

Q.1) Solution (c)

Al-Masudi was the first Arab author to combine history and scientific geography in his works.

Ibn Batuta stayed for a time in Southern India and traveled under the protection of **Jamal-ud-Din**, ruler of the small but powerful Nawayath sultanate on the banks of the Sharavathi river next to the Arabian Sea.

Alberuni occasionally drew parallels between Sufi doctrine and Indian philosophy, as well as that of Socrates, Pythagoras, Plato, Aristotle, and Galen.

Q.2) Solution (c)

The text is written in Prakrit.

The text was compiled by an individual named Hala. Sometimes he is referred to (in other writings) as a king, but it is not known for sure who he was and when he lived, although the Deccan seems to come up often when the text is referred to.

There is reference to the river Tapi, which cuts through Surat, almost in the centre of India.

One of the more remarkable things about the Gathasaptashati is that it is written from the perspective almost wholly of women.

Read More - <https://www.thehindu.com/books/a-scorpions-bitten-her-halas-gathasaptashati/article25567965.ece>

Q.3) Solution (c)

According to Nyaya, there were four valid sources of knowledge — perception, inference, comparison, and testimony, and four sources of invalid knowledge: memory, doubt, error (false certainty), and hypothetical argument (“If there was no fire, there wouldn’t be smoke, but there is smoke, so there must be fire”).

Vaisheshika school of Hinduism, like Buddhism, accepted only two reliable means to knowledge: perception and inference.

Q.4) Solution (c)

Key Terms	Meaning
Kalatika	Superintendent of pearl fisheries
Kanatikan	Chief of scribes
Nalakars	Reed workers
Lonakaras	Salt makers
Koluvanikan	Trader in ploughshares
Kolu	Hard iron tip fixed to a wooden ploughshare
Ur	Assembly of village elders
Emporium (a Graeco-Roman term).	Coastal town associated with foreign trade
Pattinam	Port
Sathavahakula	Family of caravan traders
Kumbhakarakula	Family of potters
Setthikula	Family of merchants cum bankers
Kammarakula	Family of metal smiths
Atavirakkhikakula	Family of forest guards
Dhannavanijakula	Family of grain merchants
Pannikakula	Family of greengrocers

Q.5) Solution (a)

Daridra-Charudatta tells the story of the courtesan Vasantasena and is interesting for the same story was developed by Śhudraka into the more famous play Mrichakatika.

Charudatta is the chief protagonist of the play The Mricchakatika written by Sudraka.

Read More - <https://www.eng-literature.com/2022/02/charudatta-mricchakatika-character.html>

Q.6) Solution (d)

The Ajivikas' central belief was that absolutely everything is predetermined by fate, or niyati, and hence human action has no consequence one way or the other.

Ajivikas most important leader Makkhali Goshala was a contemporary of both the Buddha and Mahavira.

Like Jains, Ajiviks wore no clothes, and lived as ascetic monks in organised groups. They were known to practice extremely severe austerities, such as lying on nails, going through fire, exposing themselves to extreme weather, and even spending time in large earthen pots for penance. There was no caste discrimination and people from all walks of life joined them.

Buddhist and Jain texts are very critical of the Ajiviks and Makkhali Goshala, which shows us that the Ajiviks must have been considered fairly important rivals of both.

Q.7) Solution (d)

Among the sixteen Mahajanapadas of ancient India, Kuru was the northernmost.



Q.8) Solution (b)

The Statue of Gomateshwara was built in deference to the Jain deity Bahubali. It does not represent the last Tirthankara of Jains.

The largest Buddhist monastery in India is the Tawang Monastery, located in the state of Arunachal Pradesh. It was founded in the 17th century and is an important center for Buddhist learning and practice.

The Khajuraho temples are a group of Hindu and Jain temples located in Khajuraho, Madhya Pradesh. The temples were built by the Chandela kings between the 10th and 12th centuries and are renowned for their intricate carvings and sculptures.

The Hoysaleswara temple is a Hindu temple located in Halebidu, Karnataka. It was built in the 12th century by the Hoysala Empire and is dedicated to Lord Shiva. The temple is known for its intricate carvings and sculptures, and is a significant example of Hoysala architecture.

Q.9) Solution (c)

Jainism spread in South India under the leadership of Bhadrabahu (not Sthalabahu).

The Jainas who remained under the leadership of Bhadrabahu were called Digambaras (not Shvetambaras) after the first council held at Pataliputra (modern Patna) by Sthalabahu.

Initially, like the Buddhists, the Jainas were not image worshipers. Later they began to worship Mahavira and also the twenty-three tirthankaras.

Jainism enjoyed the patronage of the Kalinga king Kharavela in the first century BC.

Q.10) Solution (a)

The famous ancient ports of Kalinga were Tamralipti, Palur, Pithunda, Chelitalo, Manikpatna, etc.

Q.11) Solution (b)

Methane is the second most abundant anthropogenic GHG after carbon dioxide (CO₂), accounting for about 20 percent of global emissions.

Methane is more than **25 times as potent as carbon dioxide at trapping heat** in the atmosphere. **Over the last two centuries, methane concentrations in the atmosphere have more than doubled, largely due to human-related activities.**

Because methane is both a powerful greenhouse gas and short-lived compared to carbon dioxide, achieving significant reductions would have a rapid and significant effect on atmospheric warming potential.

Source: <https://www.epa.gov/gmi/importance-methane>

Q.12) Solution (c)

They have larger-than-usual nostrils to increase the flow of oxygen, and their large lungs and heart circulate blood very efficiently through their body.

Cheetahs Don't Roar, They Meow and Purr. There are four big cats that roar: lions, tigers, leopards, and jaguars. They are able to make their intimidating noises because they have a ligament instead of the epihyal bone in the voice box.

Except lions, which live in groups called prides, most big cats are relatively solitary animals. They prefer to be on their own except when mating or raising their young. **Cheetahs are "neither solitary nor social but are a little of both."**

Female cheetahs are mostly solo creatures. They only pair up to mate and then stick with their cubs while they are raising them. Their home ranges tend to be larger than males'. Males are usually solitary, but brothers will often live in groups called coalitions.

Q.13) Solution (c)

The white-bellied musk deer (*Moschus leucogaster*). They are mostly found in Kedarnath Wildlife Sanctuary. **It is the state animal of Uttarakhand—the white-bellied musk deer. The solitary animal, which roams the high alpine region of the Himalayas at an elevation range of 2,500- 5,000 metres,** is extremely vulnerable during the harsh season. There they fall easy prey to poachers who set fire to block off their escape route or set wire snares to trap the animal, and then kill them to extract the musk pod. Carried by the male deer in its abdomen, the musk emits a sweet persistent aroma and is **highly valued for its cosmetic and alleged pharmaceutical properties.** According to the International Union for Conservation of Nature and Natural Resources (IUCN), one kilogram of musk can fetch US \$45,000 in the international market. A musk pod yields about 25 grams of the brown waxy substance. As of now, the animal is listed as an endangered species in the Red List Data of IUCN and has been placed in the **Schedule I under the Endangered and Rare Species of the Wildlife Protection Act, 1972**

Q.14) Solution (c)

Kelp forests can be seen along much of the west coast of North America. Kelp are large brown algae that live in cool, relatively shallow waters close to the shore. They grow in dense groupings

much like a forest on land. These underwater towers of kelp provide food and shelter for thousands of fish, invertebrates, and marine mammal species.

In ideal conditions, kelp can grow up to 18 inches per day, and in stark contrast to the colorful and slow-growing corals, the giant kelp canopies tower above the ocean floor. Like trees in a forest, these giant algae provide food and shelter for many organisms.

These dense canopies of algae generally occur in cold, nutrient-rich waters. Because of their dependency upon light for photosynthesis, kelp forests form in shallow open waters and are rarely found deeper than 49-131 feet.

Q.15) Solution (c)

Soil compaction is the reduction of soil volume due to external factors; External pressure due to the use of heavy machinery and inappropriate soil management can **lead to the compaction of subsoil, creating impermeable layers within the soil that restrict water and nutrient cycles.**

This process can cause on-site effects such as **reduced crop growth, yield and quality as well as off-site effects such as increased surface water run-off, soil erosion, greenhouse gas emissions, eutrophication, reduced groundwater recharge and a loss of biodiversity.**

Soil is a storage of greenhouse gases (GHG). It is seen as a major terrestrial pool of carbon. Providing nutrient cycling and filtering services, soil regulates GHG fluxes. **The loss of gases from soil to the atmosphere is often enhanced by the influence of soil compaction on permeability and changes in crop growth.**

Q.16) Solution (c)

Organisation for Economic Co-operation and Development (OECD) launched Inclusive Forum on Carbon Mitigation Approaches.

The Inclusive Forum on Carbon Mitigation Approaches (IFCMA) is an initiative designed to help improve the global impact of emissions reduction efforts around the world through better data and information sharing, evidence-based mutual learning and inclusive multilateral dialogue.

The IFCMA will take stock of mitigation policy instruments that countries use to reduce carbon emissions and estimate the emissions that these instruments relate to (mapping to the emissions base).

The IFCMA will develop and apply a consistent methodology to assess the effects of carbon mitigation policies and policy packages on emission reductions at the country level.

Q.17) Solution (a)

The Koronivia Joint Work on Agriculture (KJWA) is a landmark decision under the United Nations Framework Convention on Climate Change (UNFCCC) that recognizes the unique potential of agriculture in tackling climate change. The Koronivia decision addresses six interrelated topics on soils, nutrient use, water, livestock, methods for assessing adaptation, and the socio-economic and food security dimensions of climate change across the agricultural sectors.

India has opposed the developed world's efforts to extend the scope of mitigation to agriculture at the ongoing UN climate summit in Egypt, saying rich nations do not want to reduce emissions by changing their lifestyles and are "searching for cheaper solutions abroad.

Q.18) Solution (a)

Seahorses are mainly found in shallow tropical and temperate saltwater throughout the world, from about 45°S to 45°N.

The coastal ecosystems of India house nine out of 12 species found in the Indo-Pacific, one of the hotspots of seahorse populations that are distributed across diverse ecosystems such as seagrass, mangroves, macroalgal beds, and coral reefs.

The species are distributed along the coasts of eight States and five Union Territories from Gujarat to Odisha, apart from Lakshadweep and the Andaman and Nicobar Islands.

Source: <https://journalsofindia.com/migration-of-great-seahorses/>

Q.19) Solution (a)

Borthekera

- *Garcinia pedunculata*, commonly called 'Borthekera' is a medicinal plant found in Assam.
- The tree is endemic to the south-eastern regions of Asia such as parts of Myanmar and north-eastern parts of India.
- It is traditionally forbidden for raw consumption.

- It has been found to protect from heart diseases.
- Borthekera is a rich source of antioxidants.

Source: <https://iasbaba.com/2023/02/borthekera/>

Q.20) Solution (c)

Kalakkad–Mundanthurai Tiger Reserve (KMTR)

- State: Tamil Nadu
- **It was declared as the “First Tiger Reserve of Tamil Nadu” and the 17th Tiger Reserve of the country.**
- It consists of the Kanyakumari Wildlife sanctuary in the south and the Nellai Wildlife Sanctuary in the North.
- The river Thamirabarani originates from this tiger reserve.
- **The reserve is also known as the “River Sanctuary” with as many as 14 rivers originating from this Tiger Reserve.**
- Flora: This region has got vegetation types which gradually change from dry thorn forest to dry deciduous, moist deciduous and a patch of West coast wet evergreen forests on the higher reaches of the reserve.
- Fauna: Lion Tailed Macaque, Nilgiri Tahr, Nilgiri Pipit, Grey Headed Bulbul, Blue Winged Parakeet etc.

Q.21) Solution (b)

About Asbestos:

- **Russia is the world's largest producer of asbestos, with an annual production of around 700,000 million metric tons in 2022**
- It is a naturally occurring fibrous silicate mineral.
- Asbestos is a group of six naturally occurring minerals made up of heat-resistant fibers.
- It consists of flexible fibers resistant to heat, electricity and corrosion.
- Asbestos is an excellent electrical insulator and is highly fire-resistant, so for much of the 20th century it was very commonly used across the world as a building material.
- Construction materials contained asbestos because it is an effective insulator.
- Asbestos in cloth, paper, cement, plastic and other materials makes them stronger.
- Asbestos mainly comes from Russia, Kazakhstan and China.

- The toxic mineral was once mined throughout North America.
- Asbestos has been used on ships as both a fire retardant and an insulator to protect sailors from the constant and jarring vibrations of ships' engines.

Health Effects

- It is known to be a highly toxic material and a carcinogen.
- Inhaled or swallowed asbestos fibers can become trapped in the respiratory or digestive systems of the body, accumulating over time.
- **Repeated exposure can cause inflammation and damage the DNA.**
- The following illnesses have been associated with asbestos exposure: lung cancer, COPD, mesothelioma and asbestosis.

Q.22) Solution (c)

Sea cucumbers are marine invertebrates that live on the seafloor found generally in tropical regions. **They act like garbage collectors of the ocean world, and they recycle nutrients, thus playing an important role in keeping coral reefs in good condition.**

They are an integral part of the coral ecosystem as one of the main by-products of the sea cucumbers digestion of sand is calcium carbonate and this is essential for the survival of the coral reefs.

They are protected under the Wildlife Protection Act, 1972 under Schedule 1.

Conservation Efforts: In 2020, the Lakshadweep Islands administration created the world's first conservation area – 239 sq. km – for sea cucumbers

Q.23) Solution (c)

Phylum Porifera

- They are the **lowest multicellular animals belonging to the kingdom Animalia.**
- The word "Porifera" mainly refers to the pore bearers or pore bearing species.
- The cells of Poriferans are loosely organized.
- They are mostly found in marine water. Only a few are found in freshwater.
- They are either radially symmetrical or asymmetrical.
- Their body is usually cylindrical.

- Sponges do not have nervous, digestive or circulatory systems. **Instead, most rely on maintaining a constant water flow through their bodies to obtain food and oxygen and to remove wastes**
- **Sponges have three asexual methods of reproduction: after fragmentation; by budding; and by producing gemmules.**

Q.24) Solution (c)

In the production of these fuels, crops that are genetically engineered to take in high amounts of carbon are grown and harvested as biomass.

This class of biofuels includes electrofuels and solar fuels

Electrofuels or e-fuels (synthetic fuels) are an emerging class of drop-in replacement fuels that are made by storing energy from renewable sources in the chemical bonds of liquid or gas fuels, aiming to be a carbon-neutral fuel

They are an alternative to aviation biofuel

A solar fuel is a synthetic chemical fuel produced from solar energy. Solar fuels can be produced through photochemical (i.e. activation of certain chemical reactions by photons), photobiological (i.e., artificial photosynthesis), thermochemical (i.e., through the use of solar heat supplied by concentrated solar thermal energy to drive a chemical reaction), and electrochemical reactions (i.e. using the electricity from solar panels to drive a chemical reaction)

Q.25) Solution (a)

The Gujarat government has proposed a second home for Asiatic lions in Gujarat at Barda Wildlife Sanctuary, about 100km away from their present home at Gir National Park.

Barda Wildlife Sanctuary area falls into two districts, Porbandar and Jamnagar in the state of Gujarat.

Q.26) Solution (d)

Statement Analysis

How are GDP and GVA different?

- While the GDP calculates national income by adding up all expenditures in the economy, the GVA calculates the national income from the supply side by looking at the value added in each sector of the economy.
- The two measures of national income are linked as follows:
- $GDP = GVA + \text{Tax} - \text{Subsidy}$
- As such, if the government earned more from taxes than it spent on subsidies, GDP will be higher than GVA. If, on the other hand, if the government provided subsidies in excess of its tax revenues, the absolute level of GVA would be higher than that of GDP.
- **Simply put, GDP provides the demand side of the economy, and GVA the supply side. Hence both statement 1 and 2 are incorrect**

Source: <https://indianexpress.com/article/explained/india-gdp-data-provisional-estimates-covid-pandemic-lockdown-explained-7946558/>

Q.27) Solution (c)

Statement Analysis

- The Marginal Cost of Funds based Lending Rate (MCLR) was introduced in the year 2016 by the Reserve Bank of India (RBI) as a replacement for the earlier base rate regime. The MCLR framework was introduced to ensure that banks passed on the benefit of any reduction in the cost of funds to their customers. **Hence statement 1 is correct**
- The MCLR is the minimum interest rate below which a bank cannot lend to its customers, except in certain cases allowed by the RBI. The MCLR is calculated based on four components: (i) Marginal cost of funds, (ii) Negative carry on account of CRR (Cash Reserve Ratio), (iii) Operating costs, and (iv) Tenor premium. The MCLR is reviewed periodically by banks, and any changes in the cost of funds or operating costs are reflected in the MCLR. **Hence statement 2 correct**
- The introduction of the MCLR framework was aimed at ensuring that banks pass on the benefits of any reduction in the cost of funds to their customers in a more transparent and efficient manner. This has been seen as a positive development for borrowers, especially those with floating rate loans. In fact, the MCLR framework has been designed to ensure that banks do not discriminate against small borrowers, and that the lending rates are more responsive to changes in the cost of funds. **Hence Statement 3 is incorrect.**

Source: <https://www.bajajfinserv.in/insights/mclr-and-its-effects-on-loan-demystified>

Q.28) Solution (b)

Statement Analysis

Law of Demand

- Consumers buy more of a good when the price is lower than when the price is higher. This law applies to the majority of goods/services, but not Giffen and Veblen goods.
- For Giffen and Veblen goods, when the price rises, the quantity demanded also increases. This means that they have positive price elasticity of demand, while goods/services that follow the law of demand have negative price elasticity.
- A classic example of a Giffen good is an inferior staple food, like a potato. The demand for this staple food is driven by poverty. As the price of cheap staple food rises, consumers have even less income to spend on supplemental expensive food. The demand for expensive food would decrease and this dynamic is referred to as the income effect. Because of the smaller amount of disposable income, they are driven to buy more of the inferior food (the potato). **Hence statement 2 is correct**
- A Veblen good on the other hand, is typically a luxury good. A price increase in these types of goods/services enhances the exclusiveness and status, thereby making them more desirable and increasing demand for them. **Hence statement 1 is incorrect**

Source: <https://www.picmonic.com/api/v3/picmonics/462/pdf>

Q.29) Solution (d)

Statement Analysis

- Depreciation of the Indian rupee can lead to elevated inflation in the economy because it makes imports more expensive. As a result, the prices of imported goods and services may increase, leading to overall inflation in the economy. **Hence statement 1 is correct**
- Depreciation of the Indian rupee can lead to capital flight from the economy as investors may choose to move their investments to other countries where the currency is more stable. This could lead to a decrease in foreign investment in the Indian economy, which could have a negative impact on economic growth. **Hence statement 2 is correct**
- The statement "It can lead to better prospects for export-oriented sectors" is incorrect since a weaker rupee makes imports more expensive, which could lead to a decrease in demand for exports. However, in the short term, a weaker rupee can indeed make Indian exports more competitive in international markets, leading to increased exports. **Hence statement 3 is correct**
- Depreciation of the Indian rupee can increase the current account deficit as the cost of imports increases while the value of exports remains unchanged. This can lead to an

imbalance in trade and an increase in the current account deficit. **Hence statement 4 is correct**

Source: <https://www.outlookindia.com/business/rupee-at-record-low-rupee-vs-dollar-why-is-rupee-falling-and-how-will-it-impact-the-indian-economy-and-people-why-is-indian-rupee-falling-news-205888>

<https://timesofindia.indiatimes.com/business/india-business/explained-what-a-falling-rupee-means-for-indias-economy-and-your-finance/articleshow/92693455.cms>

Q.30) Solution (a)

Statement Analysis

- The Crowding Out Effect in the Indian economy refers to a situation where an increase in government spending leads to a decrease in private investment, thereby reducing the overall effectiveness of government spending on the economy. This happens because the government borrows money from the market to finance its increased spending, which leads to an increase in interest rates. This increase in interest rates makes borrowing more expensive for private businesses and individuals, reducing their willingness to invest.

Source: <https://www.indianeconomy.net/splclassroom/what-is-crowding-out-effect/>

Q.31) Solution (c)

Statement Analysis

- During a recession, the demand for credit usually decreases, leading to a decrease in interest rates and a fall in bond yields. The increase in bond yields is more likely when investors are uncertain about the economic outlook and prefer to invest in safer assets such as bonds. **Hence statement 1 is incorrect**
- When the RBI hikes interest rates, it leads to an increase in bond yields. Higher interest rates lead to a decrease in the demand for credit, which results in a fall in the bond prices and an increase in bond yields. **Hence statement 2 is incorrect**
- Inflation erodes the purchasing power of money, which means that investors require a higher yield to compensate for the loss of purchasing power. As a result, bond yields tend to increase during periods of inflation. **Hence statement 3 is correct**

Source: <https://www.rba.gov.au/education/resources/explainers/bonds-and-the-yield-curve.html>

Q.32) Solution (b)

Statement Analysis

- Human capital formation is partly a social process and partly a conscious decision of the possessor of the human capital.
- Physical capital is tangible and can be easily sold in the market like any other commodity. Human capital is intangible; it is endogenously built in the body and mind of its owner. Human capital is not sold in the market; only the services of the human capital are sold and, hence, there arises the necessity of the owner of the human capital to be present in the place of production. **Hence Statement 1 and 2 are correct**
- The physical capital is separable from its owner, whereas, human capital is inseparable from its owner. **Hence statement 3 is incorrect**
- The two forms of capital differ in terms of mobility across space. Physical capital is completely mobile between countries except for some artificial trade restrictions. Human capital is not perfectly mobile between countries as movement is restricted by nationality and culture.
- Both forms of capital depreciate with time but the nature of depreciation differs between the two. Continuous use of machine leads to depreciation and change of technology makes a machine obsolete. In the case of human capital, depreciation takes place with ageing but can be reduced, to a large extent, through continuous investment in education, health, etc. **Hence statement 4 is incorrect**

Source: <https://ncert.nic.in/ncerts/l/keec105.pdf>

Q.33) Solution (a)

Statement Analysis

- When RBI increases the interest rate, banks tend to deposit more money with RBI which reduces the amount of money in circulation in the economy. This reduction in the money supply can lead to a decrease in inflation. **Hence statement 1 is correct**
- Decrease in taxes can lead to an increase in disposable income which can lead to higher demand for goods and services. This increase in demand can lead to inflationary pressures. **Hence statement 2 is incorrect**

- When RBI sells government bonds in open market operations, it reduces the amount of money in circulation in the economy. This decrease in the money supply can lead to a decrease in inflation. **Hence statement 3 is correct**
- Increased public expenditure can lead to higher demand for goods and services, which can lead to inflationary pressure. Therefore, it is unlikely to lead to a decrease in inflation. **Hence statement 4 is incorrect**

Source: <https://www.economicshelp.org/blog/2269/economics/ways-to-reduce-inflation/>

Q.34) Solution (b)

Statement Analysis

- The exchange rate of the Indian Rupee is not entirely market-regulated. The Reserve Bank of India (RBI) and the government of India do intervene in the forex market to manage the volatility in the exchange rate. **Hence statement 1 is incorrect**
- If the demand for dollars increases in India and the demand for rupees decreases in the US, then the value of rupee will depreciate. This is because there will be a lesser demand for rupees, leading to a decrease in its value. **Hence statement 2 is incorrect**
- India is a net importer of crude oil, which means that it has to pay for oil imports in dollars. Thus, an increase in crude oil prices increases the demand for dollars, leading to a depreciation of the rupee. **Hence statement 3 is correct**
- The fourth statement is incorrect. A rise in interest rates in the US and European markets typically leads to an outflow of funds from emerging markets like India to developed markets. This results in a depreciation of the rupee. **Hence statement 4 is incorrect**

Source: <https://indianexpress.com/article/explained/explained-making-sense-of-exchange-rate-7910455/>

Q.35) Solution (a)

Statement Analysis

- Additional Tier-1 (AT1) bonds are perpetual bonds that do not have any maturity date. They are considered as quasi-equity instruments, and their purpose is to provide a cushion to absorb losses during times of financial stress. AT1 bonds are issued by banks and financial institutions to meet their capital requirements under the Basel III framework.

These bonds are unsecured, which means that they do not have any collateral backing them. **Hence option a is correct**

- As mentioned earlier, AT1 bonds do not have any maturity date, so statement b) is incorrect. Additionally, AT1 bonds are unsecured and do not have any collateral backing them, so they cannot be classified as secured bonds. **Hence option b is incorrect**
- AT1 bonds pay regular interest, but the interest rate may be variable or fixed depending on the terms of the bond issuance. The interest payments on AT1 bonds are discretionary, which means that if a bank faces financial stress, it can suspend interest payments. However, the bank is not obligated to pay the interest payments that were suspended during the period of financial stress. The statement that AT1 bonds are repurchased at face value is also incorrect. The bondholders can sell these bonds in the secondary market, and the price of the bond can fluctuate depending on market conditions. **Hence option c is incorrect**
- AT1 bonds were introduced as part of the Basel III framework, which was implemented after the global financial crisis of 2008-09. The purpose of AT1 bonds was to improve the quality and quantity of bank capital and to ensure that banks have sufficient buffers to absorb losses during times of financial stress. **Hence option d is incorrect**

Source: <https://www.thehindubusinessline.com/blexpainer/what-is-the-yes-bank-at1-bonds-fiasco-all-about/article66430965.ece>

Q.36) Solution (d)

Statement Analysis

- All natural fats and oils are a combination of monounsaturated, polyunsaturated and saturated fatty acids or trans fatty acids. **Hence statement 1 is correct**
- Our body needs the first two categories(monounsaturated and polyunsaturated) of 'healthy' fats as apart from being a major source of energy, they help absorb some vitamins and minerals and build cell membranes and the sheaths surrounding nerves. **Hence statement 2 is incorrect**
- Saturated fatty acids or trans fats, which are considered harmful as they clog arteries and result in hypertension, heart attacks, and other cardiovascular issues. **Hence statement 3 is incorrect**

Source: <https://www.thehindu.com/sci-tech/health/the-hindu-explains-what-are-trans-fats-and-why-are-they-harmful/article61751296.ece>

Q.37) Solution (c)

Statement Analysis

- The earth's centrifugal force also varies with latitude. The centrifugal force is the outward force felt whenever you are in a rotating reference frame. While the centrifugal force is a non-fundamental force caused ultimately by the inertia of bodies, it is very real for the body in a rotating reference frame, such as your body on the surface of the rotating earth.
- The centrifugal force is proportional to the tangential speed of the rotating reference frame. The equator is moving quickly as the earth's spins (Rotational Speed), so it has a lot of centrifugal force. In contrast, the poles are not spinning at all, so they have zero centrifugal force.
- Since centrifugal force points outwards from the centre of rotation, it tends to cancel out a little bit of earth's gravity. If the earth were not spinning, you would be heavier as you would feel the full force of gravity.
- Since there is more centrifugal force at the equator to cancel gravity, your overall weight at the equator versus at the poles is even less. The centrifugal force on your body at the equator is 0.034 m/s^2 times the mass of your body. The centrifugal force at the poles is zero.
- Hence the rotational speed is maximum at the equator and the centrifugal force is highest at the equator. In contrast the poles have negligible rotational speed and zero centrifugal force. This leads the body to be heavy at poles as compared to equator. **Hence statements 2 and 4 are correct**

Source: <https://www.wtamu.edu/~cbaird/sq/mobile/2014/01/07/do-i-weigh-less-on-the-equator-than-at-the-north-pole/>

Q.38) Solution (b)

Statement Analysis**Donation of Eye**

About 35 million people in the developing world are blind and most of them can be cured. About 4.5 million people with corneal blindness can be cured through corneal transplantation of donated eyes. Out of these 4.5 million, 60% are children below the age of 12.

- Eye donors can belong to any age group or sex.
- People who use spectacles, or those operated for cataract, can still donate the eyes.

- People who are diabetic, have hypertension, asthma patients and those **without communicable diseases** can also donate eyes. **Hence statement 1 is incorrect and 2 is correct**
- Eyes must be removed within 4-6 hours after death. Inform the nearest eye bank immediately.
- The eye bank team will remove the eyes at the home of the deceased or at a hospital.
- Eye removal takes only 10-15 minutes. It is a simple process and does not lead to
- any disfigurement.
- Persons who were infected with or died because of AIDS, Hepatitis B or C, rabies, acute leukaemia, tetanus, cholera, meningitis or encephalitis cannot donate eyes. **Hence statement 3 is correct**
- An eye bank collects, evaluates and distributes the donated eyes.
- All eyes donated are evaluated using strict medical standards.
- Those donated eyes found unsuitable for transplantation are used for valuable research and medical education.
- The identities of both the donor and the recipient remain confidential.
- One pair of eyes gives vision to up to FOUR CORNEAL BLIND PEOPLE.

Source: <https://ncert.nic.in/textbook/pdf/jesc110.pdf>

Q.39) Solution (b)

Statement Analysis

The key difference between control rod and neutron moderator is that control rods are able to absorb neutrons whereas neutron moderators can slow down the neutrons.

Moderator

- Material in the core which slows down the neutrons released from fission so that they cause more fission. It is usually water, but may be heavy water or graphite. **Hence options 1,2 and 3 are correct**

Control rods or blades

- These are made with neutron-absorbing material such as cadmium, hafnium or boron, and are inserted or withdrawn from the core to control the rate of reaction, or to halt it. In some PWR reactors, special control rods are used to enable the core to sustain a low level of power efficiently. (Secondary control systems involve other neutron absorbers, usually boron in the coolant – its concentration can be adjusted over time as the fuel burns

up.) PWR control rods are inserted from the top, BWR cruciform blades from the bottom of the core. **Hence option 4 and 5 are incorrect**

Source: <https://world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-power-reactors/nuclear-power-reactors.aspx>

Q.40) Solution (b)

Statement Analysis

Basis of differentiation	DNA viruses	RNA viruses
Definition	Are viruses whose genetic information is stored in the form of DNA	Are viruses whose genetic information is stored in the form of RNA
Genome	Genetic material consists of deoxyribonucleic acid (DNA)	Genetic material consists of ribonucleic acid (RNA)
Double-stranded/Single-stranded DNA/ RNA	<ul style="list-style-type: none"> - Two types: double-stranded DNA and single-stranded DNA viruses - Double stranded DNA viruses are more common 	<ul style="list-style-type: none"> - Two types: double-stranded RNA and single-stranded RNA - Single-stranded RNA viruses are more common
Protein Synthesis	Viral DNA is first transcribed into RNA, and mRNA is then translated into viral proteins	RNA viruses already contain RNA in the genome and can hence bypass transcription during protein synthesis
Examples	Herpesviruses, Adenoviruses, Poxviruses, Hepadnaviruses, and Papillomaviruses	Retroviruses, Reoviruses, Picornaviruses, Togaviruses, and Orthomyxoviruses
Diseases caused	Chickenpox, herpes, and smallpox	Influenza, the common cold, Aids, polio, Ebola hemorrhagic fever, SARS, measles, and West Nile fever

Source: <https://www.aatbio.com/resources/faq-frequently-asked-questions/what-are-the-differences-between-dna-viruses-and-rna-viruses>

Q.41) Solution (a)

Explanation

- The Supermassive Blackhole at the center of our Milky Way Galaxy discovered by the Event Horizon Telescope is named Sagittarius A* (pronounced as Sagittarius A-star), which is option (a).
- Option (b) M87 refers to the Supermassive Blackhole located in the center of the Messier 87 galaxy, which was also imaged by the Event Horizon Telescope in 2019.
- Option (c) Cygnus X-1 is a stellar-mass black hole located in the constellation Cygnus.
- Option (d) "The Unicorn" is the name of black hole that is closest to the earth.

Source: <https://www.space.com/15421-black-holes-facts-formation-discovery-sdcmp.html>

Q.42) Solution (c)

Explanation

- Lumpy skin disease is caused by the lumpy skin disease virus (LSDV), which belongs to the genus capripoxvirus, a part of the poxviridae family (smallpox and monkeypox viruses are also a part of the same family). The LSDV shares antigenic similarities with the sheeppox virus (SPPV) and the goatpox virus (GTPV) or is similar in the immune response to those viruses. **Hence statement 1 is correct**
- It is not a zoonotic virus, meaning the disease cannot spread to humans. It is a contagious vector-borne disease spread by vectors like mosquitoes, some biting flies, and ticks and usually affects host animals like cows and water buffaloes. **Hence statement 2 is incorrect**
- The disease was first observed in Zambia in 1929, subsequently spreading to most African countries extensively, followed by West Asia, Southeastern Europe, and Central Asia, and more recently spreading to South Asia and China in 2019. As per the FAO, the LSD disease is currently endemic in several countries across Africa, parts of West Asia (Iraq, Saudi Arabia, Syrian Arab Republic), and Turkey. **Hence statement 3 is correct**

Source: <https://www.thehindu.com/news/national/explained-what-is-the-lumpy-skin-disease-affecting-cattle-in-india-what-are-its-economic-implications-and-does-it-affect-milk-for-consumption/article65911590.ece>

Q.43) Solution (d)

Explanation

- SMRs have reduced fuel requirements. Power plants based on SMRs may require less frequent refuelling, every 3 to 7 years, in comparison to between 1 and 2 years for conventional plants. Some SMRs are designed to operate for up to 30 years without refuelling. **Hence statement 1 is correct**
- Given their smaller footprint, SMRs can be sited on locations not suitable for larger nuclear power plants. Prefabricated units of SMRs can be manufactured and then shipped and installed on site, making them more affordable to build than large power reactors, which are often custom designed for a particular location, sometimes leading to construction delays. **Hence statement 2 is correct**
- In comparison to existing reactors, proposed SMR designs are generally simpler, and the safety concept for SMRs often relies more on passive systems and inherent safety characteristics of the reactor, such as low power and operating pressure. This means that in such cases no human intervention or external power or force is required to shut down systems, because passive systems rely on physical phenomena, such as natural circulation, convection, gravity and self-pressurization. These increased safety margins, in some cases, eliminate or significantly lower the potential for unsafe releases of radioactivity to the environment and the public in case of an accident. **Hence statement 3 is correct**

Source: <https://www.iaea.org/newscenter/news/what-are-small-modular-reactors-smrs>

Q.44) Solution (c)

Statement Analysis

- Mitochondrial DNA (mtDNA) is not double-stranded and linear like nuclear DNA; it is circular in structure and single-stranded. **Hence statement 1 is incorrect**
- Mitochondrial DNA is maternally inherited in humans, and there is no evidence of paternal inheritance. **Hence statement 2 is correct**
- Mitochondrial DNA has a much smaller size and fewer genes than nuclear DNA, and hence it carries less genetic information. **Hence statement 3 is incorrect**
- Unlike nuclear DNA, which is enclosed within the nuclear envelope, mitochondrial DNA is located in the cytoplasm of the cell and is not enclosed by a nuclear envelope. **Hence statement 4 is correct**

Source: <https://pediaa.com/difference-between-mitochondrial-dna-and-nuclear-dna/>

Q.45) Solution (c)

Statement Analysis

Tidal Disruption Event

- The astronomical phenomenon of the destruction of a star by a black hole is formally called a tidal disruption event (TDE).
- A tidal force is the difference in the strength of gravity between two points. If the tidal force exerted on a body is greater than the intermolecular force that keeps it together, the body will get disrupted.
- During a TDE, the tidal force of a black hole disrupts the star in vicinity. While about half of the star's debris continues on its original path, the other half is attracted by the black hole's gravitational pull. The gradual growth of this material bound to the black hole produces a short-lived flare of emission, known as a tidal disruption event.
- **Option 1 refers** to the well-known phenomenon of ocean tides that are caused by the gravitational pull of the Moon and the Sun on the Earth's oceans.
- **Option 2 seems** to describe a hypothetical scenario that is not currently observed in astrophysics. While a planet could potentially be disrupted by the gravitational pull of a black hole, this is not commonly referred to as a Tidal Disruption Event.
- **Option 3 describes** a different astrophysical phenomenon called a galactic collision, which can lead to the formation of supermassive black holes, but it is not the same as Tidal Disruption Events.

Source: <https://www.thehindu.com/sci-tech/science/science-for-all-what-is-a-tidal-disruption-event/article66312960.ece>

Q.46) Solution (b)

Explanation:

- Article 351 states that it shall be the duty of the Union Government to promote the spread of the Hindi language, to develop it so that it may serve as a medium of expression for all the elements of the composite culture of India. Hence, statement 1 is incorrect.
- Article 350-Language to be used in representations for redress of grievances- Every person shall be entitled to submit a representation for the redress of any grievance to any officer or authority of the Union or a State in any of the languages used in the Union or in the State, as the case may be. Hence, statement 2 is correct.

Source: <https://rajbhasha.gov.in/en/constitutional-provisions>

Q.47) Solution (b)

Explanation:

- Article 14 of the Indian Constitution, which provides for equality before the law has been borrowed from the British constitution. **Hence, statement 1 is incorrect.**
- In Indra sawhney v. Union of India case SC opined that Article 14 has to be understood in the light of Directive principles. **Hence, statement 2 is correct.**
- Under it, person means legal person as well as individuals. **Hence, statement 3 is incorrect.**

Q.48) Solution (d)

Explanation:

- Although human traffic is prohibited, Article 23 permits the State to impose compulsory service for public purposes like military or social service. **Hence, statement 1 is correct.**
- In imposing such service, the state shall not make discrimination on grounds only of religion, race, caste or class. This means gender-based discrimination is allowed. **Hence, statement 2 is correct.**

Q.49) Solution (c)

Explanation:

- Article 32 (3): Parliament can empower any local court to issue writs, within its jurisdiction. **Hence, statement 1 is correct.**
- Judicial review is considered a basic structure of the constitution (Indira Gandhi vs Raj Narain Case 1975). Judicial review under Articles 32 and 226 is basic feature of the constitution. **Hence, statement 2 is correct.**

Q.50) Solution (c)

Explanation:

- The President appoints Chief Election Commissioner and Election Commissioners. They have tenure of six years, or up to the age of 65 years, whichever is earlier. They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court of India.
- The President appoints regional commissioners after consultation with the election commission to assist the election commission. The conditions of service and tenure of office also shall be determined by the President. They are appointed to assist the Chief Election Commissioner in the performance of his duties.

Q.51) Solution (a)

Explanation:

Article 348(1)(a) of the Constitution of India states that all proceedings in the Supreme Court and in every High Court, shall be in English language. Hence statement 1 is correct

Clause (2) of the Article 348 of the Constitution states that notwithstanding anything in sub-clause (a) of clause (1), the Governor of a State may, with the previous consent of the President, authorize the use of Hindi Language, or any other language used for any official purposes of the State, in proceedings in the High Court having its principal seat in that State. Hence statement 2 is incorrect

Q.52) Solution (d)

Explanation:

The Constitution divides the taxing powers between the Centre and the states in the following ways:

- The Parliament has exclusive power to levy taxes on subjects enumerated in the Union List.
- The state legislatures have exclusive power to levy taxes on subjects enumerated in the State List.
- Both the parliament and the State legislature can levy taxes on subjects enumerated in the Concurrent List.

The residuary power of taxation (that is, the power to impose taxes not enumerated in any of the three lists) is vested with the Parliament. Under this provision, the Parliament has imposed gift tax, wealth tax and expenditure tax.

The Constitution also draws a distinction between the power to levy and collect a tax and the power to appropriate the proceeds of the tax. Income tax is levied and collected by the Centre but its proceeds are distributed between the Centre and the states.

Hence both the statements are not correct.

Q.53) Solution (c)

Explanation:

- Option (a) is not correct: The Inter-State Council was set up in 1990, and Punchhi commission in 2007. So, it is not possible that for the first time Punchhi Commission would recommend the establishment of an inter-state council. The commission was constituted by the Government of India in 2007 to examine Centre-State relations.
- Option (b) is not correct: Khusro Committee is also known as the Agricultural Review Committee which was established in 1989. The committee examined the problems of agricultural and rural credits and recommended major systematic improvements and not inter-state relations.
- Option (c) is correct: The Central government appointed a six-member Administrative Reforms Commission (ARC) in 1966 under the chairmanship of Morarji Desai (followed by K Hanumanthayya). Its terms of references included, among others, the examination of Centre-State relations. The First Administrative Reforms Commission for the first time recommended the establishment of an Inter-State Council under Article 263 of the Constitution. It also recommended transferring more financial resources to the states to reduce their dependence upon the Centre and deployment of Central armed forces in the states either on their request or otherwise. The recommendations were not accepted by the central government.
- Option (d) is not correct: The Inter-State Council was set up in 1990 following the recommendations of the Sarkaria Commission. But it was already recommended by the first ARC in 1966 itself. The clamour for more autonomy by states led to the constitution of Sarkaria Commission in 1983 which was asked to examine and review existing arrangements between the Centres and the States in all spheres and recommend appropriate changes and measures.

Q.54) Solution (c)

Explanation:

The Election Commission is a permanent and an independent body established by the Constitution of India directly to ensure free and fair elections in the country.

Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to parliament, state legislatures, the office of president of India and the office of vice president of India shall be vested in the election commission.

The powers and functions of the election commission are:

- To determine the territorial areas of the electoral constituencies throughout the country on the basis of the Delimitation Commission Act of Parliament.
- To prepare and periodically revise electoral rolls and to register all eligible voters.
- To notify the dates and schedules of elections and to scrutinise nomination papers.
- To grant recognition to political parties and allot election symbols to them. **Hence option 1 is correct.**
- To act as a court for settling disputes related to granting of recognition to political parties and allotment of election symbols to them.
- To appoint officers for inquiring into disputes relating to electoral arrangements.
- To determine the code of conduct to be observed by the parties and the candidates at the time of elections.
- To prepare a roster for publicity of the policies of the political parties on radio and TV in times of elections.
- To advise the president on matters relating to the disqualifications of the members of Parliament.
- To advise the governor on matters relating to the disqualifications of the members of state legislature.
- To cancel polls in the event of rigging, booth capturing, violence and other irregularities.
- To request the president or the governor for requisitioning the staff necessary for conducting elections.
- To supervise the machinery of elections throughout the country to ensure free and fair elections.
- To advise the president whether elections can be held in a state under president's rule in order to extend the period of emergency after one year. **Hence option 3 is correct.**
- To register political parties for the purpose of elections and grant them the status of national or state parties on the basis of their poll performance.

On matters relating to disqualifications under the Anti-Defection law, the presiding officers of either House of Parliament take their decision without seeking advice from the election commission. **Hence option 2 is not correct.**

Q.55) Solution (d)

Explanation:

The subject of the local government is assigned to the States (mentioned in the State List under the Seventh Schedule of the Constitution). **Hence, statement 1 is incorrect.**

Regarding the application of Part IX to the union territories, the Article 243L of the constitution states that the “provisions of this **Part shall apply to the Union territories** and shall, in their application to a Union territory, have effect as if the references to the Governor of a State were references to the Administrator of the Union territory appointed under article 239 and references to the Legislature or the Legislative Assembly of a State were references, in relation to a Union territory having a Legislative Assembly, to that Legislative Assembly provided that the President may, by public notification, direct that the provisions of this Part shall apply to any Union territory or part thereof subject to such exceptions and modifications as he may specify in the notification”. **Hence, statement 2 is incorrect.**

Q.56) Solution (a)

Explanation:

The Central Information Commission has been constituted with effect from 12-10-2005 under the Right to Information Act, 2005. The jurisdiction of the Commission extends over all Central Public Authorities. Thus it is a statutory body. **Hence statement 1 is not correct.**

The powers and functions of the Central Information Commission are:

- It is the duty of the Commission to receive and inquire into a complaint from any person who has been refused information, not been able to submit application due to non-appointment of PIO, etc.
- It can order an inquiry into any matter if there are reasonable grounds (suo-moto power).
- While inquiring, the commission has the powers of a civil court. **Hence statement 2 is correct.**
- all public records must be given to the Commission during inquiry for examination

- seeking an annual report from the public authority on compliance with this Act;
- Imposing penalties under this Act. It can impose a penalty on the Public Information Officer (PIO) at the rate of ₹250 per day up to a maximum of ₹25,000.
- It can also recommend (cannot initiate by itself) for disciplinary action against the errant official. **Hence statement 3 is not correct.**

Q.57) Solution (b)

Explanation:

CBI is a non-constitutional and non-statutory body and enjoys the status of an attached office to the Ministry of Personnel.

It derives its powers from the Delhi Special Police Establishment Act (DSPE), 1946.

With the passage of time, requests were made by various quarters for CBI to take up investigation even in conventional crimes like assassinations, kidnappings, hijackings, crimes committed by extremists, violation of Official Secrets Act, large scale Banks and Insurance Frauds etc. and others specific cases like Bhagalpur Blindings, Bhopal Gas Tragedy etc. Since early 1980's, constitutional courts also started referring cases to CBI for enquiry/investigation on the basis of petitions filed by the aggrieved persons in cases of murders, dowry deaths, rape etc. **Hence statement 1 is not correct.**

Thus, CBI has grown into a multidisciplinary investigation agency over a period of time. Today it has the following three divisions for investigation of crime:

- Anti-Corruption Division - for investigation of cases under the Prevention of Corruption Act, 1988 against Public officials and the employees of Central Government, Public Sector Undertakings, Corporations or Bodies owned or controlled by the Government of India - it is the largest division having presence almost in all the States of India.
- Economic Offences Division - for investigation of major financial scams and serious economic frauds, including crimes relating to Fake Indian Currency Notes, Bank Frauds and Cyber Crime.
- Special Crimes Division - for investigation of serious, sensational and organized crime under the Indian Penal Code and other laws on the requests of State Governments or on the orders of the Supreme Court and High Courts.
- The laws under which CBI can investigate Crime are notified by the Central Government under section 3 of the DSPE Act, 1946.

- CBI can suo-moto take up investigation of offences notified in DSPE act, only in the Union Territories.

Taking up investigation by CBI in the boundaries of a State requires the prior consent of that State as per Section 6 of the DSPE Act

The Central Government can authorize CBI to investigate such a crime in a State but only with the consent of the concerned State Government.

The Supreme Court and High Courts, however, can order CBI to investigate such a crime anywhere in the country without the consent of the State.

CVC shall exercise superintendence over the functioning of the CBI insofar as it relates to the investigation of offences under the Prevention of Corruption Act, 1988. **Hence statement 2 is correct.**

Q.58) Solution (c)

Explanation:

Based on the recommendations made by various Committees and Commissions, various reforms have been introduced in our electoral system, election machinery and election process. Some of the important reforms include:

- The 61st Constitutional Amendment Act of 1988 reduced the voting age from 21 years to 18 years for the Lok Sabha as well as the assembly elections.
- The EVMs were used for the first time in 1998 on an experimental basis in selected constituencies in the elections to the Assemblies of Rajasthan, Madhya Pradesh, and Delhi. The EVMs were used for the first time in the general elections (entire state) to the Assembly of Goa in 1999.
- In 1999, a provision was made for voting by certain classes of persons through postal ballot. Thus, any class of persons can be notified by the Election Commission, in consultation with the government, and the persons belonging to such notified class can give their votes by postal ballot, and not in any other manner, at elections in their constituency or constituencies.
- In **2003**, the election Commission issued an order directing every candidate seeking election to the Parliament or a State Legislature to furnish on his nomination paper the declaration of Criminal Antecedents, Assets, etc., by Candidates.
- In **2010**, a provision was made to confer voting rights to the citizens of India residing outside India due to various reasons. Accordingly, every citizen of India – (a) whose name

is not included in the electoral roll (b) who has not acquired the citizenship of any other country (c) who is absent from his place of ordinary residence in India owing to his employment, education or otherwise outside India (whether temporarily or not) – shall be entitled to have his name registered in the electoral roll in the Parliamentary / Assembly constituency in which his place of residence in India as mentioned in his passport is located.

- The Supreme Court in September **2013** upheld the right of voters to reject all candidates contesting the elections, saying it would go a long way in cleansing the political system of the country. The top court directed the Election Commission to have an option of NOTA on EVMs and ballot papers in a major electoral reform. The NOTA option was first used in the assembly elections held in five states in 2013.

Hence, option (c) is correct.

Q.59) Solution (c)

Explanation:

- The Model Code of Conduct for the guidance of political parties and candidates is a set of norms which has been evolved with the consensus of political parties who have consented to abide by the principles embodied in the said code and also binds them to respect and observe it in its letter and spirit.
- The Election Commission ensures its observance by political party(-ies) in power, including ruling parties at the Centre and in the States and contesting candidates in the discharge of its constitutional duties for conducting the free, fair and peaceful elections to the Parliament and the State Legislatures under Article 324 of the Constitution of India. It is also ensured that official machinery for the electoral purposes is not misused. Further, it is also ensured that electoral offences, malpractices and corrupt practices such as impersonation, bribing and inducement of voters, threat and intimidation to the voters are prevented by all means. In case of violation, appropriate measures are taken.
- The Model Code of Conduct is enforced from the date of announcement of election schedule by the Election Commission and is operational until the process of elections is completed.
- Some of the features of MCC are:
 - The Ministers shall not combine their official visit with electioneering work and shall not also make use of official machinery or personnel during the electioneering work, however, the Commission has exempted the Prime Minister from the operation of the model code of conduct provision pertaining to the

combining of an official visit with electioneering visit. **Hence option 2 is not correct.**

- No transport including official air-crafts, vehicles etc. shall be used for the furtherance of the interest of any party or a candidate
- There shall be a total ban on the transfer and posting of all officers/officials directly or indirectly connected with the conduct of the election. If any transfer or posting of an officer is considered necessary, prior approval of the Commission shall be obtained. **Hence option 1 is correct.**
- There is no objection provided that he does not make any political speech on the occasion and the function is to be conducted only by Govt. officials. No advertisement depicting the photograph of Chief Minister/Minister/Speaker shall be released.
- Governor may participate and address the Convocation. Chief Minister or Ministers may be advised not to participate and address the Convocation.
- The Central Ministers / Chief Minister / Ministers in the States and other political functionaries can attend the Independence Day/Republic Day celebration. However, it will be ensured that no political speeches highlighting the achievements of the party in power are made on the occasions. **Hence option 3 is not correct.**
- Ministers and other authorities shall not sanction grants/payments out of discretionary funds from the time elections are announced.
- Fresh release of funds under MPs/MLAs/MLCs Local Area Development Fund of any scheme shall not be made in any area where the election is in progress, till the completion of the election process.

Q.60) Solution (b)

Explanation:

- A party is recognised as a state party in a state if any of the following conditions is fulfilled:
 - If it secures six percent of the valid votes polled in the state at a general election to the legislative assembly of the state concerned; and, in addition, it wins 2 seats in the assembly of the state concerned; or
 - If it secures **six percent** of the valid votes polled in the state at a general election to the Lok Sabha from the state concerned; and, in addition, it wins 1 seat in the Lok Sabha from the state concerned; **hence, option (b) is not correct.**

- If it wins three percent of seats in the legislative assembly at a general election to the legislative assembly of the state concerned or 3 seats in the assembly, whichever is more; or
- If it wins 1 seat in the Lok Sabha for every 25 seats or any fraction thereof allotted to the state at a general election to the Lok Sabha from the state concerned; or
- If it secures eight percent of the total valid votes polled in the state at a General Election to the Lok Sabha from the state or to the legislative assembly of the state. This condition was added in 2011.
- The number of recognized parties keeps on changing on the basis of their performance in the general elections. There are 9 national parties, 47 state parties and 1593 registered-unrecognized parties in the country. The national parties and state parties are also known as all-India parties and regional parties respectively.
- AAP became the 9th national party in 2022.

Q.61) Solution (a)

The East India Company Act 1813, also known as the Charter Act 1813, renewed the charter issued to the British East India Company and continued the Company's rule in India. **However, the Company's commercial monopoly was ended, except for the tea and opium trade and the trade with China, reflecting the growth of British power in India.**

The Act expressly asserted the Crown's sovereignty over British India and permitted Christian missionaries to propagate English and preach their religion in Company's territories. The power of the provincial governments and courts in India over European British subjects was also strengthened by the Act, and financial provision was also made to encourage a revival in Indian literature and for the promotion of science.

Q.62) Solution (c)

After the revolt, indigo production **collapsed in Bengal**. But the planters now **shifted their operation to Bihar**. With the discovery of synthetic dyes in the late nineteenth century their business was severely affected, **yet they managed to expand production**.

Q.63) Solution (b)

Civil Servants for the East India Company used to be nominated by the Directors of the Company and thereafter trained at Haileybury College in London and then sent to India.

Following Lord Macaulay's Report of the Select Committee of British Parliament, the concept of a merit based modern Civil Service in India was introduced in 1854.

The Montagu-Chelmsford reforms proposed that one-third of total appointments to higher civil service posts should go to Indians.

Q.64) Solution (c)

The **Santhal rebellion** was a rebellion in present-day Jharkhand and West Bengal against both the British East India Company and zamindari system by the Santhal. It started on June 30, **1855** and on November 10, 1855, martial law was proclaimed by the East India Company which lasted until January 3, 1856.

The **Kol uprising**, also known in British records as the Kol mutiny was a revolt of the tribal Kol people of Chhota Nagpur that took place between **1831 and 1832**.

The **Paika rebellion**, Or the Paika Bidroha, was the first ever armed rebellion against Company rule in India in **1817**. The Paikas rose in rebellion under Bakshi Jagabandhu and projecting Lord Jagannath as the symbol of Odia unity, the rebellion quickly spread across most of Odisha before being put down by the Company's forces.

The **Sannyasi rebellion or monk rebellion (1770-77)** was a revolt by the sannyasis and sadhus (Hindu ascetics, respectively) in Bengal, India in the late 18th century which took place around Murshidabad and Baikunthapur forests of Jalpaiguri under the leadership of Pandit Bhabani Charan Pathak.

Q.65) Solution (d)

In March 1859 thousands of ryots in Bengal refused to grow indigo. As the rebellion spread, ryots refused to pay rents to the planters, and attacked indigo factories armed with swords and spears, bows, and arrows. Women turned up to fight with pots, pans, and kitchen implements.

Those who worked for the planters were socially boycotted, and the gomasthas – agents of planters – who came to collect rent were beaten up.

Q.66) Solution (b)

Lex Loci Act, 1850 is related to the right to inherit ancestral property to Hindu converts to Christianity. Lex Loci Act, proposed in 1845 and passed in 1850, provided the right to inherit ancestral property to Hindu converts to Christianity.

Q.67) Solution (a)

- **The Rampa Rebellion of 1922, also known as the Manyam Rebellion**, was a tribal uprising led by Alluri Sitarama Raju in Godavari Agency of Madras Presidency, British India.
- It began in August 1922 and lasted until the capture and killing of Raju in May 1924.
- The Rampa administrative area, situated in the hills of the present Godavari districts of Andhra Pradesh, comprised around 700 square miles, and comprised mostly of Tribal population.
- They had traditionally supported their food requirements, through the use, in particular, of the Podu system, whereby each year some areas of jungle forest were burned to clear land for cultivation.
- The British wanted to take control of the forest land for building railways and ships.
- Also, the British authorities wanted to improve the economic usefulness of lands in Godavari Agency, an area that was noted for the prevalence of malaria and blackwater fever.
- This commercial exploitation had a great impact on the local tribal people, as they lost their land to traditional cultivation activities.
- Thus, the revolt was mainly against the passing of Madras Forest Act, 1882 which put restrictions on the free movement of tribal communities in the forest land and prevented them from engaging in their traditional Podu agricultural system.
- Alluri Sitarama Raju, a sanyasi, a person of justice and strong will power, raised his voice against the unlawful British Policy.
- He harnessed the discontent of the tribal people to support his anti-colonial zeal, whilst also accommodating the grievances of those Muttadars who were sympathetic to his aim.
- Tribal people were the victims of the colonial rulers' greed and Raju wanted justice for them.
- So, Raju headed the Rampa Rebellion along with the band of tribal people and other followers.
- Alluri Raju also used guerrilla warfare to fight against the British. He raided many police stations like Dammanapalli, Krishna Devi Petra and Annavaram.

- The revolt started in August 1922 and ended in May 1924 after the capturing and killing of Raju.
- However, there was no commission of enquiry placed on the problems faced by the tribes and the reason for rebellion.
- In 2022, two special postal covers were released, celebrating the centenary of the Rampa rebellion, led by Alluri Sitarama Raju.

Q.68) Solution (d)

Statement Analysis:

Statement 1	Statement 2
Correct	Incorrect
Cornwallis Code, (1793), the enactment by which Lord Cornwallis, governor-general of India, gave legal form to the complex of measures that constituted the administrative framework in British India known as the Cornwallis, or Bengal, system. The land revenue assessment (the major source of revenue) was fixed permanently with zamindars, or hereditary revenue collectors. These native Indians, provided they paid their land taxes punctually, were treated as landowners, but they were deprived of magisterial and police functions, which were discharged by a newly organized government police. This “permanent settlement” provided the British with an Indian landed class interested in supporting British authority.	The higher ranks of the services were restricted to Europeans, thus depriving Indians of any responsible office. As a whole, the system brought by Cornwallis code gave social and political stability to Bengal at the price of neglecting the rights of the lesser landholders and undertenants and of excluding Indians from any responsible share in the administration.
Statement 3	Statement 4
Incorrect	Correct
Cornwallis code reorganized the judiciary. The law administered was Hindu and Muslim personal law and a modified Muslim criminal code.	The Cornwallis Code: 1. There was a separation of revenue and justice administration. 2. European subjects were also brought under jurisdiction.

	<p>3. Government officials were answerable to the civil courts for actions done in their official capacity.</p> <p>4. The principle of sovereignty of law was established.</p>
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Q.69) Solution (d)

Statement Analysis:

Statement 1	Statement 2
Incorrect	Incorrect
<p>The Meerut Conspiracy Case was a controversial court case that was initiated in British Raj in March 1929 and decided in 1933. Several trade unionists, including three Englishmen, were arrested for organizing an Indian railway strike. The British government convicted 27 leftist trade union leaders under a lawsuit.</p> <p>Meerut Thesis is not related to Meerut conspiracy trial.</p>	<p>The HSRA: Determined to overcome the Kakori setback, the younger revolutionaries, inspired by socialist ideas, set out to reorganise Hindustan Republic Association at a historic meeting in the ruins of Ferozshah Kotla in Delhi (September 1928). Under the leadership of Chandra Shekhar Azad, the name of HRA was changed to Hindustan Socialist Republican Association (HSRA).</p> <p>Meerut thesis is not related to formation of HSRA.</p>
Statement 3	Statement 4
Correct	Correct
<p>In 1936–1937, the co-operation between socialists and communists reached its peak. Serious discussions took place between the leaders of Congress Socialist Party (CSP) and those of the Communist Party of India, which had in the meantime overcome the split in its ranks and established a united all-India organization. The results of these discussions were spelt out in the document adopted at the second national conference</p>	<p>Congress Socialist Party adopted the thesis in 1936.</p>

of the CSP held in Meerut in January 1936. That document is popularly known as The Meerut Thesis.

Q.70) Solution (a)

Statement Analysis:

Pair 1	Pair 2
Correct	Incorrect
East Indian (daily): Henry Vivian Derozio	Indian Mirror: Devendranath Tagore and N N Sen
Pair 3	Pair 4
Incorrect	Correct
Bahishkrit Bharat (Marathi Fortnightly): B.R.Ambedkar	National Herald: Jawaharlal Nehru

Q.71) Solution (c)

On September 1, 2022, super typhoon Hinnamnor, the strongest tropical cyclone of the year, was hurtling towards Taiwan from the western Pacific Ocean and another tropical storm called Gardo was moving towards Hinnamnor from its southeast and as they approached each other, they showed a textbook example of what is known as the Fujiwhara Effect.

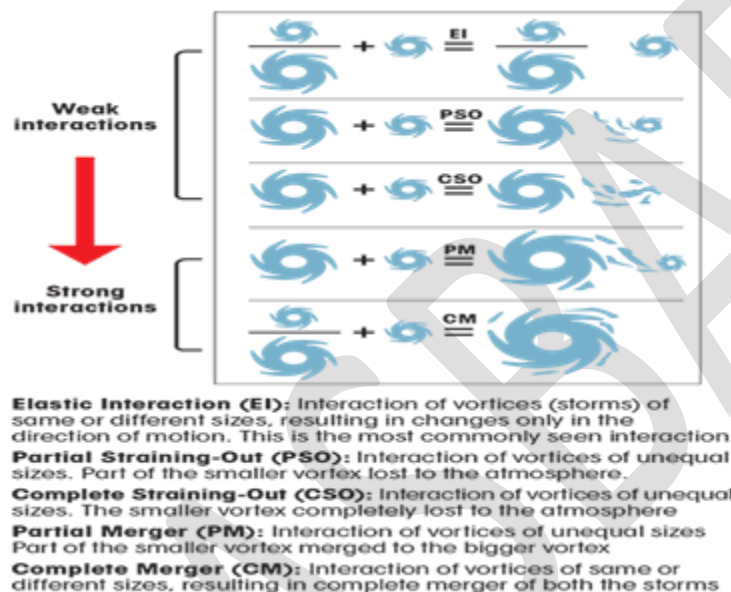
Do You Know?

- Fujiwhara effect was identified by Sakuhei Fujiwhara, a Japanese meteorologist in 1921.
- Fujiwhara effects refers to any interaction between two tropical storms formed around the same time in the same ocean region with their centres or eyes at less than 1,400 km, with intensity that could vary between a depression (wind speed under 63 km per hour) and a super typhoon (wind speed over 209 km per hour).
- The interaction could lead to changes in the track and intensity of either or both storms' systems.
- In rare cases, the two systems could merge, especially when they are of similar size and intensity, to form a bigger storm.

Effect:

- It makes cyclones more unpredictable due to their rapid intensification, carrying of more rain and newer ways of moving over warming oceans.
- This is because each of the interactions between the two storm systems is unique and very difficult to capture with current climate models.
- This may result in large-scale devastation.
- In an increasingly warming world, a dance and merger between two large enough tropical cyclones over any of the global oceans could lead to the formation of a mega cyclone, causing devastation along coast-lines.

Different ways in which Fujiwhara Effect can take place:



<https://www.downtoearth.org.in/news/climate-change/perfect-storm-what-is-the-fujiwhara-effect-85337>

Q.72) Solution (c)

Stunning Rainbow-like 'Iridescent Pileus Cloud' Appears Over Chinese City.

Pileus cloud is formed when base cloud pushes a moist current of air upwards and water vapour from the current condenses resembling a crest. It happens in the cumulus or cumulonimbus cloud hence statement 3 is correct.

The reason for rainbow like appearance is **diffraction of light** which when passes through droplets and ice crystals in the cloud give rainbow like appearance hence statement 1 is correct and statement 2 is wrong.

This phenomenon occurs for few minutes or hours since cloud above them absorb/eat it.

Pileus cloud are also knowns as accessory cloud or cap cloud or scarf cloud.



<https://www.indiatimes.com/trending/environment/iridescent-pileus-cloud-rainbow-578246.html>

Q.73) Solution (d)

In News: Ukraine-Russia rivalry and recently, Turkey saying, Greece is increasing military presence in the area.

Country bordering Aegean Sea are Turkey and Greece. Sea of Marmara connected to the Aegean Sea via the Dardanelles Strait, and to the Black Sea through the Bosphorus Strait.



Q.74) Solution (b)

In News: A Lok Sabha member from Shivamogga district in Karnataka, urged the Centre to levy a hefty import duty on arecanut to check falling prices in the domestic market.

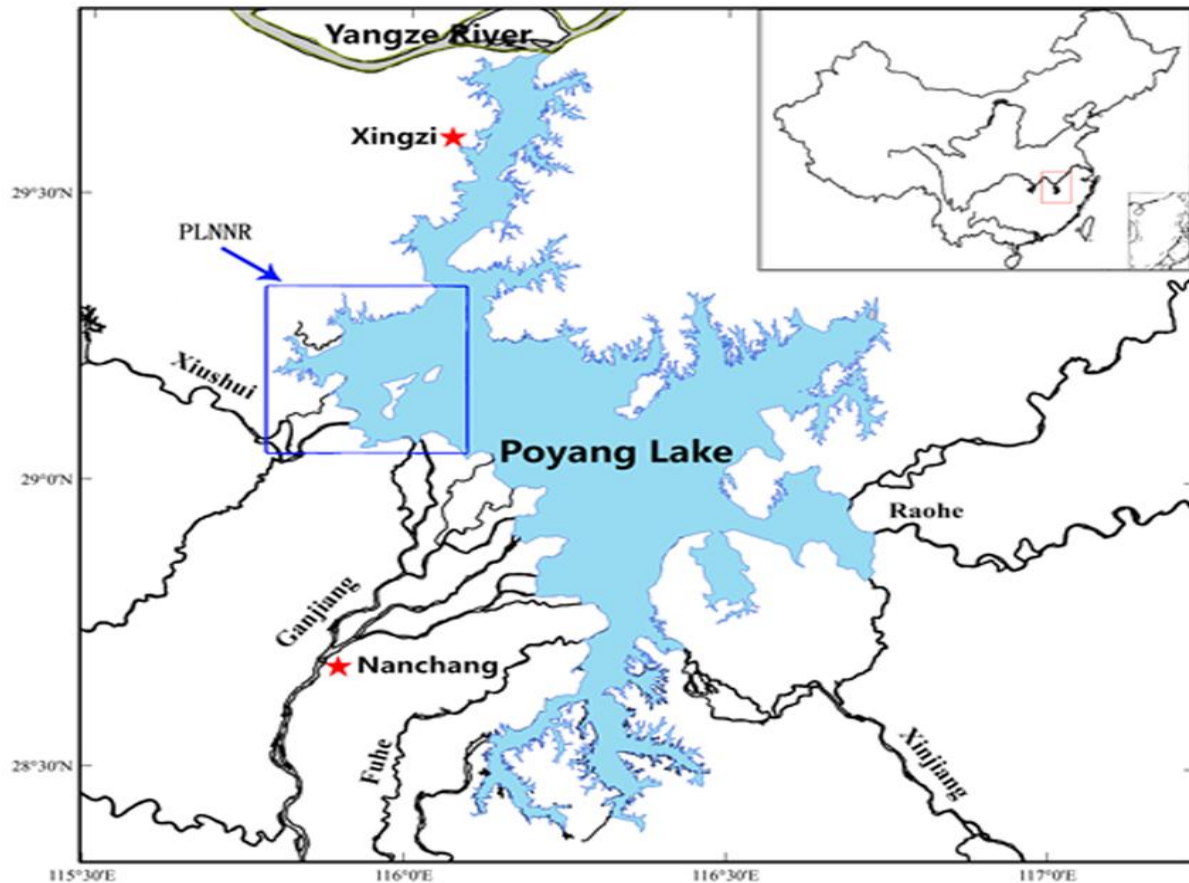
- The cultivation of arecanut is mostly confined to 28° north and south of the equator.
- It grows well within the temperature range of 14°C and 36°C and is adversely affected by temperatures below 10°C and above 40°C.
- Arecanut is capable of growing in a variety of soils
- June – December is found to be the optimum.
- **Karnataka** produces around 80 per cent of the country's arecanut,
- Arecanut is considered a **horticulture crop** in Karnataka, a **commercial crop** at the national level and a **dry fruit** at an international level.

Q.75) Solution (d)

In News: Long draught and heatwave have impacted the water level of this lake in China.

It is China's biggest freshwater lake hence Statement 1) and 2) is wrong.

It is a shallow lake. The lake is fed by the Gan, Xin, and Xiu rivers, which connect to the Yangtze through a channel. Hence statement 3) is also wrong.



Q.76) Solution (d)

Palaeontologist have found the skeletal remains of Europe's largest meat-eating dinosaur at Isle of Wight.

It is the largest and second most populated Island of England with Portsea Island as the most populated. Hence statement 1 is correct.

It is a UNESCO Biosphere Reserve. Hence statement 2 is correct.

It is separated from the mainland by a deep strait known as the Solent. Hence statement 3 is correct.

The dinosaur lived during Cretaceous Period. The dinosaur belongs to the Spinosaurus group of dinosaurs. It is considered as the longest-known dinosaur predator. Hence statement 4 is correct.



Q.77) Solution (d)

Forecasters said the rain arriving in California is being caused by an atmospheric river phenomenon → Pineapple Express.

Atmospheric rivers typically occur in the extratropical North Pacific/Atlantic, South-Eastern Pacific, and South Atlantic oceans often making landfall on the west coasts of North and South America. Hence statement 2 is incorrect.

According to NOAA atmospheric rivers are long, narrow regions in the atmosphere that transport most of the water vapor outside the tropics. Atmospheric rivers usually begin over tropical regions. Warm temperatures cause ocean water to evaporate and rise into the

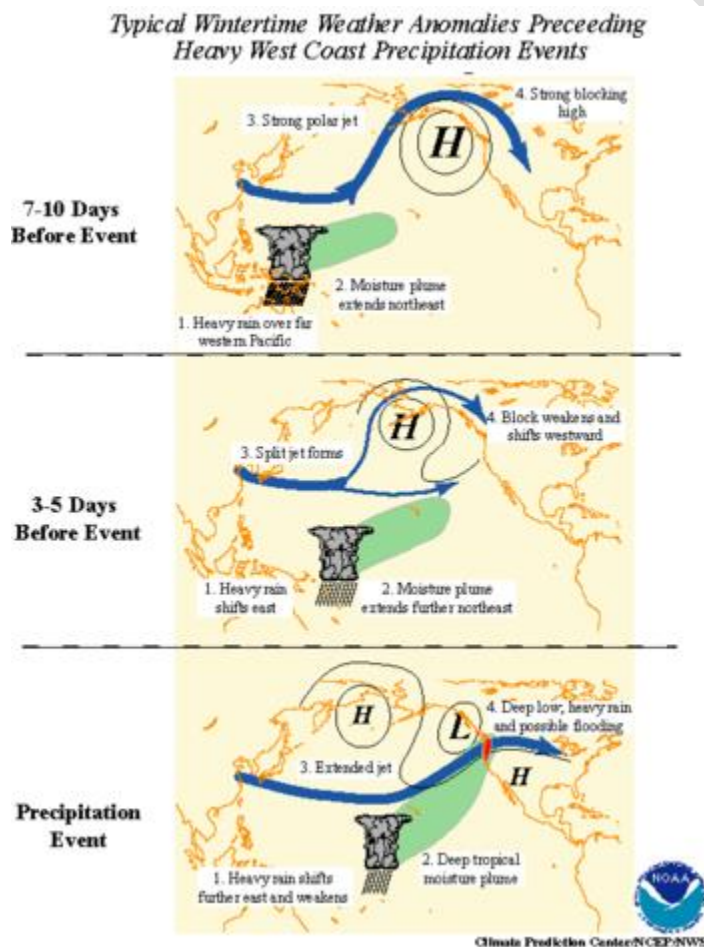
atmosphere. Strong winds help to carry the water vapor through the atmosphere. The moisture is collected from Caribbean and when they interact with land it fell as snow or heavy river of rain. Hence statement 3 is correct.

Although atmospheric rivers come in different shapes and sizes, for one to be a “true Pineapple Express,” location matters. So necessary conditions are:

The moisture is pulled from the tail end which should start from Hawaii into the atmosphere, must start near Hawaii.

The river must stretch continuously through the atmosphere to the U.S. West Coast.

According to the NOAA between 30% and 50% of the annual precipitation on the West Coast occurs from just a few atmospheric river events.



<https://economictimes.indiatimes.com/news/international/us/pineapple-express-atmospheric-rivers-bring-high-wind-gusts-and-power-outages-throughout-us/articleshow/96552626.cms>

Q.78) Solution (c)

Recently there was Earthquake in Turkey and Syria with magnitude of around 7.8.

An Earthquake is a natural event which cause earth shake. The main cause of an Earthquake is the release of energy from the Earth's crust in the form of Seismic Waves that travel in all directions. These seismic waves are produced mainly through tectonic movement of the plates inside the earth crust. Earthquakes occur in the crust or upper mantle, from the earth's surface to about 400 miles below the surface. Hence statement 2 is correct.

The vibrations that arise from earthquakes are measured on instruments known as seismographs.

The hypocentre is the point within the earth where an earthquake rupture starts. The epicentre is the point directly above it at the surface of the Earth. Also commonly termed the focus. Hence statement 1 is incorrect.

Three types of earthquakes→

- Tectonic Earthquake
- Volcanic Earthquake
- Human-Induced Earthquakes

Almost 80% of all the planet's earthquakes occur along the rim of the Pacific Ocean, called the "Ring of Fire"; a region that encircles the Pacific Ocean and is home to 452 volcanoes (over 75% of the world's active and dormant volcanoes).

The largest recorded earthquake in the world was a magnitude 9.5 in Chile on May 22, 1960. Hence statement 3 is correct.

Q.79) Solution (d)

In News: Kalapani dispute between India and Nepal

The Kali River originates at Kalapani in the Himalayas in the Pithoragarh district of Uttarakhand. The river flows for about 300 km before merging into the Ghaghara River in Uttar Pradesh.

The Kali River forms the boundary between Nepal and Kumaun. The river is also known as the Mahakali River in Nepal. It originates in Nepal and flows towards India, forming the boundary between the two countries for a distance of about 80 km.

The Chameliya hydro-electric project is located on the river in Uttarakhand and has a capacity of 30 MW, while the Tanakpur hydro-electric project is located downstream on the river in

Uttarakhand and has a capacity of 120 MW. However, this statement is not necessary to answer the given question as it only asks for the correct statements.

Hence All the above statements are correct.

Kali River also known as Sharda River.

It discharges in Ghaggar river in UP.

About the dispute:

The Treaty of Sugauli signed by the Kingdom of Nepal and British was signed on 4 March 1816 between the East India Company and Guru Gajraj Mishra following the Anglo-Nepalese War of 1814–16. It located the Kali River as Nepal's western boundary with India.

The discrepancy in locating the source of the river led to boundary disputes between India and Nepal, with each country producing maps supporting their own claims.



Q.80) Solution (c)

Context: Recently Meghalayan age was in news. Meghalayan Age refers to 4200 years ago to present. It comes under Holocene Epoch. This was discovered after studying Stalagmites of Mawmluh caves in Meghalaya

World's Largest cave fish discovered from Umladaw cave in Meghalaya's Jaintia Hills

World's longest Sandstone cave (around 24.5 Km) named Krem Puri is in Khasi hills.

India's longest caves are present in Meghalaya.

Living Root Bridges are found here which has been asked in the past in UPSC.



Q.81) Solution (d)

Context: It was in new because of Indus water treaty dispute.

Helsinki rules establish the principle of “reasonable and equitable utilization” of the water of an international drainage basin among the riparian state as the basic principle of international water law.

There is Berlin Rules 2004 and Campione Rules and Harmon doctrine on similar water related dispute.

Indus Water Treaty (IWT) was signed in 1960, between India and Pakistan and brokered by the World Bank.

The Helsinki Rules on the Uses of the Waters of International Rivers is an international guideline regulating how rivers and their connected groundwaters that cross national boundaries may be used, adopted by the International Law Association (ILA) in Helsinki, Finland in August 1966.

Q.82) Solution (c)

Context→ India and Bangladesh to negotiate on CEPA.

CEPA yet not signed so statement 1 is incorrect.

India and Bangladesh signed MoU related to sharing of water of Kushiara river which is the only second such pact, the first pact was in 1966 related to Ganga River. Hence statement 2 is correct.

India-Bangladesh Friendship Pipeline Project, will connect Siliguri (West Bengal) and Parbatipur (Bangladesh) to supply diesel and not natural gas. Hence statement 3 is incorrect.

Do You Know?

- Agartala-Akhaura rail link when open will connect NE with Bangladesh hence more trade in the region. Also, then there is Railway link between Chilahati (Bangladesh) and Haldibari (India).
- Feni Bridge (Maitree Setu) over the Feni River connects Subroom (Tripura) and Ramgarh (Bangladesh).
- Protocol on Inland Water Transit and Trade (PIWTT) connecting the inland waterways of India and Bangladesh for commerce and trade.

Q.83) Solution (a)

Context→ India and SL lately have a lot of engagements together and India provided a support of over US \$3.4 Billion to SL to overcome the economic crisis.

Bangladesh is the largest recipient of Line of credit from India which is around US \$8 Billion. Hence statement 1 is incorrect.

India and SL signed the Free Trade Agreement in 2000. So, statement 2 is incorrect.

India and SL are part of SAARC, BIMSTEC, ADB, IORA, NAM, UN etc. So, statement 3 is correct.

Q.84) Solution (b)

Context→ This was in news because of conditions which have developed that might led to block development like in the Cold War era.

The Global Security Initiative (GSI), a China-led framework aiming to restore stability and security in Asia. The GSI looks to counter the US Indo-Pacific strategy, Quad and AUKUS. China held that the Global security initiative is envisaged to uphold the principle of "indivisible security" which means that no country can strengthen its own security at the expense of others.

Q.85) Solution (a)

About Teesta River:

- **Teesta river is a major right bank tributary of the Brahmaputra** (known as Jamuna in Bangladesh), flowing through India and Bangladesh.
- It originates in the Himalayas near the Tso Lhamo Lake, in Sikkim and flows to the south through West Bengal before entering Bangladesh.
- **Source:** Pahurni glacier, Khangse glacier and ChhoLhamo Lake are also considered the sources of the Teesta River.
- River basin Distribution: **The major portion of the river basin lies in India** and only 17% of it is in Bangladesh.
- **The river joins the Brahmaputra in Bangladesh before it flows into the Bay of Bengal** after meeting with the Ganges and the Meghna.
- Two major large barrages constructed on Teesta –
 - Gajoldoba in West Bengal, India
 - Duani in Bangladesh.

Q.86) Solution (b)

- Operation Rahat- Yemen
- Operation Maitri- Nepal
- Operation Sukoon- Lebanon
- Operation Ganga- Ukraine

Q.87) Solution (b)

UK is the first non-founding member to join the CPTPP recently so was in news.

The CPTPP was signed by the 11 countries on 8 March 2018 in Santiago, Chile. The CPTPP entered into force on 30 December 2018. CPTPP) is an FTA between 11 countries and Pacific Rim countries that are Canada, Mexico, Peru, Chile, NZ, Australia, Brunei, Singapore, Malaysia, Vietnam, and Japan.

UK is the first non-founding member to join the CPTPP recently.

Earlier named as TPP but when USA moved out in 2017, the name was changed to CPTPP.

The agreement covers goods & services which include financial services, telecommunications, and food safety standards.

It also aims to reduce environmental abuses.

Further all countries have agreed to cut down on wildlife trafficking.

<https://www.dfat.gov.au/trade/agreements/in-force/cptpp/comprehensive-and-progressive-agreement-for-trans-pacific-partnership>

Q.88) Solution (c)

This was in news because Russia has been accused of violating Geneva Convention.

GENEVA CONVENTIONS OF 12 AUGUST 1949

Geneva Convention I

Improving the conditions of the sick and wounded, members of the armed forces in the field

Geneva Convention II

Improving the conditions of shipwrecked sailors, members of armed forces at sea

Geneva Convention III

Treatment of prisoners of war (POW)

Geneva Convention IV

Protection of civilians in time of war

The Geneva Conventions-1949 and their Additional Protocols form the core of international humanitarian law, which regulates the conduct of armed conflict and seeks to limit its effects. They protect people not taking part in hostilities and those who are no longer doing so.

The four 1949 Conventions have been ratified by 196 states, including all UN member states, both UN observers the Holy See and the State of Palestine, as well as the Cook Islands.

Three Additional Protocols:

Protocol I and II → They strengthen the protection of victims of international (Protocol I) and non-international (Protocol II) armed conflicts and place limits on the way wars are fought.

Protocol III → Created an additional emblem, the Red Crystal, which has the same international status as the Red Cross and Red Crescent emblems.

<https://www.icrc.org/en/document/geneva-conventions-1949-additional-protocols>

Q.89) Solution (a)

The first G20 Tourism Working Group Meeting recently held in Kutch region of Gujarat.

- It is a **large area of salt marshes** that span the **border between India and Pakistan**.
- It is located mostly in the **Kutch district of Gujarat**, with a minor portion extending into the **Sindh province of Pakistan**.
- It is divided into the **Great Rann and Little Rann**.
- The Great Rann of Kutch is the larger portion of the Rann.
- **The Little Rann of Kutch is home to the Indian wild ass (khur)**.
- The area has desert on one side and the sea on the other enables various ecosystems, including **mangroves and desert vegetation**.
- The history of the Rann of Kutch began with **early neolithic settlements**.
- The **Wild Ass Wildlife Sanctuary**, situated in the Indian state of Gujarat, is **the largest wildlife sanctuary in the country**.
 - It is spread in the entire area of the **little Rann of Kutch where small grass-covered areas**, known as **baits**, forms the flora and is an important source to support the fauna of the region.

The word Rann means "desert". The Rann of Kutch covers around 26,000 square kilometres (10,000 square miles). The Great Rann of Kutch is the larger portion of the Rann. **It is part of Indo-Malayan Realm**

Q.90) Solution (b)

IMF Releases the The Global Financial Stability Report provides an assessment of the global financial system and markets, and addresses emerging market financing in a global context.

Q.91) Solution (c)

India's Foreign Trade Policy 2023, with an ambitious target of achieving \$2 trillion in exports by 2030, is a positive and significant step towards India's economic growth and development. Hence statement 1 is correct.

The policy aims to promote exports, create jobs, and enhance India's global competitiveness by adopting measures such as boosting infrastructure, easing regulatory compliances, and providing incentives to exporters. Achieving this target will require a coordinated effort from the government, the private sector, and other stakeholders. It will also require addressing various challenges such as increasing productivity, improving the quality of products, and accessing new markets.

Ministry of Commerce & Industry announced Foreign Trade Policy (FTP) 2023. statement 2 is incorrect.

The courier service has been increased to 5lakh to 10lakh per consignment. To make a push towards ease of doing business the qualifying criteria for a five-star exporter has been reduced from \$2B to \$800m. So, statement 3 is incorrect.

Foreign Trade Policy (FTP) 2023 announced new Town for Export Excellence (TEE)- Faridabad for apparel, Moradabad for handicrafts, Mirzapur for handmade carpets and Varanasi for handloom, and handicrafts.

Overall, this policy is a welcome move and has the potential to transform India's economy, create employment opportunities, and improve the standard of living of its citizens.

<https://pib.gov.in/PressReleaseframePage.aspx?PRID=1912572#:~:text=The%20FTP%202023%20encourages%20recognition,enabling%20merchanting%20trade%20from%20India.>

Q.92) Solution (d)

From April 1, the sale of gold jewellery will not be allowed without a Hallmark Unique Identification (HUID) number.

Earlier, the HUID used to be of four digits. As of now both HUIDs (4- and 6-digit) are used in the market but after March 31, 2023 only 6-digit alphanumeric code will be allowed. Hence statement 1 is correct.

HUID makes it easy to trace the individual piece of jewellery, and is a guarantee of quality.

In HUID-based Hallmarking, registration of jewellers is automatic with no human interference. It is aimed at ensuring the purity of Hallmarked jewellery and check any malpractice. HUID is a secure system and poses no risk to data privacy or security. Hence statement 2 is correct.

A BIS Hallmark consists of three symbols — the BIS logo, a symbol to indicate the purity and fineness of the jewellery, and then the HUID. Hence statement 3 is correct.

No gold jewellery is made of 100 per cent gold, as the yellow metal in itself is very soft and has to be mixed with other metals to shape it into jewellery items. Hence statement 4 is correct.

The three categories of hallmarked jewellery, according to the government website, are: “22K916 means that it is a 22-carat gold and the piece of jewellery has 91.6 percent gold. 18K750 means that it is an 18-carat gold and the piece of jewellery has 75 percent gold. 14K585 means that it is a 14-carat gold and the piece of jewellery has 58.5 percent gold.”



Q.93) Solution (b)

About the SAMARTH scheme:

- Samarth is a demand-driven and placement-oriented umbrella skilling programme of the Ministry of Textiles.
- The implementation period of the scheme: is up to March 2024.
- The training programme and course curriculum have been rationalized keeping in view the technological and market demand of the domestic and international economies.
- In addition to the entry-level skilling, a special provision for upskilling/ re-skilling programme has also been operationalized under the scheme towards improving the productivity of the existing workers in the Apparel & Garmenting segments.
- Samarth also caters to the upskilling/ re-skilling requirement of the traditional textile sector such as handloom, handicraft, silk and jute.

Q.94) Solution (c)

Budget is one of the hot topics every year.

- The finance minister announced that the maximum deposit limit for Senior Citizen Savings Scheme will be enhanced from Rs 15 lakh to Rs 30 lakh. Also, the maximum deposit limit for Monthly Income Account Scheme will be enhanced from Rs 4.5 lakh to Rs 9 lakh for single account and from Rs 9 lakh to Rs 15 lakh for joint account. Hence statement 1 is correct.
- The highest surcharge rate in personal income tax has been reduced from 37% to 25% in the new tax regime for income above ₹2 crore. This would result in maximum tax rate of personal income tax come down to 39% which was earlier 42.74%. Hence statement 2 is correct.

NEW TAX REGIME			
INCOME	EARLIER	NOW	BENEFIT
₹7 LAKH	33,800	0	33,800
₹8 LAKH	46,000	35,000	11,600
₹9 LAKH	62,400	45,000	17,400
₹10 LAKH	78,000	60,000	18,000
₹12 LAKH	1,19,600	90,000	26,900
₹15 LAKH	1,95,000	1,50,000	45,000

<https://pib.gov.in/PressReleasePage.aspx?PRID=1895320#:~:text=Budget%20Estimates%202023%2D24,at%20Rs%2023.3%20lakh%20crore.>

Q.95) Solution (c)

Agriculture Infra Fund (AIF) is a financing facility launched on 8th July 2020 for creation of post-harvest management infrastructure and community farm assets. Hence statement 2 is incorrect.

Under this scheme, Rs 1 lakh crore is to be disbursed by financial year 2025-26 and the interest subvention and credit guarantee assistance will be given till the year 2032-33.

- Agriculture Infra Fund (AIF) is a financing facility launched in 2020 for creation of post-harvest management infrastructure and community farm assets.
- It gives 3% interest subvention; credit guarantee supports through CGTMSE for loan of up to Rs.2 crore and facility of convergence with other Central and State Govt. Scheme
- AIF is providing all around financial support to the farmers, Agri-entrepreneurs, farmer groups like Farmer Producer Organisations (FPOs), Self Help Groups (SHGs), Joint Liability Groups (JLGs) etc. and many others to create post-harvest management infrastructure and build community farming asset throughout the country.

Q.96) Solution (a)

The NMP estimates aggregate monetisation potential of Rs 6 lakh crores through core assets of the Central Government, over a four-year period, from FY 2022 to FY 2025 so was in news.

National Monetization Pipeline (NMP)

- The pipeline has been developed by NITI Aayog, in consultation with infrastructure line ministries, based on the mandate for **'Asset Monetisation' under Union Budget 2021-22**.
- NMP estimates aggregate monetisation potential of Rs 6.0 lakh crores through core assets of the Central Government, over a four-year period, from FY 2022 to FY 2025.
- It aims to unlock value in brownfield projects by engaging the private sector, transferring to them revenue rights and not ownership in the projects, and using the funds generated for infrastructure creation across the country.
- **Framework of NMP:**
 - The pipeline has been prepared based on inputs and consultations from respective line ministries and departments, along with the assessment of total asset base available therein.
 - **Monetization through disinvestment and monetization of non-core assets have not been included in the NMP.**
- The framework for **monetisation of core asset monetisation** has three key imperatives:
 - **Monetization of rights and not the ownership, assets headed back at the end of transaction life.**
 - **Brownfield de-risked assets, stable revenue streams.**
 - Structured partnerships under defined **contractual frameworks with strict KPIs and performance standards.**

The receipts under National Monetization Pipeline (NMP) will be considered revenue or capital receipts?

If the assets are sold under NMP then it will be considered as Capital Receipts, but if an agreement is signed where government is transferring the assets under lease for certain specific time and it turn government is receiving regular money for that time period then it will be considered as revenue receipts. Hence statement 2 is incorrect.

Real Estate Investment Trusts (Reits) and Infrastructure Investment Trusts (Invits) are among the key structures used to monetise assets in the roads and power sectors.

Roads, railways, and power sector assets will comprise over 66% of the total estimated value of the assets to be monetized.

The sectors including aviation, mining, natural gas, ports, telecom and petroleum product pipelines, warehouses, and stadiums will cover the remaining 44% estimated value.

<https://pib.gov.in/PressReleaseframePage.aspx?PRID=1894919>

Q.97) Solution (b)

The Reserve Bank of India announced a Prompt Corrective Action (PCA) Framework for Non-Banking Financial Companies (NBFCs), to strengthen applicable supervisory tools.

- The framework will apply to all deposit-taking NBFCs, all non-deposit taking NBFCs. It has excluded NBFCs not accepting or not intending to accept public funds, primary dealers, and housing finance firms, along with government-owned ones.
- PCA will also be applicable to Micro Finance Institutions (MFIs) which is also a category of NBFC. RBI has already implemented Prompt Corrective Action (PCA) for Scheduled Commercial Banks. The PCA norm is a supervisory tool of RBI.

The parameters based on which NBFC will be brought under Prompt Corrective Action (PCA):

- Tier 1 Capital Ratio.
- Capital Adequacy Ratio.
- Net NPA Ratio.

PCA Framework for NBFCs

A. The PCA Framework is applicable to the following category of NBFCs:

- a. All Deposit Taking NBFCs [Excluding Government Companies] (NBFCs-D)
- b. All Non-Deposit Taking NBFCs in Middle, Upper and Top Layers (NBFCs-ND);

[Including Investment and Credit Companies, Core Investment Companies (CICs), Infrastructure Debt Funds, Infrastructure Finance Companies, Micro Finance Institutions and Factors]; but

[Excluding – (i) NBFCs not accepting/not intending to accept public funds; (ii) Government Companies, (iii) Primary Dealers and (iv) Housing Finance Companies]

B. For NBFCs-D and NBFCs-ND, Capital and Asset Quality would be the key areas for monitoring in PCA Framework.

For CICs, Capital, Leverage and Asset Quality would be the key areas for monitoring in PCA Framework.

C. For NBFCs-D and NBFCs-ND, indicators to be tracked would be Capital to Risk Weighted Assets Ratio (CRAR), Tier I Capital Ratio and Net NPA Ratio (NNPA). For CICs, indicators to be tracked would be Adjusted Net Worth/Aggregate Risk Weighted Assets, Leverage Ratio and NNPA.

D. A NBFC will generally be placed under PCA Framework based on the audited Annual Financial Results and/or the Supervisory Assessment made by the RBI. However, the RBI may impose PCA on any NBFC during the course of a year (including migration from one threshold to another) in case the circumstances so warrant.

E. The Reserve Bank may issue a press release when a NBFC is placed under PCA as well as when PCA is withdrawn vis-à-vis a NBFC.

F. Breach of any risk threshold (as detailed under) may result in invocation of PCA.

<https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12208&Mode=0>

Q.98) Solution (d)

Recently, government of India informed that Russian banks have opened Special Rupee Vostro Accounts (SRVA) with partner banks in India.

Explanation:

About Special Rupee Vostro Accounts (SRVA):

- The SRVA is an additional arrangement to the existing system that uses freely convertible currencies.
- It works as a complimentary system to facilitate transactions that cannot be executed through the existing banking setup.

About Vostro Accounts:

- A Vostro account is an account that domestic banks hold for foreign banks in the former's domestic currency.
- In this, a foreign bank acts as an agent providing financial services on behalf of a domestic bank.
- It enables domestic banks to provide international banking services to their clients who have global banking needs.
- Domestic banks use Vostro accounts to facilitate transfers, conduct business transactions, accept deposits, and gather documents on behalf of the foreign bank.

Significance:

- The system could reduce the “net demand for foreign exchange, the U.S. dollar in particular, for the settlement of trade flows”
- It will reduce the dependence on foreign currencies.
- It can make the country less vulnerable to external shocks.
- Ensure timely payments.
- This helps domestic banks to gain wider access to foreign financial markets and serve international clients without having to be physically present abroad.
- Vostro accounts are not restricted to banks, they can be used by other entities such as insurance companies and business entities to keep funds with another entity.
- When Vostro accounts are used by corresponding banks, the domestic bank can execute transfers, deposits, and withdrawals on behalf of the corresponding bank.

There are 3 types of accounts: Vostro, Nostro and Loro Accounts

- Vostro accounts -are maintained in the domestic currency. Hence 2 is incorrect.
- Nostro accounts- are maintained in foreign currency. Hence 1 is incorrect.
- A Loro account -is a current account that is maintained by one domestic bank for another domestic bank in the form of a third-party account, unlike nostro and vostro which is bilateral correspondence. Hence 3 is correct.

Q.99) Solution (d)

Recently RBI allowed **Microfinance Institutions (MFI)** the freedom to set interest rates.

Explanation:

A microfinance loan is defined as a collateral-free loan given to a household having annual household income up to ₹3,00,000. Earlier, the upper limits were Rs.1.2 lakh for rural borrowers and Rs.2 lakh for urban borrowers. Hence statement 3 is correct.

Here the household shall mean an individual family unit, i.e., husband, wife, and their unmarried children.

The provisions of these directions shall apply to the following entities:

- All Commercial Banks (including Small Finance Banks, Local Area Banks, and Regional Rural Banks) excluding Payments Banks;

- All Primary (Urban) Co-operative Banks/ State Co-operative Banks/ District Central Co-operative Banks; and
- All Non-Banking Financial Companies (including Microfinance Institutions and Housing Finance Companies).
- Hence statement 1 is incorrect.

The Banks/NBFCs should clearly mention a ceiling on the interest rate and all other charges applicable to the microfinance loans. Banks/NBFCs should separate the components of the interest rate such as cost of funds, risk premium and margin, etc. based on objective parameters. Hence statement 2 is incorrect.

Interest rates and other charges/ fees on microfinance loans should not be usurious. These shall be subjected to supervisory scrutiny by the Reserve Bank.

<https://www.rbi.org.in/Scripts/NotificationUser.aspx/NotificationUser.aspx?Id=12256&Mode=0>

Q.100) Solution (d)

Recently India-Australia ECTA came into force.

Explanation:

The Ind-Aus, ECTA covers the following major areas:

- Trade in Goods
- Trade in Services
- Rules of Origin
- Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) measures
- Customs Procedures and Trade Facilitation
- Trade Remedies
- Legal & institutional Issues
- Movement of Natural Persons

Note:

- The deal will facilitate work visas for two to four years for Indian students in Australia on a 'reciprocal basis.'
- It will allow Indian chefs and yoga professionals to work there as well.
- The agreement will facilitate zero duty access on over 96% of Indian exports, including several labour-intensive industries.

- India will benefit from preferential market access provided by Australia on 100% of its tariff lines. This includes all the labour-intensive sectors of export interest to India such as Gems and Jewellery, Textiles, leather, footwear, furniture, food, and agricultural products, engineering products, medical devices, and Automobiles.
- On the other hand, India will be offering preferential access to Australia on over 70% of its tariff lines, including lines of export interest to Australia which are primarily raw materials and intermediaries such as coal, mineral ores, and wines etc.
- The agreement with Australia is expected to create 10 lakh additional jobs in the country over the next five years.

It will also increase the resilience of supply chains, and contribute to the stability of the Indo-Pacific region.

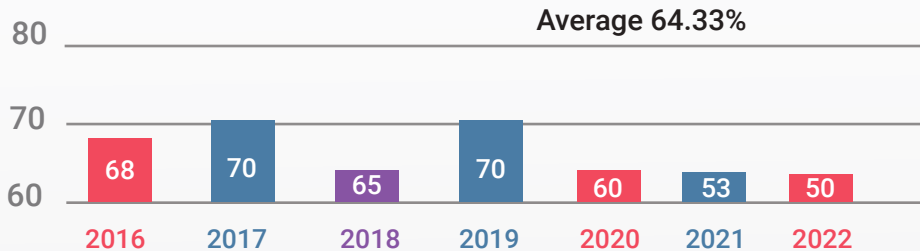
Total India – Australia trade expected to cross US \$ 45-50 billion by 2035

<https://pib.gov.in/PressReleasePage.aspx?PRID=1889525#:~:text=The%20Agreement%20will%20benefit%20various,to%20Australia%20in%20value%20terms.>



HITTING THE BULL'S EYE

PRELIMS:



ISN'T IT AWESOME AND SPEAKS ABOUT OUR CREDIBILITY AND AUTHENTICITY

Timings – 9:30 AM to 11:30 AM (Paper 1 – GS) 2:30 PM to 4:30 PM (Paper 2 – CSAT)



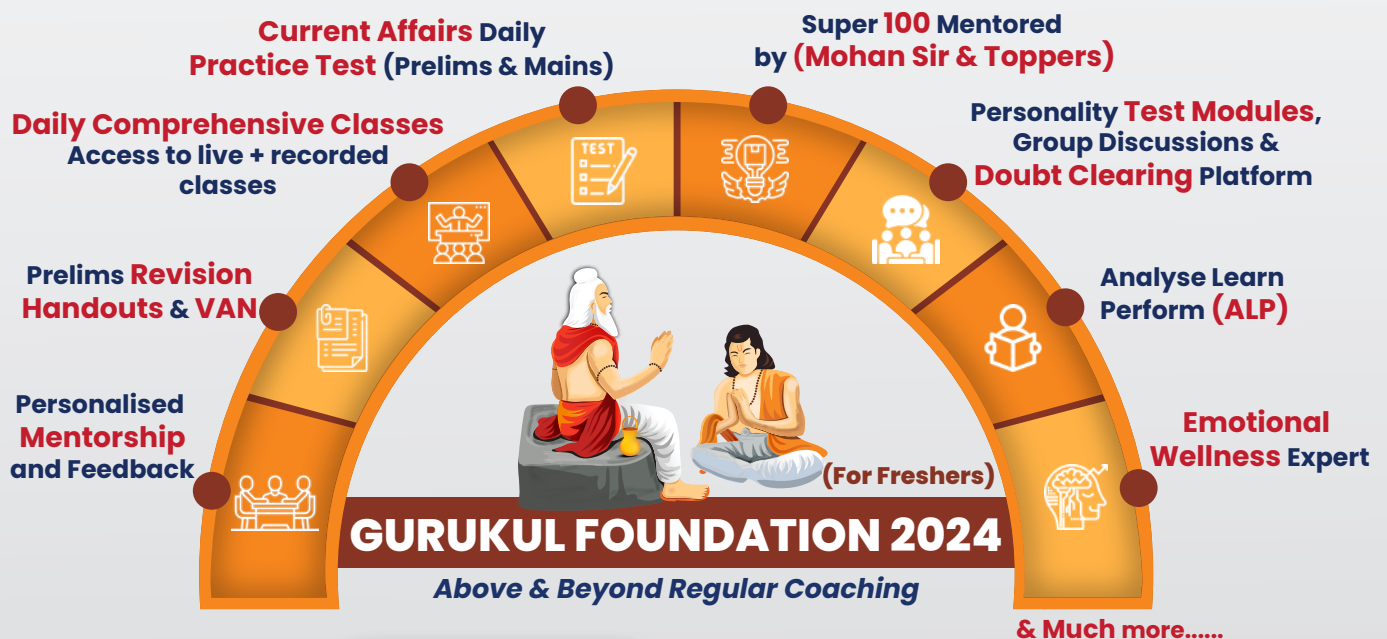
Open Mock

02 30th April 2023

03 14th May 2023



The Guru-shishya Parampara Continues....



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