absolute veto in the case of Bills reserved for him by the Governors. The president may act in the following manner:

- In case of Money Bill, President may either declare his assent or withhold his assent.
- In the case of Bills other than Money Bill, the President apart from declaring his assent or refusing it, directs the Governor to return the Bill to the Legislature for reconsideration.

PANCHAYATI RAJ

- The Panchayati Raj System is the first tier or level of democratic government.
- The term Panchayati Raj in India signifies the system of rural local self-government. It was constitutionalized through the 73rd Constitutional Amendment Act of 1992.
- The development of the village was the immediate problem faced by our country after independence. Hence the Community Development Programme was launched in 1952 with a view to carry out the integral rural development work.
- Rajasthan was the first state to set up Panchayati Raj System in 1959 followed by Andhra Pradesh.

Main Provisions of 73rd Amendment Act

- This act has added a new Part-IX to the Constitution of India.
- It is entitled as 'The Panchayats' and consists of provisions from Articles 243(A) to 243(O). In addition, the act has also added a new Eleventh Schedule to the Constitution. It contains 29 functional items of the panchayats.
- Fixing tenure of five years for Panchayats at all levels and holding fresh elections with in six months in the event of supersession of any Panchayat.
- Reservation of 1/3 seats (both members and chaizrpersons) for women in Panchayats at all the levels.
- The Act provides for a three-tier systerm of the Panchayati Raj in the states namely:
  - Gram Panchayat at the Village level.
  - Panchayat Samiti at the Block level.
  - Zila Parishad at the District level.

Compulsory Provisions for Panchayati Raj Institutions

- Organisation of Gram Sabha in a village or group of villages.
- Establishment of Panchayats at the village, intermediate and district levels.
- 21 years to be the minimum age for contesting elections to Panchayats.

Objective
GENERAL STUDIES

PART - 3
Geography

Geography

03

Geography is a systematic study of the Universe and its features. Traditionally, geography has been associated with cartography and place names. Although many geographers are trained in topography and cartography, this is not their main occupation. Geographers study the space and the temporal database distribution of phenomena, processes, and features as well as the interaction of humans with their environment. Because space and time affect a variety of topics, such as economics, health, climate, plants and animals, geography is a highly interdisciplinary subject. The interdisciplinary nature of the geography depends upon the relationship between physical phenomena and its interaction with human beings.

EARTH SOLAR SYSTEM

- Our solar system consists of the Sun (the star), 8 planets, 63 moons, millions of smaller bodies like asteroids and comets and a huge quantity of dust-grains and gases. Some celestial bodies do not have their own heat and light.
- In order of their distance from the Sun, the eight planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.
- Out of the eight planets, Mercury, Venus, Earth, and Mars are called the inner planets as they lie between the Sun and the belt of asteroids. They are called Terrestrial planets.
- The other four planets are called outer planets. They are also called Jovian or Gas Giant planets. Jovian means Jupiter-like. Most of them are much larger than the terrestrial planets and have a thick atmosphere, mostly of helium and hydrogen.
- The two outermost planets, Uranus and Neptune are ice-giants being composed mostly of substances with relatively high melting points compared with Hydrogen and Helium.

The Sun

- The Sun is about 150 million km away from the earth. It is huge and made up of extremely hot gases.

Planets

- **Mercury:** It is nearest planet to the Sun. It is the smallest planet of our solar system. It can be observed just before sunrise or just after sunset, near the horizon. It takes only about 88 days (approximately) to revolve around Sun along its orbit. Mercury has no satellite of its own.
- **Venus:** It is the brightest planet in the night sky. It is often called a morning or an evening star although it is not a star. Venus is considered as 'Earth's-twin' because its size and shape are very much similar to that of the earth. Venus has no moon or satellite of its own. It rotates from east to west while the Earth rotates from west to east. It is also the hottest planet in the solar system.
- **The Earth:** The Earth is the third nearest planet from the Sun, it is the fifth largest planet. It is slightly flattened at the poles. That is why its shape is described as a Geoid. From space, the Earth appears blue-green due to the reflection of light from water and landmass on its surface. The Earth has only one natural satellite called Moon.
- **Mars:** It appears slightly reddish and, therefore, it is called the Red Planet. Mars has two small natural satellites.
- **Jupiter:** It is the largest planet of the solar system. It is so large that about 1300 earths can be placed inside this giant planet. However, the mass of Jupiter is about 318 times that of our Earth. It rotates very rapidly on its axis. Jupiter has a large number of natural satellites. It also has faint rings around it.
- **Saturn:** It appears yellowish in colour. It looks beautiful because of rings. Saturn also has a large number of natural satellites. It is the least dense among all the planets. Its density is less than that of water.
- **Uranus:** Like Venus, Uranus also rotates from east to west. It has highly tilted rotational axis in its orbital motion and thus it appears to roll on its side.
- **Neptune:** It is the planet forthest from the Sun and like Uranus, it is an ice giant.

Cold Winds	Country
Mistral	Spain & France
Bora	Eastern Europe and North Eastern Italy
Pampero	Argentina
Buran	Siberia

Jet Streams

These are a narrow belt of high attitude (above 12,000 m) westerly winds in the upper troposphere. Their speed varies from about 110 km/hr in summer to about 184 km/hr in winter.

In the Northern and Southern hemispheres, these are two jet stream.

- **Subtropical Jet Stream:** Centered at about 30° latitude.
- **Polar Front Jet Stream:** Whose position varies with the boundary between polar and temperate air.

A reverse jet stream blows towards the west in tropical high altitudes during northern hemisphere summer. It is associated with the heating of the asian continent and may help bring summer monsoon to the Indian Ocean.

CYCLONE

Cyclones are well developed low-pressure systems surrounded by closed isobars having increasing pressure outside and closed air circulation towards the centre such that the air blows inward in anticlockwise direction in the northern hemisphere and clockwise in the southern hemisphere.

Tropical cyclones

Tropical cyclones are intense cyclonic storms that develop over the warm oceans of the tropics. Surface atmospheric pressure in the centre of tropical cyclones tends to be extremely low.

The main characteristics of tropical cyclones are:

- They have winds that exceed 34 knots (39 miles/hr).
- They are clockwise in the Southern Hemisphere and Counter-clockwise about their centres in the Northern Hemisphere.
- They are known as Cyclones in the Indian Ocean, Hurricanes in the Atlantic, Typhoons in the Western Pacific and South China Sea, and Willy-Willies in the Western Australia.

Temperate cyclones

- The systems developing in the mid and high latitude, beyond the tropics are called the middle latitude or temperate cyclones.
- Extra tropical cyclones form along the polar front.
- Two air masses of contrasting physical properties: one air mass is polar in character and is cold, denser and north-easterly in direction while the other air mass is tropical in origin and is warm, moist, lighter and south westerly in direction.
- An anticyclone is a region of high atmospheric pressure related to the surrounding air, generally thousands of kilometres in diameter and also known as a high or high-pressure system.
- Winds in an anticyclone form a clockwise out-spiral in the Northern Hemisphere; whereas they form an anti-clockwise out-spiral in the Southern Hemisphere.

OCEANOGRAPHY

The study of sea floor by echo method of sound waves reveals that the sea floor is not a flat area. It consists of mountains, plateaus, plains & trenches etc. Some major submarine features are described below.

Continental Shelf

- The portion of the land which is submerged under sea water is continental shelf.
- The continental shelf is shallow and its depth is not more than 200 metres.
- In all about 7.5 percent of total area of the oceans is covered by the continental shelves.

The shelves are of great use to man because:

- Marine food comes almost entirely from them.
- About 20 percent of oil and gas of the world is extracted from them.
- They serve as sites for productive fishing grounds.

Continental Slope

- It is an area of steep slope extending just after the continental shelf up to a considerable depth from where a gentle sea plain takes its form.
- The extent of the slope area is usually between 200-2000 m. But sometimes it may extend to 3660 metres from the mean sea level.
- The continental slope along many coasts of the world is followed by deep canyon like trenches terminating as fan shaped deposits at the base.
- Continental slope covers 8.5 percent of the total ocean area.

Continental Rise

- The gently sloping surface at the base of the continental slope is called continental rise.
- It may extend to hundreds of Kilometers into the deep ocean basin.

Deep Ocean Basins

Objective
GENERAL STUDIES

PART - 4
Economy

Economy

04

Economics is the social science of studying the production, distribution and consumption of goods and services. It is a complex social science that spans from mathematics to psychology. At its most basic, however, economics considers how a society provides for its needs. Society's most basic need is survival; which requires food, clothing and shelter. Once those are covered, it can then look at more sophisticated commodities such as services, personal transport, entertainment, and the list goes on. Today, this social science, known as "Economics" tends to refer only to the type of economic thought which political economists refer to as 'Neoclassical Economics'. It was developed in the 18th century based on the idea that economics can be analysed mathematically and scientifically.

ECONOMY

An **economy** is a system of organizations and institutions that either facilitate or play a role in the production and distribution of goods and services in a society. Economies determine how resources are distributed among members of a society; they determine the value of goods and services; and they even determine what sorts of things can be traded or bartered for those services and goods.

How a society structures its economic system is largely a political and social issue. The political and legal structure of a society will govern how wealth can be accumulated, how wealth and resources are distributed, and the manner of competition permitted between different participants in the economy.

The three types of economic system are:

1. Market economy
2. Centrally Planned economy
3. Mixed economy

Market Economy (Capitalist)

Market economy is a free economy. It means that producers are free to decide 'what, how and for whom to produce'. On what basis do they take their decisions? It is on the basis of supply and demand forces in the market.

Centrally Planned Economy (Socialist)

In a centrally planned economy, decisions relating to 'what, how and for whom to produce' are taken by the central authority appointed by the government of the country.

All decisions are taken with a view to maximise social welfare. Unlike the market economy, profit maximisation is not the consideration. Those goods and services will be produced which the central authority (or the government) finds as most useful for the society. That technique of production will be adopted which is socially most useful. In a situation of mass unemployment, for example, labour intensive technology will be preferred (rather than capital intensive technology) so that unemployment is reduced. Enough goods will be produced for poorer sections of the society even when production of such goods does not yield profit. Social justice is accorded higher priority than profit maximisation.

Mixed Economy (Capitalist + Socialist)

Mixed economy shares the merits of market economies as well as centrally planned economies. Decisions regarding 'what, how and for whom to produce' are taken on the basis of market forces as well as on the basis of social considerations. In certain areas of production, producers are free to take their decisions with a view to maximising profits. In certain other areas, decisions are taken entirely on the basis of social considerations. Example: In India, producers are free to produce cloth or steel to maximize their profits. But 'railways' are the monopoly of the government. The government provides transport services at nominal rates so that poorer sections of the society can avail them.

The study of economics is divided into two distinct branches. They are:

- Micro Economics
- Macro Economics

BRANCHES OF ECONOMICS

Micro Economics

The word "micro" means very small, so micro economics implies the study of economics at a very

small level. It is the study of individuals, households and firms behaviour in decision making and allocation of resources. In a society comprising of many individuals collectively, every single individual makes just a small part.

So the economic decisions taken by a single individual become the subject matter of micro economics. We can cite some examples in this regard.

- In order to satisfy various wants, an individual buys goods and services. To buy goods and services, the individual has to pay some price from his limited amount of income. So, the individual has to make a decision with regard to quantity of the good to be purchased at the given price. He/she also has to decide the combination of different goods to buy in his/her income so that he/she can get maximum satisfaction as a buyer.
- An individual also sells goods and services as a seller. Here he has to take a decision regarding the quantity of good to be supplied at a given price so that he/she can earn some profit.

All of us pay a price to buy a good. How does this price get determined in the market? Micro economics provides answer to this question.

In order to produce a good, an individual producer has to decide how to combine the various factors of production so that maximum output can be produced at minimum cost.

Limitation of Microeconomics

- Focuses on certain unrealistic assumptions which may not always be true.
- The approach may even prove to be misleading as it generalises situations that may act misleading.

Macro Economics

The word "macro" means very large. In comparison to an individual, the society, or the country, or the economy as a whole is very large. So the economic decisions taken at the level of the economy as whole are the subject matter of macro economics.

Macroeconomics include the study of the behaviour and performance of an economy as a whole. It focuses on the aggregate changes in the economy. Such as unemployment, growth rate, GDP & inflation.

Take the example of the economic decisions taken by the government. We all know that the government represents the whole country, not just an individual. So, the decisions taken by the government are meant for solving the problems of the whole society.

For example, the government makes policies with respect to collection of taxes, expenditure on public goods and welfare activities etc. which affect the whole economy. "How do such policies work" is the subject matter of macroeconomics.

In micro economics, we study the behaviour of an individual as a buyer and seller. As a buyer, the individual spends money on goods and services which is called his/her consumption expenditure.

If we add consumption expenditure of all individuals living in an economy, then we get the idea of aggregate consumption expenditure of the whole economy. This becomes a subject matter of macroeconomics.

Similarly, aggregating incomes of individuals becomes total income of the country or the national income.

Inflation or price rise does not affect an individual only, but it affects the whole economy. So knowing its causes and effects, as well as controlling it, comes under the study of macroeconomics.

Similarly, problems of unemployment, economic growth and development etc. concern with the whole population of the nation and hence are covered under the study of macroeconomics.

Limitations of Macroeconomics

- Inferences from aggregates may not always be true, as rise in the national income does not necessarily mean that individual incomes have risen.
- Takes into account only aggregate variables, which may not clearly define economic conditions.
- Regards aggregates as homogeneous.

Difference between micro and macroeconomics

- Microeconomics is the study of economics at an individual level, whereas, macroeconomics is the study of an economy as a whole.
- Microeconomics focuses on issues that affect individuals and firms (demand and supply). Whereas, macroeconomics focuses on issues that affect the economy as a whole (unemployment, national income, etc.).
- Microeconomics helps in determining the prices of a product along with the prices of factors of production, whereas, macroeconomics helps in maintaining stability in general price level and resolving major problems like inflation, unemployment etc.

Similarities between Micro and Macro Economics

- Micro economics principles are used in macroeconomics. Micro economics affects macroeconomics and vice versa.

Objective
GENERAL STUDIES

PART - 5
Physics

Physics

05

Physics is the branch of science which is concerned with the study of matter and energy and their inter-relationship. Numerous developments have taken place in the realm of physics, from the earlier stages of classical physics to the emergence of physics based on quantum theory. Classical physics included topics like optics, mechanics, electricity, magnetism and acoustics. In the twentieth century quantum physics has made much headway and it includes topics like atomic and nuclear particles, etc.

SI UNIT SYSTEM

Fundamental or base quantities

- The quantities which do not depend upon other quantities for their complete definition are known as fundamental or base quantities.
  e.g.: length, mass, time, etc.

Derived quantities

- The quantities which can be expressed in terms of the fundamental quantities are known as derived quantities.
  e.g.: Speed = (Distance/Time), volume, acceleration, force, pressure, etc.

Units of physical quantities

- The chosen reference standard of measurement in multiple of which, a physical quantity is expressed is called the unit of that quantity.
  Physical Quantity = Numerical Value × Unit

Quantity	Unit	Symbol	Definition
Length	metre	m	1983, 17th CGPM: The path travelled by light in vacuum during a time interval of 1/299792458 seconds. This fixes the speed of light to exactly 299,792,458 m/s.
Mass	kilogram	kg	1901, 3rd CGPM: Mass of the platinum-iridium prototype kept at BIPM in Sevres.
Time	second	s	1968, 13th CGPM: One second equals 9192631770 periods of the radiation due to the transition between the two hyperfine levels of the ground state of Cesium-133 atom.
Electric current	ampere	A	1948, 9th CGPM: Given two parallel, rectilinear conductors of negligible circular cross- section positioned 1 m apart in vaccum, one ampere is the electric current which, passing through both of them, makes them attract each other by the force of 2×10^{-7} newtons per every meter of length. This fixes the permeability of vaccum to exactly $2\pi\times10^{-7}$ H/m.
Temperature	kelvin	K	1968, 13th CGPM: One degree K

			equals 1/273.16 of the thermodynamic temperature of the triple point of water.
Quantity of substance	mole	mol	1971, 14th CGPM: The amount of a substance composed of as many specified elementary units (molecules, atoms) as there are atoms in 0.012 kg of Carbon-12.
Luminosity	candela	cd	1979, 16th CGPM: The candle (or candela) is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540 × 10^{12} hertz and that has a radiant intensity in that direction of 1/683 W/sr.

Quantity	Unit	Symbol	Equals	Definition/Dimensional Formula
Plane angle	radian	rad		The plane angle which, when centered in a circle, cuts off an arc whose length is equal to the circle radius.
Solid angle	steradian	sr		The solid angle which, when centered in a sphere, cuts off a cap whose surface equals that of a square having the radius as side.
Frequency	hertz	Hz	1 s^{-1}	[number of events or cycles]/[time].
Mechanics				
Force	newton	N	1 kg. $m.s^{-2}$	MLT^{-2}
Pressure	pascal	Pa	1 $N.m^{-2}$	$ML^{-1}T^{-2}$
Energy	joule	J	1 N.m	ML^2T^{-2}
Power	watt	W	1 $J.s^{-1}$	ML^2T^{-3}
Electromagnetism				
Charge	coulomb	C	1 A.s	M^0L^0TA
Potential	volt	V	1 $W.A^{-1}$	$ML^2T^{-3}A^{-1}$
Resistance	ohm	Ω	1 $V-A^{-1}$	$ML^2T^{-3}A^{-2}$
Conductance	siemens	S	1 $A-V^{-1}$	$M^{-1}L^{-2}T^3A^2$
Capacitance	farad	F	1 $C.V^{-1}$	$M^{-1}L^{-2}T^4A^2$
Inductance	henry	H	1 $V-s.A^{-1}$	$ML^2T^{-2}A^{-2}$
Magnetic flux	weber	Wb	1 $J.A^{-1}$	$ML^2T^{-2}A^{-1}$
Magnetic flux density	tesla	T	1 $Wb.m^{-2}$	$ML^0T^{-2}A^{-1}$
Optics				
Luminous flux	lumen	Im	1 cd.sr	[luminosity]-[solid angle].
Illuminance	lux	Ix	1 $Im.m^2$	[luminous flux]/[area].
Power	dioptre	D	1 m^{-1}	Inverse of focal length
Radioactivity and radiation				
Activity	becquerel	Bq	1 s^{-1}	[number of decay events]/[time]

Objective
GENERAL STUDIES

PART- 6
Chemistry

Chemistry

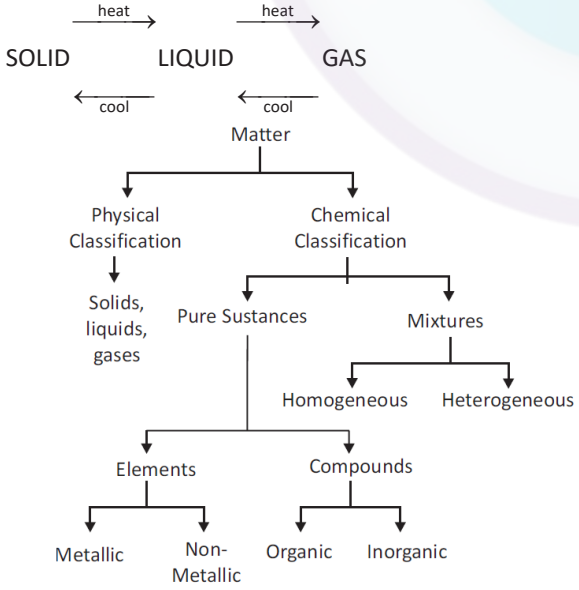
06

Chemistry is the branch of science concerned with the composition, properties, characteristics and reactions of substances. Chemistry, in our day to day lives, is associated with almost each and every task our body performs. Chemistry is playing an important role in industry and production. Chemistry is divided into various branches–**Inorganic Chemistry** is associated with the properties of compounds of the chemical elements contained in minerals.

Organic Chemistry is concerned with the compounds of Carbon. **Biochemistry** is concerned with the carbon compounds found in living organisms. **Electrochemistry** deals with the relation between electricity and chemical changes. **Geochemistry** is mainly associated with the chemical composition of rocks and minerals.

CLASSIFICATION OF MATTER

- Anything that occupies space and has mass or volume is called Matter.
- Matter undergoes changes which may be either chemical changes or physical changes.
- All matters exist in one of the three forms or states: solid, liquid and gas.
- The three states of matter are inter-conversible.



Elements

- An Element is a pure substance that is composed of only one kind of atom.
- An element cannot be composed or decomposed into simpler substance by a physical or chemical change.

e.g. Aluminium (Al), Hydrogen (H), Iron (Fe) etc.

Compounds

- Compound is a pure substance that is composed of two or more elements chemically combined in definite and constant proportions. **e.g.** water (H_2O), Sodium Chloride (NaCl) etc.

Mixtures

- A mixture is matter composed by two or more substances (elements, compound or both) in variable proportions in which each of its components still exhibit its own characteristics and properties.
- Mixtures can be heterogeneous *i.e.* non uniform, or homogeneous, *i.e.* the same throughout.
- Homogenous mixtures have the same composition throughout the sample. **e.g.** salt solution
- Heterogeneous mixture consists of two or more substances which have different compositions. **e.g.** oil and water

Solution

- A solution is a homogeneous mixture of two or more substance. The component that is present in a larger amount is called the **solvent**. The component present in a smaller quantity is called the **solute.**

Homogeneous Solution

- Homogeneous solution can be defined as that mixture which is formed by the combination of a solute in solvent, which can not be seen as separate entities either by naked eye or through microscope or ultra microscope.

Heterogeneous Solution

- Heterogeneous solution is the one in which the solute and solvent particles are seen either by naked eye or by microscope and can be separated by normal filtration or ultra filtration.

Colloids

- A colloid is a solution that has particles ranging between 1 and 1000 nanometers in diameter, yet are still able to remain evenly distributed throughout the solution.
- These are also known as **colloidal dispersions** because the substances remain dispersed and do not settle to the bottom of the container. A colloidal dispersion consists of colloids in a dispersing medium.
- Particles intermediate in size between those found in solutions and suspensions can be mixed such that they remain evenly distributed without settling out.
- A common method of classifying colloids is based on the phase of the dispersed substance and what phase it is dispersed in. The types of colloids include sol, emulsion, foam, and aerosol.
  - **Sol** is a colloidal suspension with solid particles in a liquid.
  - **Emulsion** is between two liquids.
  - **Foam** is formed when many gas particles are trapped in a liquid or solid.
  - **Aerosol** contains small particles of liquid or solid dispersed in a gas.
  - Dust is a colloid. It consists of a solid in a gas, so it is an aerosol.
  - Whipped cream is a colloid. It consists of a gas in a liquid, so it is a foam.
  - The light is reflected off the large particles and spreads out.
  - It is considered a suspension if the particles are larger than 1000 nanometres in diameter.

Tyndall Effect

- **The Tyndall Effect** describes scattering of light as a light beam passes through a colloid.

Brownian Motion

- **Brownian Motion** describes the Zig–zag movement of colloidal particles in suspension.
- The blue colour of the sky is due to **Rayleigh scattering**. The light is scattered due to the presence of dust particles suspended in the air.

Metals and Non-metals

- Metals are generally good conductors of heat and electricity.
- Silver is the best conductor of heat followed by copper.
- Mercury offers very high resistance to the passage of electric current.
- Metals are generally hard but sodium and potassium are so soft that they can be easily cut with a knife.
- Metals are malleable and ductile. Gold and silver are most malleable and best ductile metals.
- Metals are solid at room temperature except mercury (M.P – 39°C) which is liquid, caesium (M.P 28.4°C) and gallium (M.P – 29.8°C) are liquid above 30°C.
- Metals are electropositive in nature, they ionize by the loss of electrons and form positive ions.
- Almost all the metal oxides are basic in nature but zinc oxide and aluminium oxide are amphoteric.
- Lithium, sodium, potassium, rubidium and caesium are alkali metals. Alkali metals are stored under kerosene or liquid paraffin to protect them from the action of air.
- Metallic sodium is prepared by the electrolysis of molten mixture of 40% sodium chloride and 60% calcium chloride in a **Down's cell**.

Some Important Compounds

De-icing of Roads after snowfall

- De-icing is the process of removing ice from the surface by using salts. Nowadays, liquid $CaCI_2$ and $MgCI_2$ are also used for this purpose.

Alkaline Earth Metals and their Compounds

- Beryllium, magnesium, calcium, strontium, barium and radium are collectively known as alkaline earth metals. $Be(OH)_2$ is amphoteric in nature. $Mg(OH)_2$ is called milk of magnesia and used as an antacid.
- Calcium oxide (CaO) is also called quick lime. It is used in the manufacturing of glass, calcium chloride, cement, bleaching powder, calcium carbide, slaked lime, in the extraction of iron and as a drying agent for ammonia and alcohol.
- Calcium hydroxide, slaked lime [$Ca(OH_2)$] is used in the manufacturing of caustic soda, sodalime and for softening of hard water.
- Calcium sulphate, gypsum ($CaSO_4.2H_2O$) loses a part of its water of crystallization when heated upto 120°C to form $CaSO_4.1/2H_2O$ which is known as **plaster of Paris**.
- Plaster of Paris is a white powder, which sets into hard mass on wetting with water and it is used in making statues, toys, etc., in medical applications of setting fractured bones in right positions and in dentistry.

Some Important Metals

Boron (B)

Objective

GENERAL STUDIES

Chapter - 7

Biology

Biology

07

Biology (Bio = life, logos = study) is defined as the study of plants and animals. Biology as a subject encompasses in itself various functions of life that constitutes a living organism. These vital functions are feeding, movement, breathing, interaction with the environment, reproduction etc. Biology also includes a variety of other crucial topics like structure and function of organism, inheritance, growth, development, behaviour etc. Thus to provide a wider perspective to Biology, a new term 'Life Science' has been introduced to include all the above mentioned studies. Broadly there are two main divisions of Biology – Botany and Zoology. But both Botany and Zoology have various branches and each forms a new discipline in Biology.

CELL

- It is the basic structural and functional unit of life.
- Cells were first **discovered by Robert Hooke**.
- The smallest cell is 0.1 to 0.5 micrometre in bacteria. The largest cell measuring 170 mm × 130 mm, is the egg of an ostrich.
- Amoeba acquires its food through **endocytosis**.

Prokaryotic cells	**Eukaryotic cells**
Cells do not have definite nucleus.	Cells have definite nucleus.
Eg: Bacteria and Blue-green Algae	Eg: Other than Bacteria and Blue-green Algae

- Compounds called proteins carbohydrates and phospholipids make up most of the cell membrane.

Difference Between Plant Cell and Animal Cell

SI. No.	**Plant Cell**	**Animal Cell**
Cell: size and shape	Plant cells are larger, regular and rectangular in shape.	The animal cells are smaller, irregular and round in shape.
Cell wall	Present	Absent
Plasma membrane	Present	Present
Endoplasmic reticulum	Present	Present
Nucleus	Is present and lies on one side of the cell.	Is present and lies in center of the cell.
Lysosomes	Present but are very rare.	Present
Centrosomes	Absent	Present
Golgi apparatus	Present	Present
Cytoplasm	Present	Present
Ribosomes	Present	Present
Plastids	Present with chloroplast in them.	Absent
Essential nutrients	The plant cells can synthesize amino acids, vitamins and coenzymes which are required by them	The animal cells cannot synthesize amino acids, vitamins, and coenzymes which are required by them
Vacuoles	Large central vacuole is present.	Small and numerous central vacuoles are present.
Cilia	Absent	Present in most animal cells.
Mitochondria	Present and are fewer.	Present and are numerous.

Diffusion

- It is a process of movement of substance from a region of higher concentration to a region of lower concentration is low. Water also obeys the law of diffusion.

- The single largest cell in the world is of an Ostrich.
- Mitochondria contains DNA, hence capable of self replication.
- Sieve tube in plants and the mature mammalian red blood cells do not have a nucleus.
- The red blood cell carries respiratory gases.
- Matrix is a transparent, homogenous semi-fluid substance. In its active state it remains saturated with water.
- Sieve cells in plants transport nutrients in plants.
- During the transformation of tadpole into frog. The embryonic tissues like gills and tail are digested by the lysosome.
- The lysosomal enzymes of the sperm cells digest the limiting membranes of the ovum (egg). Thus the sperm is able to enter the ovum.

TISSUE

Animal tissues are divided as:

Epithetical Tissue

On the basis of cell layers

- When an epithelium has a single layer of cells it is called a simple epithelium.
- Whereas a multiple tier of cells are known as stratified epithelium.

On the basis of shape of cells

- **Cuboidal:** Its occurrence is in kidney tubules, salivery glands, inner lining of the cheek. It's main function is to give mechanical strength.
- **Columnar:** Its occurrence is in sweat gland, tear gland, salivary gland. It's main function is to give mechanical strength concerned with secretions.
- **Squamous:** It forms a single thin layer on interior surface of blood vessels, it is called endothelium.
- Its main function is to protect the underlying parts from injury, entry of germs, etc.

Connective tissue

- It's main function is to bind and support other tissues.

Types of Connective Tissue

Areolar tissue

- It fills spaces inside organs. Found around muscles, blood vessels and nerves. Its main function is to joins skin to muscles, support internal organs, help in the repair of tissues. Whereas tendons main function is to connect muscles to bones and ligament connects bones to each other.

Adipose tissue

- It occurs below skin, between internal organs and in the yellow bone Marrow. It's main function is to store fat and to conserve heat.

Skeletal tissue

- Cartilage occurs in nose, epiglottis and in intervertebral disc of mammals. It's main function is to provide support and flexibility to body part.
- Whereas bone protects internal delicate organs. Provides attachment with muscles. Bone marrow makes blood cells.

Fluid tissue

- Blood and Lymph transport O_2 nutrients, hormones to tissues and organs. Whereas leucocytes fight diseases and platelets help in clotting of blood. Lymph transport nutrients into the heart and it also forms the defense system of the body.

Muscular Tissue

- It is specialized for ability to contract muscle cells.

Types of Muscular tissue

Skeletal muscle

- It is attached primarily to bones. Its main function is to provide the force for locomotion and all other voluntary movements of the body.

Cardiac muscle

- It occurs only in the heart. The contraction and relaxation of the heart muscles help to pump the blood and distribute it to the various parts of the body.

Smooth muscle

- It can be found in stomach, intestines, and blood vessels these muscles cause slow and prolonged contractions which are involuntary.

Nervous tissue

- This tissue is specialized with a capability to conduct electrical impulses and convey information from one area of the body to another. Most of the nervous tissue (98%) are located in the central nervous system, the brain and spinal cord.

Important facts regarding animal tissue

- Muscles contain special protein called contractile protein which contract and relax to cause movement.
- Fat storing adipose tissue is found below the skin and between internal organs.
- Two bones are connected to each other by a tissue called ligament. This tissue is very elastic.
- The skin, the lining of the mouth, the lining of blood vessels, kidney tubules are all made up of epithelial tissue.
- Voluntary muscles and cardiac muscles are richly supplied with blood whereas involuntary muscles are poorly supplied with blood.

Objective GENERAL STUDIES

Chapter - 8

Practice Questions

Practice Questions 08

Statement Based GS MCQ's

1. Consider the following statements: -
(a) The covalent bond is formed by similar sharing of electrons.
(b) A coordinate covalent bond is an ionic bond in which the two shared bonding electrons are from the same one of the atoms involved in the bond.
Which of the above statements is/are correct? –
(A) Only **(a)** is correct
(B) Only **(b)** is correct
(C) Both **(a)** and **(b)** are incorrect
(D) None is Incorrect

2. Consider the following statements: -
(i) A jelly-like double membrane organelles found outside the cell nucleus in which the organelles are located. it is called Cytoplasm
(ii) Nucleopore are tiny holes present in the nuclear membrane which are involved in the movement of nucleic acids and proteins within the cell.
(iii) Ribosomes is present in both type of cells, plant cell and animal cells.
Which of the above statements is/are not correct?
(A) Only I **(B)** Only II
(C) Only III **(D)** None of these

3. Consider the following statements with respect to "Mars": -
(a) Helioseismology, a term coined by Douglas Gough, is the study of the structure and dynamics of the "Mars"
(b) its most of the surface is deeply covered by finely grained iron (III) oxide dust.
Which of the above statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Both **(a)** & **(b)** **(D)** None is correct

4. Consider the following statements with regards to sun: -
(a) The Sun is a G-type main-sequence star that comprises about 99.86% of the mass of the Solar System.
(b) The Sun is composed primarily of the chemical element's hydrogen and helium.
Which of the above statement/s is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) **(a)** and **(b)** Both **(D)** None of these

5. Consider the following statements: -
(i) The second smallest sea on Earth is Gulf of California.
(ii) Kaziranga National Park hosts two-thirds of the world's great one-horned rhinoceroses
(iii) The Line of Actual Control (LAC) is the effective border between India and the People's Republic of China.
Which of the above statements is/are correct? -
(A) **(i)** and **(ii)** Both **(B)** **(ii)** and **(iii)** Both
(C) **(iii)** and **(i)** Both **(D)** **(i)**, **(ii)** and **(iii)** All

6. Consider the following statements: -
(a) The electron neutrino (ν_e) is a subatomic lepton elementary particle which has zero net electric charge.
(b) A magnet is a material or object that produces a magnetic field just because of electric field.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Both **(a)** & **(b)** **(D)** None of these

7. Consider the following statements: -
(a) Niels Bohr introduced the atomic Hydrogen model in 1913. In the model, electrons orbit the nucleus in atomic shells.
(b) A chemical bond formed between ions of opposite charge is called ionic bond.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Both **(a)** & **(b)** **(D)** None of these

8. Consider the following statements: -
(a) In chemistry, Law of conservation of mass is a law states that matter can neither be created nor destroyed.
(b) "Elements are made of extremely small particles called atoms." Mendeleev's statement regarding the atom.
(c) Subatomic particles are particles that are slightly larger than atoms. These may be

composite particles, such as the neutron and proton or elementary particles.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Only **(c)** **(D)** None of these

9. Consider the following statements: -
(a) Molecular orbital theory is a method for describing the electronic structure of molecules using quantum mechanics.
(b) Hydrogen bonding is a special type covalent bond to a hydrogen atom.
(c) In an ideal gas, the internal energy is the sum total of the gas particles' kinetic energy.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)** and **(c)**
(C) Only **(c)** and **(a)** **(D)** All are correct

10. Consider the following statements: -
(a) The study of various external & internal both features of the organism are known as morphology.
(b) Cells consist of cytoplasm enclosed within a membrane, which contains many biomolecules such as proteins and nucleic acids.
(c) Cells were discovered by Robert Hooke in 1665.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(c)** and **(a)**
(C) Only **(b)** and **(c)** **(D)** None of these

11. Consider the following statements: -
(a) Prokaryotic cells are simpler and smaller than eukaryotic cells, and lack a nucleus, and other membrane-bound organelles.
(b) Eukaryotic cells are about fifteen times wider than a prokaryote and can be as much as a thousand times greater in volume.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Both **(a)** & **(b)** **(D)** None of these

12. Consider the following statements: -
(a) The eukaryotic DNA is always organized in many linear molecules, called chromosomes.
(b) The cell membrane, or plasma membrane, is a biological membrane that surrounds the cytoplasm of a cell.
Which of the given statements is/are correct?
(A) Only **(a)** **(B)** Only **(b)**
(C) Both **(a)** & **(b)** **(D)** None of these

13. Consider the following statements: -
(i) The four major classes of Biomolecules are – Carbohydrates, Proteins, Nucleic acids and Lipids.
(ii) Nucleosides are molecules formed by attaching a nucleobase to a ribose or deoxyribose ring. For example, cytidine.
Which of the given statements is/are correct?
(A) Only **(i)** **(B)** Only **(ii)**
(C) Both **(i)** & **(ii)** **(D)** None of these

14. Consider the following statements: -
(i) There are Four Fundamental Forces of Nature are Gravitational force, Weak Nuclear force, Electromagnetic force and Strong Nuclear force.
(ii) "Weak Nuclear force<Electromagnetic force<Gravitational force<Strong nuclear force" is the correct arrangement of fundamental forces in ascending order.
Which of the given statements is/are correct?
(A) Only **(i)** **(B)** Only **(ii)**
(C) Both **(i)** & **(ii)** **(D)** None of these

15. Consider the following statements: -
(i) A second the duration of 9192631770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.
(ii) The kilogram is defined by setting the Planck constant h exactly to 6.62607015×10^{-34} J·s ($J = kg\cdot m^2\cdot s^{-2}$), given the definitions of the meter and the second.
(iii) The luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 5.4×1014 hertz and that has a radiant intensity in that direction of 1/683 watt per steradian.
Which of the given statements is/are correct?
(A) Only **(i)** **(B)** Only **(ii)**
(C) Only **(iii)** **(D)** All are correct

16. Consider the following statements with respect to derived units that include units with special names: -
(i) The quantity surface tension is measured in newton per meter.
(ii) The quantity electric field strength is measured in volt per meter.
(iii) The quantity permittivity is measured in farad per meter.
Which of the given statements is/are correct?
(A) Only **(i)** **(B)** Only **(ii)**
(C) Only **(iii)** **(D)** All are correct

17. Consider the following statements with respect to derived units: -
(i) Square meter is the derived unit of volume.