# **General Studies**

Current Affair Test (March-2024)

## 1. Answer: (c)

At any time after the expiration of three years from the date of the grant of a patent, any person interested may make an application to the Controller for grant of compulsory licence on patent on any of the following grounds, namely:—

- (a) that the reasonable requirements of the public with respect to the patented invention have not been satisfied, or
- (b) that the patented invention is not available to the public at a reasonably affordable price, or
- (c) that the patented invention is not worked in the territory of India.

## **2. Answer: (b)**

While a company can go for repurchase of its shares when it is sitting on a lot of cash but does not have many avenues to invest and prefers to return cash to shareholders, the case of Paytm is different – it's sitting on huge losses and now using part of investors' proceeds for the buyback.

## Who is eligible to participate in buyback?

To be eligible to participate in the share repurchase process, a shareholder needs to hold the shares of the company, which has announced the buyback, before the record date declared in the announcement.

The share also needs to be held in the demat form.

#### **3. Answer: (c)**

As the Government of India presses ahead with its plan to internationalise the Indian Rupee (INR), an Inter Departmental Group (IDG) of officials of the Reserve Bank of India (RBI) have in a report cautioned that internationalisation may result in increased volatility in the rupee's exchange rate in the initial stages. "This would further have monetary implications as the obligation of a country to supply its currency to meet the global demand may come in conflict with its domestic monetary policies, popularly known as the Triffin dilemma," the IDG wrote. The Triffin dilemma or Triffin paradox is the conflict of economic interests that arises between short-term domestic and long-term international objectives for countries whose currencies serve as global reserve currencies.

## 4. Answer: (b)

Every decision of the Goods and Services Tax Council shall be taken at a meeting, by a majority of not less than three-fourths of the weighted votes of the members present and voting, in accordance with the following principles, namely: — The vote of the Central Government shall have a weightage of one

third of the total votes cast, and the votes of all the State Governments taken together shall have a weightage of two-thirds of the total votes cast, in that meeting.

## 5. Answer: (a)

The concept of the "Invisible Hand" was introduced by the Scottish Enlightenment philosopher Adam Smith. It first received its economic interpretation in his 1776 book, "An Inquiry into the Nature and Causes of the Wealth of Nations."

- The Invisible Hand is a fundamental aspect of the laissez-faire approach to the market, which essentially means "let it be" or "let it go." In essence, this approach posits that the market has the inherent ability to reach its equilibrium without requiring government or other interventions to force it into unnatural patterns.
- The term "Invisible Hand" serves as a metaphor for the unseen forces that propel the free market economy. It signifies that, through individual self-interest and the freedom to produce and consume, the best interests of society as a whole are naturally and effectively realized.
- This dynamic interplay of individual pressures on market supply and demand is responsible for the organic movement of prices and the flow of trade within the market.

#### 6. Answer: (b)

Statement 3 is incorrect.

India has taken some steps to promote the internationalisation of the rupee (e.g., enable external commercial borrowings in rupees), with a push to Indian banks to open Rupee Vostro accounts for banks from Russia, the UAE, Sri Lanka and Mauritius and measures to trade with ~18 countries in rupees instituted. For a currency to be considered a reserve currency, the rupee needs to be fully convertible, readily usable, and available in sufficient quantities. India does not permit full capital account convertibility (i.e., allowing free movement of local financial investment assets into foreign assets and vice-versa), with significant constraints on the exchange of its currency with others — driven by past fears of capital flight (i.e., outflow of capital from India due to monetary policies/lack of growth) and exchange rate volatility, given significant current and capital account deficits.

#### 7. **Answer**: (c)

## Frictional unemployment

Frictional unemployment, also called search unemployment, occurs when workers lose their current job and are

in the process of finding another one. This suggests that zero unemployment is impossible at any one time because some workers will always be in the process of changing jobs.

## **8.** Answer: (d)

## **Key Budget documents include:**

- Annual Financial Statement (Article 112)
- Demands for Grants (Article 113)
- Finance Bill (Article 110)
- Fiscal Policy Statements mandated under the FRBM Act, 2003, including
- The Macro-Economic Framework Statement and The Medium-Term Fiscal Policy cum Fiscal Policy Strategy Statement.

## 9. Answer: (a)

Only Statement 1 is correct.

A payments bank is a new type of bank that can perform most banking operations but cannot issue credit cards or loans. Payments banks are registered as public limited companies and licensed under the Banking Regulation Act of 1949. Payments banks can accept deposits up to 200,000 per customer, but this limit may increase.

10. Answer: (d)

11. Answer: (a)

12. Answer: (d)

13. Answer: (d)

Many reforms can be pursued to internationalise the rupee. It must be made more freely convertible, with a goal of full convertibility by 2060 – letting financial investments move freely between India and abroad. This would allow foreign investors to easily buy and sell the rupee, enhancing its liquidity and making it more attractive. Additionally, the RBI should pursue a deeper and more liquid rupee bond market, enabling foreign investors and Indian trade partners to have more investment options in rupees, enabling its international use. Indian exporters and importers should be encouraged to invoice their transactions in rupee — optimising the trade settlement formalities for rupee import/export transactions would go a long way. Additional currency swap agreements (as with Sri Lanka) would further allow India to settle trade and investment transactions in rupees, without resorting to a reserve currency such as the dollar. Additionally, tax incentives to foreign businesses to utilise the rupee in operations in India would also help. The RBI and the Ministry of Finance must ensure currency management stability (consistent and predictable issuance/retrieval of notes and coins) and improve the exchange rate regime.

#### 14. Answer: (a)

Only statement 2 is correct.

#### Inflation:

• Inflation refers to the rise in the prices of most goods and services of daily or common use, such

- as food, clothing, housing, recreation, transport, consumer staples, etc.
- Inflation measures the average price change in a basket of commodities and services over time.
- The opposite and rare fall in the price index of this basket of items is called 'deflation'.
- Inflation is indicative of the decrease in the purchasing power of a unit of a country's currency.
- RBI through its Monetary Policy Committee (MPC) Controls Money supply in the market.
- Inflation is measured by a central government authority, which is in charge of adopting measures to ensure the smooth running of the economy. In India, the Ministry of Statistics and Programme Implementation measures inflation.
- Inflation is primarily measured by two main indices — WPI (Wholesale Price Index) and CPI (Consumer Price Index), which measure wholesale and retail-level price changes, respectively.

## 15. Answer: (c)

The Committee on Capital Account Convertibility (CAC) or Tarapore Committee was constituted by the Reserve Bank of India to suggest a roadmap on full convertibility of Rupee on Capital Account.

# 16. Answer: (c)

Vostro accounts are opened to facilitate trade in rupee. A Vostro account is an account that a domestic bank holds for a foreign bank in the domestic bank's currency — which, in the case of India, is the rupee. Payments in rupee for the export and import of goods will go to these Vostro accounts. The owners and beneficiaries of this money will be the exporters and importers in both the countries. The banks will keep the record of money transferred.

#### What is a Nostro account?

Two kinds of accounts, Vostro and Nostro, are often mentioned together. Both Vostro and Nostro are technically the same type of account, with the difference being who opens the account and where. So, if an Indian bank like the SBI wants to open an account in the United States, it will get in touch with a bank in the US, which will open a Nostro account and accept payments for SBI in dollars. The account opened by the Indian bank in the US will be a Nostro account for the Indian bank, while for the US bank, the account will be considered a Vostro account. What led to creation of the Vostro accounts? RBI put in place a mechanism to settle international trade in rupees "in order to promote growth of global trade with emphasis on exports from India and to support the increasing interest of the global trading community in the rupee".

#### 17. Answer: (a)

Only Statement 2 is correct.

Core inflation — that is the inflation rate when prices of food and fuel are taken away. Core inflation typically rises and falls more gradually than inflation in food and fuel. Eight core industrial sectors that support infrastructure such as coal, crude oil, natural gas, refinery products, fertilizers, steel, cement, and electricity have a total weight of nearly 40% in the Index of Industrial Production (IIP).

## 18. Answer: (b)

Statement 2 is incorrect.

The CH3+ molecule, which is also known as methyl cation, has been detected in space for the first time by the James Webb Space Telescope (JWST). Organic molecules are carbon-based. They contain carbon atoms bonded to hydrogen atoms but can also bond to other elements, such as oxygen, nitrogen or phosphorus. Everything that makes us and all life on Earth is carbon based. CH3+ is a very simple organic molecule, just one carbon atom and 3 hydrogen atoms. But it reacts with other molecules to form more complex ones. Its presence in space tells us that basic building blocks for life are out there.

## 19. Answer: (b)

Statement 3 is incorrect. Ambergris, which means grey amber in French, is a waxy substance that originates from the digestive system of protected sperm whales. Ambergris is a rare substance, which contributes to its high demand and high price in the international market. Traditionally, it is used to produce perfumes which have notes of musk. While there are records of it being used to flavour food, alcoholic beverages and tobacco in some cultures in the past, it is rarely used for these purposes presently. While there is a ban on the possession and trade of ambergris in countries like the USA, Australia and India, in several other countries it is a tradable commodity, though with limitations in some of them. In the Indian context, sperm whales are a protected species under Schedule 2 of the Wildlife Protection Act and possession or trade of any of its by-products, including Ambergris and its byproducts, is illegal under provisions of the Wildlife Protection Act, 1972.

## **20.** Answer: (b)

Statement 1 is incorrect. The Anthropocene epoch as a term was first coined by Nobel Prize-winning chemist Paul Crutzen and biology professor Eugene Stoermer in 2000 to denote the present geological time interval, in which the Earth's ecosystem has gone through radical changes due to human impact, especially since the onset of the Industrial Revolution. There are numerous phenomena associated with this epoch, such as global warming, sea-level rise, ocean acidification, massscale soil erosion, the advent of deadly heat waves, deterioration of the biosphere and other detrimental changes in the environment. The planet's geological time scale is divided into five broad categories: eons, epochs, eras, periods, epochs and ages. While eon is the broadest category of geological time, age is the smallest category. Each of these categories is further divided into sub-categories. For instance, Earth's history is characterised by four eons, including Hadeon (oldest), Archean, Proterozoic, and Phanerozoic (youngest).

# 21. Answer: (b)

Statement 3 is incorrect.

Convention on International Trade in Endangered Species of Wild Fauna and Flora is an international agreement between governments to ensure that international trade in wild animals and plants does not threaten the survival of the species. The convention entered into force in 1975 and India became the 25th party — a state that voluntarily agrees to be bound by the Convention — in 1976. All import, export and re-export of species covered under CITES must be authorised through a permit system.

Every two years, the Conference of the Parties (CoP), the supreme decision-making body of CITES, applies a set of biological and trade criteria to evaluate proposals from parties to decide if a species should be in Appendix I or II.

## 22. Answer: (b)

Statement 1 is incorrect. A recent image captured by trap cameras in the Neora Valley National Park in the hills of West Bengal has confirmed the presence of Royal Bengal Tigers at an altitude of 10,509 feet above sea level. Neora Valley National Park in the Kalimpong district of West Bengal was established in 1986, it's a rich biological zone with diverse flora and fauna. The park is home to the red panda and is known for its rugged, inaccessible terrain.

#### 23. Answer: (b)

Statement 3 is incorrect.

El Niño typically brings less rain and higher temperatures to the Amazon. The Amazon rainforest covers an area twice the size of India and holds tremendous stores of carbon, serving as a crucial buffer against climate change. Two-thirds of it is located in Brazil.

# 24. Answer: (c)

## **Impact of Sand Mining on the Environment**

- Excessive sand mining can alter the river bed, force the river to change course, erode banks, and cause flooding.
- It causes river and estuary deepening, as well as the expansion of river mouths and coastal inlets.
- It may also result in saline water intrusion from the nearby sea.
- Instream mining can have far-reaching consequences that extend beyond the immediate mine sites.
- Every year, many hectares of fertile streamside land are lost, as well as valuable timber resources and wildlife habitats in riparian areas. Degraded stream habitats reduce fisheries productivity, biodiversity, and recreational potential.
- Sand mining is a direct cause of erosion and has an impact on local wildlife.
- Various animals rely on sandy beaches for nesting

- clutches, and mining has nearly wiped out gharials (a crocodile species) in India.
- Sand mining in Chambal has had an impact on the population of Gharials, a critically endangered species (a National Chambal Sanctuary has been established for their conservation).

## 25. Answer: (c)

Statement 1 is incorrect. CITES Appendix I lists species threatened with extinction — import or export permits for these are issued rarely and only if the purpose is not primarily commercial. CITES Appendix II includes species not necessarily threatened with extinction but in which trade must be strictly regulated. The international ivory trade was globally banned in 1989 when all African elephant populations were put in CITES Appendix I. However, the populations of Namibia, Botswana, and Zimbabwe were transferred to Appendix II in 1997, and South Africa's in 2000 to allow two "one-off sales" in 1999 and 2008 of ivory stockpiled from natural elephant deaths and seizures from poachers. The endangered Asian elephant was included in CITES Appendix I in 1975, which banned the export of ivory from the Asian range countries. In 1986, India amended The Wild Life (Protection) Act, 1972 to ban even domestic sales of ivory. After the ivory trade was globally banned, India again amended the law to ban the import of African ivory in 1991.

## 26. Answer: (a)

Only Statement 3 is correct.

India's first comprehensive survey estimates the snow leopard population at 718 in the wild. The maximum number of snow leopards was estimated in Ladakh (477), followed by Uttarakhand (124), Himachal Pradesh (51), Arunachal Pradesh (36), Sikkim (21), and Jammu and Kashmir (9). The survey, named Snow Leopard Population Assessment in India (SPAI), began in 2019 and involved collaboration between the World Wide Fund for Nature-India, the Nature Conservation Foundation, and the Wildlife Institute of India. The snow leopard is classified as "vulnerable" and faces threats such as human-wildlife conflicts, free-ranging dogs, and poaching. Source

#### 27. Answer: (d)

Ecosystem is the groups of organisms from all biological domains in conjunction with the physical (abiotic) environment. Biome is the continental scale (climatically and geographically contiguous areas with similar climatic conditions) grouping of ecosystems. Biosphere or Ecosphere is all life plus the physical (abiotic) environment.

## 28. Answer: (d)

- Coal emits nearly twice as much carbon dioxide as natural gas and about 60% more than oil, on a kilogram comparison having a greater role in global warming.
- Combusting coal also leaves behind partially burnt

- carbon particles that feed pollution and trigger respiratory disorders.
- Environmental issues associated with Coal Mining that is air pollution, water pollution, soil pollution etc.
- Opencast mining and underground mining of coal affect the vegetation pattern.
- Several occupational hazards are associated with coal mining: Pneumoconiosis (by inhaling coal dust), allergies and asthma, noise hazard etc.

# 29. Answer: (b)

Green hydrogen is hydrogen produced by splitting water molecules into hydrogen and oxygen using renewable electricity. The process is called electrolysis.

## 30. Answer: (a)

Only statement 1 is correct.

## Forest Conservation Act, 1980

- This is the legislation enacted to protect India's forests and empowers the Central government to regulate the extraction of forest resources — from timber and bamboo to coal and minerals — by industries as well as forest-dwelling communities.
- A separate Act, the Forest Rights Act, protects the rights of tribals and forest-dwellers dependent on forests for their livelihood. From 1951-1975, about four million hectares of forest land has been diverted for various non-forestry purposes.
- From 1980 to 2023, under the purview of the Act, only a million hectares have been diverted a sign of its impact in reducing the pace of forest appropriation.
- However, such protection was only available for areas already marked out as 'forest' in Central or State government records.
- A Supreme Court judgment in 1996, in the Godavarman Thirumulpad case, expanded the scope of such protection. Under it, even areas not formally notified as 'forests' but conforming to the 'dictionary' meaning of forests were protected.

## 31. Answer: (c)

Manatees, typically solitary animals, are known to gather in warm waters during colder weather. Manatees are large, aquatic mammals that are sometimes called "sea cows". Manatees are herbivores that eat over 60 different types of plants. IUCN Status: Vulnerable

# 32. Answer: (a)

Only Statement 2 is correct. India celebrated World Wetlands Day 2024 at Sirpur Lake, a Ramsar site in Indore. Wetlands are low-lying areas of land that are saturated with water, either permanently or seasonally. They are transition zones between land and water, where the flow of water, the cycling of nutrients, and the energy of the sun meet.

#### 33. Answer: (b)

Statement 3 is incorrect.

'Primary forests' are forests predominant with native

tree species, undisturbed with little to no human interference (roads, dams, mining, etc.), and the ecological processes are not significantly disrupted. These forests are the densest, wildest, and of most ecological importance on Earth. They cover a large geographical area expanding from the snow-covered boreal region to the humid tropics, though 75% of them are found in 7 countries i.e., Russia, Canada, Brazil, the Democratic Republic of the Congo (DRC), the United States, Peru, and Indonesia.

## 34. Answer: (b)

Statement 3 is incorrect.

Tarballs are dark-coloured, sticky balls of oil that form when crude oil floats on the ocean surface. Tarballs are formed by weathering of crude oil in marine environments. They are transported from the open sea to the shores by sea currents and waves. Some of the balls are as big as a basketball while others are smaller globules. Tarballs are usually coin-sized and are found strewn on the beaches. However, over the years, they have become as big as basketballs and can weigh as much as 6-7 kgs. Wind and waves tear the oil slick into smaller patches that are scattered over a much wider area. Various physical, chemical and biological processes (weathering) change the appearance of the oil. Why are tarballs found on the beaches during the monsoon? It is suspected that the oil comes from the large cargo ships in the deep sea and gets pushed to the shore as tarballs during monsoon due to wind speed and direction.

#### 35. Answer: (b)

Statement 3 is incorrect.

Aichi Biodiversity Targets that expired in 2020. No single country met all 20 Aichi Targets within its own borders, according to a September 2020 UN assessment. What were the Aichi Targets? The Aichi Targets, adopted during the 2010 CBD summit in Nagoya, located in Japan's Aichi prefecture, included goals such as reducing deforestation by at least half during the coming decade and curbing pollution so that it no longer harmed ecosystems. After parties adopted the Aichi Targets, they were expected to devise their own national biodiversity strategies that would mimic the goals laid out by Aichi. Nearly all parties created these strategies, but most were never fully implemented.

#### 36. Answer: (a)

Only Statement 1 is correct.

'Green hydrogen', the emerging novel concept, is a zero-carbon fuel made by electrolysis using renewable power from wind and solar to split water into hydrogen and oxygen. This 'Green hydrogen' can be utilised for the generation of power from natural sources — wind or solar systems — and will be a major step forward in achieving the target of 'net zero' emission. Black

hydrogen is produced by use of fossil fuel, whereas pink hydrogen is produced through electrolysis, but using energy from nuclear power sources. Grey hydrogen is produced from natural gas.

## 37. Answer: (d)

Natural sources (volcanoes, fires, phytoplankton) produce sulphur dioxide, but burning sulphur-rich fossil fuels—primarily coal, oil, and petroleum—is the main source of the gas. Smelter ovens, which are used to concentrate metals found in ore, also produce it.

## 38. Answer: (b)

Statement 2 is incorrect. Compressed natural gas, or CNG, is natural gas under pressure which remains clear, odourless, and noncorrosive – and can be used as a cheaper, greener, and more efficient alternative to the traditional petrol and diesel fuels for vehicles. CNG is comprised mostly of methane gas which, like gasoline, produces engine power when mixed with air and fed into your engine's combustion chamber. CNG engines run more quietly due to the higher-octane rating of CNG over gasoline and they produce less exhaust emissions. Harmful emissions such as carbon monoxide (CO), carbon dioxide (CO2) and nitrous oxide (N2O) can be reduced by as much as 95% when compared to gasoline powered vehicles.

## 39. Answer: (b)

Statement 2 is incorrect.

- The black-necked crane (Grus nigricollis) is a medium-sized crane that is native to Asia. It is the only alpine crane species in the world and lives at high altitudes in the Himalayas and on the Tibetan Plateau.
- The black-necked crane is listed in Schedule I of the Wild Life (Protection) Act, 1972, receiving the highest degree of protection.
- It is also listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Convention on Conservation of Migratory Species.

#### 40. Answer: (a)

Only statement 2 is correct. Is heat good for any animals in the Mediterranean? Jellyfish, on the other hand, are thriving because of higher temperatures, as well as nutrient run-off from farms and sewage. Overfishing and loss of fish habitat mean the jellyfish have few or no predators. The sea also hosts around 1,000 invasive species — the highest number in the world. Alien species can have a major impact on ecosystems. For instance, invasive Rabbitfish native to the Indo-Pacific and Rea Sea feed on seaweed and have reshaped the habitat of the eastern Mediterranean. Underwater deserts have replaced dense seaweed forests. "The species that normally live in the algal forests — and the species that usually feed on them — can no longer live there. Warming seas are already affecting fishing activities in the area. Rabbitfish and lionfish are edible, but other invasive fish aren't. Some are even poisonous, like the puffer fish.

## 41. Answer: (a)

Only statement 2 is correct.

LNG is natural gas reduced to a liquid state (liquefaction) through intense cooling to around -161 degrees Celsius (-259 Fahrenheit). This liquid gas is 600 times smaller than the original volume and is half the weight of water. The compressed fossil fuel, which is constituted almost wholly of methane— a potent greenhouse gas —, can be transported around the world by ship. After arriving at its destination, the cargo is regasified in a floating terminal and redistributed through pipelines. But despite LNG's export potential, the high cost of liquefaction and producing LNG has limited its market. The cooling, liquefying and transport processes, as well as the post-transport regasification procedures, also require a lot of energy. Because of LNG's much more complex production and transport process, the risks of methane leakages along the production, transport and regasification chain are simply much higher and therefore much more emissionsintensive.

## 42. Answer: (b)

Statement 2 is incorrect.

- The United Nations Conference on the Environment 1972 is also known as the Stockholm Conference.
- It was the first world conference to make the environment a major issue. The conference aimed at creating a common governance framework for the planetary environment and natural resources.
- The countries agreed to not harm each other's environment or the areas beyond national jurisdiction.
- One of the major results of the Stockholm conference was the creation of the United Nations Environment Programme (UNEP).
- The participants adopted a series of principles for sound management of the environment including the Stockholm Declaration and Action Plan for the Human Environment and several resolutions.

#### **Stockholm Declaration:**

- Placed environmental issues at the forefront of international concerns.
- Marked the start of a dialogue between industrialized and developing countries on the link between economic growth, the pollution of the air, water, and oceans and the well-being of people around the world.

## 43. Answer: (c)

The World Meteorological Organisation is publishing the report since 1993. The report mainly documents indicators of climate system such as increasing land and ocean temperatures, greenhouse gas concentrations, melting ice, sea-level increase, glacier retreat and extreme weather. The report also highlights the impacts of climate change on socio-economic development, food security, migration and marine ecosystems.

## 44. Answer: (b)

Statement 3 is incorrect. The Beas River is a river in north India. The river rises in the Himalayas in central Himachal Pradesh and flows for some 470 kilometres (290 mi) to the Sutlej River in the state of Punjab. The water of the Beas river is allocated to India under the terms of the Indus Waters Treaty between India and Pakistan.

## 45. Answer: (d)

Zodiacal light is a faint, diffuse glow of sunlight scattered by dust particles that orbit the sun. It appears in the night sky as a roughly triangular white glow that extends from the sun's direction and along the zodiac.

## 46. Answer: (b)

Statement 3 is incorrect. Changes in a river's course in the northern part of the country is not unusual. One of the reasons is believed to be the movement of the Indian Tectonic Plate. The Plate has been moving northward. That is the reason the Himalayas are rising. One reason for the course of the Yamuna moving eastwards too is believed to be this. Also, it is more likely for a river to change course in the alluvial plains of North India. "Alluvial terrain is soft and more amenable to changing river courses. If we look at the course of the Ganga between 1786 and now, there are places where it has changed its course by 34 km. In Badaun (UP) the river has moved 10 km from where it used to be.

# 47. Answer: (c)

The Earth's geological time scale is a fundamental tool used by geologists, palaeontologists and other scientists to study the planet's past. It is a system that divides the history of the Earth into discrete intervals of time, based on events, such as the evolution and extinction of different living beings and processes that have occurred. It is divided into five broad categories: eons, epochs, eras, periods, and ages. As of now, at least officially, we're in the Phanerozoic eon, Cenozoic era, Quaternary period, Holocene epoch and the Meghalayan age. Anthropocene epoch — a proposed geological epoch that began when the human impact started to radically alter the Earth's ecosystem and geology.

## 48. Answer: (b)

Statement 1 is incorrect. A heat dome occurs when an area of high-pressure traps warm air over a region, just like a lid on a pot, for an extended period of time. The longer that air remains trapped, the more the sun works to heat the air, producing warmer conditions with every passing day. Heat domes generally stay for a few days but sometimes they can extend up to weeks, which might cause deadly heat waves. Scientists suggest that any region of high pressure, whether a heat dome or not, forces air to sink and once it reaches the ground, it gets compressed and becomes even warmer. Moreover, when air sinks, it gets drier and further raises the temperature of the

area. The heat dome's formation is related to the behaviour of the jet stream — an area of fast-moving air high in the atmosphere. The jet stream is believed to have a wave-like pattern that keeps moving from north to south and then north again. When these waves get bigger and elongated, they move slowly and sometimes can become stationary. This is when a high-pressure system gets stuck and leads to the occurrence of a heat dome. Although heat domes are likely to have always existed, researchers say that climate change may be making them more intense and longer. They suggest with the rising temperatures, it is expected that the jet stream will become more wavy and will have larger deviations, causing more frequent extreme heat events.

## 49. Answer: (a)

Only statement 1 is correct. A cyclone is a low pressure system that forms over warm waters. Essentially, it is a system of high speed winds rotating around a low-pressure area, with the winds blowing counter clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. According to the World Meteorological Organization, "Tropical cyclones are one of the biggest threats to life and property even in the formative stages of their development. They include a number of different hazards that can individually cause significant impacts on life and property, such as storm surge, flooding, extreme winds, tornadoes and lighting.

# **50.** Answer: (c)

The Department for Promotion of Industry and Internal Trade (DPIIT), under the Ministry of Commerce and Industry, has launched a call for startup applications for registration on the MAARG portal, the National Mentorship Platform by Startup India. MAARG portal - Mentorship, Advisory, Assistance, Resilience and Growth, is a one stop platform to facilitate mentorship for startups across diverse sectors, functions, stages, geographies, and backgrounds. The objectives of the MAARG portal are -

- To provide sector focused guidance, handholding, and support to startups throughout their lifecycle
- To establish a formalized and structured platform that facilitates intelligent matchmaking between the mentors and their respective mentees
- To facilitate efficient and expert mentorship for startups and build an outcome-oriented mechanism that allows timely tracking of the mentor-mentee engagements

## 51. Answer: (a)

Only option 1 is correct. New Aadhaar cards and PDF versions of the identity document have started including a more explicit and prominent disclaimer that they are "a proof of identity, not of citizenship or date of birth."

## 52. Answer: (c)

The Unique Identification Authority of India is a statutory authority established under the provisions of Aadhaar act 2016 by the Govt. of India under the Ministry of Electronics & Information Technology. Mission

- To provide for good governance, efficient, transparent and targeted delivery of subsidies, benefits and services, the expenditure for which is incurred from the Consolidated Fund of India or the Consolidated Fund of State to residents of India through assigning of unique identity numbers.
- To develop policy, procedure and system for issuing Aadhaar number to residents of India, who request for same by submitting their demographic information and biometric information by undergoing the process of enrolment.
- To develop policy, procedure and systems for Aadhaar holders for updating and authenticating their digital identity.
- Ensure availability, scalability and resilience of the technology infrastructure.

## 53. Answer: (a)

Only statement 1 is correct. Under the Indian Constitution, public libraries are a state subject. Around Nineteen states have passed the Library Legislation Act. In 2013, the National Mission on Libraries came into being under the Ministry of Culture, to revive and modernise public libraries.

## 54. Answer: (d)

PM-JANMAN Yojana aids the development of particularly vulnerable tribal groups (PVTG). PM-Vishwakarma Yojana provides end-to-end support to artisans and craftspeople engaged in 18 trades Pradhan Mantri Ujjwala Yojana (PMUY) has played a pivotal role in providing access to clean cooking fuel, releasing 10 crore LPG connections to households. Unnat Jyoti by Affordable LEDs for All (UJALA) program has contributed to energy efficiency by distributing over 37 crore LED bulbs, along with providing about 72 lakh LED tube lights and 23 lakh energy-efficient fans.

## 55. Answer: (d)

The National Commission for Protection of Child Rights (NCPCR) has launched the GHAR (GO Home and Re-Unite) Portal for the digital monitoring and tracking of the restoration and repatriation of children as per the protocols under the Juvenile Justice (Care and Protection of Children) Act, 2015.

- The portal facilitates the digital tracking and monitoring of children in the Juvenile Justice system who need to be repatriated to another country, state, or district.
- It enables the digital transfer of cases to the concerned Juvenile Justice Board/Child Welfare Committee for speedy repatriation and allows for requests for translators or interpreters if required.

## 56. Answer: (c)

SAFEETY, developed by the Society for Applied Microwave Electronics Engineering and Research (SAMEER) under MeitY's guidance, features conveyorized loading and unloading of grain bags with RFID traceability, online weight and moisture measurement, and Radio Frequency Based Removal of Moisture from Grain. This advanced system can handle nearly one truckload (approximately 28 tons) of grains in just 40 minutes.

## 57. Answer: (c)

Over the last 15 years, the Government of India has attempted to replicate the success that liquefied petroleum gas (LPG) adoption has seen in urban households, in poorer and rural households. The Grameen Vitrak Yojana, launched in 2009, has helped grow the rural distributor base from 18% to 60% of the total LPG distributor base today.

## 58. Answer: (c)

Statement 4 is incorrect. The Central government has approved a new treatment regimen for leprosy, aiming to stop its transmission at the sub-national level by 2027, three years ahead of the UN's Sustainable Development Goals. The Ministry of Health and Family Welfare has decided to introduce a three-drug regimen for Pauci-Bacillary (PB) cases in place of a two-drug regimen for six months. According to the WHO, leprosy is a chronic infectious disease caused by the Mycobacterium leprae bacteria. The disease predominantly affects the skin and peripheral nerves. Left untreated, it may cause progressive and permanent disabilities. The bacteria are transmitted via droplets from the nose and mouth during close and frequent contact with untreated cases. Leprosy, reported from all the six WHO regions, is curable with multi-drug therapy (MDT). The majority of new cases detected annually are from South East Asia. The WHO's recommended treatment regimen consists of three drugs — dapsone, rifampicin and clofazimine.

## 59. Answer: (c)

The Indian Space Research Organisation (ISRO) has said that the INSAT-3DS satellite has been flagged off to the launch port at the Satish Dhawan Space Centre in Sriharikota.

The INSAT-3DS satellite is an exclusive meteorological satellite realised by ISRO with the primary objective to provide continuity of services to the existing in-orbit INSAT-3Dand3DR satellites and significantly enhancing the capabilities of the INSAT system. The satellite is designed for enhanced meteorological observations and monitoring of land and ocean surfaces for weather forecasting and disaster warning, with state-of-the-art payloads viz., 6 channel Imager and 19 channel Sounder meteorology payloads, communication payloads viz., the Data Relay Transponder (DRT) and Satellite aided Search and Rescue (SAS&R) transponder. The DRT instrument receives meteorological, hydrological and

oceanographic data from automatic Data Collection Platforms / Automatic Weather Stations (AWS) and augments the weather forecasting capabilities. The SAS&R transponder is incorporated in the satellite to relay a distress signal / alert detection from the beacon transmitters for search and rescue services with global receive coverage.

## 60. Answer: (b)

Statement 1 is incorrect.

#### What are semiconductors?

Also known as microchips or integrated circuits, semiconductors are usually made from silicon, and consist of millions or billions of transistors that act like miniature electrical switches that flip on and off to process data such as images, radio waves, and sounds. They are practically inside every essential product of the modern world — from household appliances to sophisticated defence systems, mobile phones to cars, toys to high-end luxury products.

## 61. Answer: (d)

- Uranium enrichment process increases the proportion of U-235 through the process of isotope separation.
- For nuclear weapons, enrichment is required upto 90% or more which is known as Highly Enriched Uranium/weapons-grade uranium.
- For nuclear reactors, enrichment is required upto 3-4% which is known as Low Enriched Uranium/ reactorgrade uranium.

#### 62. Answer: (c)

China also commands 60% of the total production of germanium. The element is used in fibre-optic cables, infrared imaging devices (used by enforcement agencies for surveillance, target acquisition and reconnaissance, particularly in the dark) and optical devices (to improve the ability to operate weapon systems in harsh conditions). They are also used in solar cells for their ability to withstand heat and higher energy conversion efficiency.

#### 63. Answer: (c)

Guillain-Barré Syndrome is a rare neurological disorder where the body's immune system — which normally protects it from infections and other foreign bodies mistakenly attacks its own peripheral nerve cells. A person with this syndrome will have difficulty speaking, walking, swallowing, excreting or performing other normal functions of the body. The condition can get progressively worse. Thus, the peripheral nerves the nerves that branch out from the brain and the spinal cord — get damaged as a result, and the muscles can become weak or paralyzed. The exact reasons for Guillain-Barré Syndrome are not yet understood. However, it often develops shortly after a person gets an infectious disease. Rarely, vaccinations can cause it. Guillain-Barré Syndrome, or GBS, also was linked to the cytomegalovirus, Epstein Barr virus, Zika virus and even the COVID-19 pandemic.

## 64. Answer: (c)

Scientists have made progress in understanding Huntington's disease by studying fruit flies (Drosophila melanogaster).

## About the study:

- Huntington's disease patients carry a mutated version of the HTT gene, which codes for a protein called huntingtin (Htt).
- The mutated gene encodes an abnormal Htt protein, leading to the destruction of neurons regulating movement, thinking, and memory. Huntington's disease (HD) is an inherited disorder that causes nerve cells (neurons) in parts of the brain to gradually break down and die. The disease attacks areas of the brain that help to control voluntary (intentional) movement, as well as other areas.

## 65. Answer: (b)

Statement 2 is incorrect.

- Ammonia is a colourless, pungent gas with the chemical formula NH3. It's made up of hydrogen and nitrogen. In its aqueous form, it's called ammonium hydroxide.
- Ammonia is a natural byproduct and respiratory stimulant. It's produced naturally in the human body and in nature, including in water, soil, and air. In human health, ammonia and the ammonium ion are important components of metabolic processes.
- In its concentrated form, ammonia is dangerous and caustic.

#### Signs and symptoms of ammonia exposure include:

- Nausea
- Vomiting
- Abdominal pain
- Burns of the mouth, throat, oesophagus, and stomach

## 66. Answer: (b)

Statement 2 is incorrect.

## 67. Answer: (b)

Statement 3 is incorrect.

Classification based on Stem Cells formation at different times of human lives There are 3 types under this classification

- Embryonic stem cells
- Adult stem cells
- Induced pluripotent stem cells or iPSC's

#### What are Embryonic Stem cells?

These are the Stem cells that exist only during the earliest stage of development.

#### What are Adult Stem Cells?

- These are the cells that can multiply when there is a need to repair adult organs and tissues.
- These cells are present in almost all organs of the human body.
- They are multipotent i.e. they can give rise to a limited number of mature cell types, usually corresponding to the tissues in which they reside.

A most well-known example is the blood-forming (hematopoietic) stem cells from bone marrow that give rise to different blood cells in our body.

• Some tissue-specific stem cells can only give rise to one or two mature cell types and are called unipotent and bipotent, respectively. Stem cells found in the skin produce new skin cells and are an example of unipotent stem cells.

What are induced pluripotent stem cells (iPSC's)? These cells are not found in the body but made in the laboratory from cells of the body. The iPSC cells have properties similar to those of embryonic stem cells.

# 68. Answer: (c)

- A transgene is a gene that has been transferred naturally, or by any of a number of genetic engineering techniques, from one organism to another. The introduction of a transgene, in a process known as transgenesis, has the potential to change the phenotype of an organism. from one organism and is introduced into a different organism.
- This non-native segment of DNA may either retain the ability to produce RNA or protein in the transgenic organism or alter the normal function of the transgenic organism's genetic code. In general, the DNA is incorporated into the organism's germ line.

## 69. Answer: (d)

The ergosphere is a region surrounding a rotating black hole, located between the event horizon and the stationary limit. In this area, space-time itself is dragged along with the rotation of the black hole. Objects within the ergosphere are forced to rotate along with the black hole's spin due to the distortion of spacetime caused by its immense gravitational pull. The event horizon, on the other hand, is a theoretical boundary around a black hole beyond which no radiation can escape.

## **70.** Answer: (c)

India has already decided to build a gravitational wave detector to join the international LIGO (Laser Interferometer Gravitational Wave Observatory) network, and is a full member of the ITER project, which is working to harness energy from nuclear fusion reactions. India also has a strong participation in the Large Hadron Collider (LHC), the world's largest and most powerful particle accelerator that is running some of the most exciting experiments in particle physics.

## 71. Answer: (a)

Only Statement 3 is correct.

The Square Kilometer Array will not be a single large telescope, but a collection of thousands of dish antennas operating as a single unit. The name, Square Kilometer Array, comes from the original intention to create one square kilometre (one million square metre) of effective area for collecting radio waves. This was meant to be achieved by installing thousands of smaller antennas in a specific array design that would make them

function like a single radio telescope. The antennas, about 200 of them in South Africa and more than 130,000 in Australia, are being installed in sparsely populated locations, chosen to ensure they are as far away from human activities as possible. This has been done in order to minimise signal interference from undesirable Earth-based sources. Though none of the SKA facilities would be located in India, there are immense science and technology gains for the country by participating in the project as a full member. The intellectual properties generated by the project, though owned by the SKA Observatory, would be accessible to all the member countries.

## **72.** Answer: (b)

Statement 3 is incorrect.

The first detection of gravitational waves was announced on February 11, 2016. These had been predicted, almost exactly a century ago by Albert Einstein as a natural consequence of his theory of gravity — the Theory of General Relativity. General Relativity implies that under certain circumstances, space itself would be stretched and compressed resulting in the production of gravitational waves — much like throwing a stone in a placid pool of water. Since gravitational waves were first detected by LIGO (Laser Interferometry Gravitational-wave Observatory), its detectors have observed dozens of short high-frequency gravitational wave bursts. These high-frequency waves are thought to be a result of collisions of black holes — about as massive as our Sun — as well as of neutron stars. Black holes and neutron stars are stellar remnants of stars which have exhausted their nuclear fuel.

#### 73. Answer: (d)

Each person's DNA, except for identical twins, is unique. By analyzing selected DNA sequences (called loci), a crime laboratory can develop a profile to be used in identifying a suspect. DNA can be extracted from many sources, such as hair, bone, teeth, saliva, and blood. Because there is DNA in most cells in the human body, even a minuscule amount of bodily fluid or tissue can yield useful information. Samples may even be extracted from used clothes, linen, combs, or other frequently used items.

#### 74. Answer: (d)

Important Dimensions of India-Russia Relations: International/Multilateral Organisations and Connectivity Projects BRICS, SCO, G20, International North-South Transport Corridor (INSTC)

#### 75. Answer: (d)

The joint statement — 'Horizon 2047: 25th Anniversary of the India-France Strategic Partnership, Towards A Century of India-France Relations' — lays out a roadmap for the bilateral relationship till 2047.

## **76.** Answer: (d)

"In the UN's Convention on the Prevention and Punishment

of the Crime of Genocide, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:

- (a) Killing members of the group;
- (b) Causing serious bodily or mental harm to members of the group;
- (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
- (d) Imposing measures intended to prevent births within the group;
- (e) Forcibly transferring children of the group to another group."

## 77. Answer: (d)

The Boao Forum for Asia (BFA) is a non-profit organisation that hosts high-level forums for leaders from government, business and academia in Asia and other continents to share their vision on the most pressing issues in this region and the world at large. BFA is modelled on the World Economic Forum held annually in Davos.

## **78. Answer:** (b)

Statement 2 is incorrect. According to the International Union for Conservation of Nature (IUCN), the extraction of mineral resources from the ocean below 200 metres is called deep sea mining. Deep Sea Conservation Coalition (DSSC), an initiative formed in 2004 to safeguard deep-sea ecosystems. India has been granted two exploration contracts from the ISA so far – one for polymetallic nodules, and one for polymetallic sulphides.

#### 79. Answer: (c)

The Healthy Indian Project (THIP), a health information platform in India, has joined the World Health Organization's Vaccine Safety Net (VSN), a global network of websites providing trustworthy vaccine safety information. The Vaccine Safety Net (VSN) is a global network of websites that provide reliable information on vaccine safety. The VSN is an initiative of the World Health Organization (WHO). The VSN is a diverse group of websites that provide vaccine safety information in various languages.

#### 80. Answer: (d)

The two countries signed a Friendship Treaty in 1955, and India's support to Egypt, including during the Suez Canal crisis in 1956, eventually led to the Non-Aligned Movement in 1961, with both as founder members. They were also instrumental in the G-77 grouping and "South-South Cooperation" initiatives.

#### 81. Answer: (b)

Statement 1 and 4 is correct. Pardon: Removes sentence and conviction, absolves from all sentences, punishments, and disqualifications. Commutation: Substitution of a harsher punishment with a lighter one (e.g., death sentence

to rigorous imprisonment). Remission: Reducing the sentence period without changing its character. Respite: Awarding a lesser sentence due to special circumstances Reprieve: Temporary stay of sentence execution to seek pardon or commutation

## 82. Answer: (b)

Statement 2 is incorrect.

Khaps are mainly gotra – clans tracing their paternal lineage to a common ancestor – and region-based social outfits. They derive their name either from the number of villages/clusters of villages or the gotras they represent. Khaps used to have three kinds of functions - settle familial/village disputes, maintain/protect the tenets of the faith, and protect the area from outside invasion. Today, the last function is largely irrelevant. The major function of Khaps today is to settle disputes and ensure that social and religious custom is enforced in their area. With regards to leadership and succession, a defining feature of khaps is that they do not have a set organisation. While earlier, succession as a khap president/leader was hereditary, now, that is not necessarily the case. To preside over a meeting of a particular khap or a group of khaps, the chairman of the same is nominated unanimously and on the spot. As largely there are no defined rules to elect president of a khap, in many cases more than one person claims to be head of a particular khap - causing fights and disputes. There are nearly 300 main khaps in north India – in the states of Haryana, Uttar Pradesh, Delhi, Rajasthan and Uttarakhand.

#### 83. Answer: (c)

Article 25 lays down an individual's fundamental right to religion; Article 26(b) upholds the right of each religious denomination or any section thereof to "manage its own affairs in matters of religion"; Article 29 defines the right to conserve distinctive culture. An individual's freedom of religion under Article 25 is subject to "public order, health, morality" and other provisions relating to fundamental rights, but a group's freedom under Article 26 has not been subjected to other fundamental rights.

## 84. Answer: (b)

Statement 2 is incorrect.

In India, the Constitution gives the government the right to levy taxes on individuals and organisations, but makes it clear that no one has the right to levy or charge taxes except by the authority of law. Any tax being charged has to be backed by a law passed by the legislature or Parliament. Taxes in India come under a three-tier system based on the Central, State and local governments, and the Seventh Schedule of the Constitution puts separate heads of taxation under the Union and State list. There is no separate head under the Concurrent list, meaning Union and the States have no concurrent power of taxation.

## 85. Answer: (a)

Only Statement 2 is correct.

In a historic move, the Supreme Court designated 11 women lawyers as senior advocates, a first in a single round of appointments. A committee led by Chief Justice of India D Y Chandrachud designated a total of 56 lawyers and advocate-onrecord (AoR) as senior advocates. This marked a significant moment for gender representation in senior legal roles. Senior advocates in India have certain privileges, including a separate dress code, priority in court hearings, and the right to sit in a designated area of the court. However, they are not allowed to advertise, solicit clients, or directly contact clients for work. An Advocate-on-Record (AOR) is a legal professional who can practice before the Supreme Court of India. They are entitled to act and plead for a party in the Supreme Court.

## 86. Answer: (b)

Statement 2 is incorrect.

FC is a body set up under Article 280 of the Constitution. Its primary job is to recommend measures and methods on how revenues need to be distributed between the Centre and states. There are no-ex officio members of the commission as such, because it is constituted afresh every five years. Besides suggesting the mechanism to share tax revenues, the Commission also lays down the principles for giving out grant-in-aid to states and other local bodies. The commission has to take on itself the job of addressing the imbalances that often arise between the taxation powers and expenditure responsibilities of the centre and the states, respectively.

#### 87. Answer: (d)

The Indian Preamble, based on the Objectives Resolution, was moved by Jawaharlal Nehru in the Constituent Assembly on 13 December 1946 and adopted on 26 November 1949. It came into force on 26 January 1950, Republic Day. During the Indian emergency, Indira Gandhi amended it to include the words "socialist," "secular," and "integrity." (42nd Amendment Act of 1976). It signifies the principle of popular sovereignty, emphasizing that power resides with the citizens, not just the government.

## 88. Answer: (b)

Article 142 of the Constitution of India gives the Supreme Court the power to pass any decree or make any order to ensure complete justice in any matter pending before it Any decree so passed or order so made shall be enforceable throughout the territory of India.

#### 89. Answer: (d)

Part IV (Articles 36-51) covers a wide range of principles, including (apart from the UCC), the securing of equal justice and free legal aid to citizens (Art 39A), participation of workers in the management of industries (Art 43A), organisation of agriculture and animal husbandry (Art 48), protection and improvement of the environment and safeguarding of forests and wildlife

(Art 48A), promotion of international peace and security (Art 51), etc.

## 90. Answer: (c)

The Constitution (First Amendment) Bill sought to make several consequential changes—from exempting land reforms from scrutiny to providing protections for backward classes in the Constitution. Notably, it also expanded on the scope of the restrictions on the right to free speech.

## 91. Answer: (b)

Article 348 of the Constitution states that the authoritative texts of all Acts passed by Parliament or State legislatures shall be in the English Language. The legal regime in place provides that English shall remain an official language until resolutions for the discontinuance of English as an official language are adopted by State Legislatures and by Parliament.

## 92. Answer: (b)

Statement 1 is incorrect. The Indian Navy has unveiled new epaulettes for Admirals, inspired by the naval ensign and Chhatrapati Shivaji's rajmudra, as part of an initiative to reflect India's rich maritime heritage and move away from British nomenclature. Chhatrapati Shivaji Maharaj's Rajmudra is a royal seal and symbol of his dream of a Maratha Swarajya. The seal includes Sanskrit inscriptions that express Shivaji's gratitude to his father and his commitment to ruling his land independently and the welfare of his subjects. The Rajmudra's text is in Sanskrit, unlike other royal seals from the time, which were usually carved in Persian.

#### 93. Answer: (a)

Only Statement 1 is correct. Lothal was one of the southernmost sites of the Indus Valley civilization, located in the Bhāl region of what is now the state of Gujarat. The port city is believed to have been built in 2,200 BC. Lothal was nominated in April 2014 as a UNESCO World Heritage Site, and its application is pending on the tentative list of UNESCO. As per the nomination dossier submitted to UNESCO, "The excavated site of Lothal is the only port-town of the Indus Valley Civilisation. A metropolis with an upper and a lower town had in on its northern side a basin with vertical wall, inlet and outlet channels which has been identified as a tidal dockyard.

#### 94. Answer: (c)

Kapilvastu is in southern Nepal, near the Indian border. Lumbinī is a Buddhist pilgrimage site in Nepal. It is the place where, according to Buddhist tradition, queen Maya gave birth to Siddhartha Gautama at around 566 BCE.

#### 95. Answer: (b)

Statement 1 is incorrect.

 The Subika painting style is deeply connected to the Meitei community's cultural history through its six surviving manuscripts – Subika, Subika

- Achouba, Subika Laishaba, Subika Choudit, Subika Cheithil and Thengrakhel Subika.
- The paintings are a composition of cultural motifs created by pre-existing features and other influences. However, the Subika painting style is nearly extinct due to neglect.
- The Subika Laishaba is a composition of cultural motifs influenced by the cultural worldviews of the community.
- Its illustrations incorporate visual elements like lines, shapes, forms, colours, and patterns.
- These visual images serve as cultural motifs, creating visual effects and expressing cultural significance.
- The paintings are done on handmade paper, and the materials for manuscripts, such as handmade paper or tree bark, are prepared locally.

## 96. Answer: (c)

The Kamakhya Temple is a significant pilgrimage site and one of the largest Shakti shrines in India. It is located on the Nilachal hills in Guwahati, Assam. The temple is dedicated to the goddess Kamakhya and is a centre of Tantric practices. It is also the site of the Ambubachi Mela, an annual festival that celebrates the goddess's menstruation. PM-DevINE is a Central Sector scheme introduced in the Union Budget 2022-23. It aims to fund infrastructure projects and support social development initiatives in the North-East Region (NER). Implemented by the Ministry of Development of the North-East Region, it focuses on ensuring connectivity, addressing critical issues, and empowering youth and women in the NER.

## 97. Answer: (c)

Seven products from Odisha, ranging from the Similipal Kai chutney made with red weaver ants to the embroidered Kapdaganda shawl, have bagged the coveted Geographical Indication (GI) tag. Woven and embroidered by the women of the Dongria Kondh tribe, a particularly vulnerable tribal group (PVTG) in the Niyamgiri hills in Odisha's Rayagada and Kalahandi districts, the shawl reflects the rich tribal heritage of the Dongria Kondhs. The shawl is worn by both men and women and the Dongrias gift it to their family members as a token of love and affection.

## 98. Answer: (c)

## What was the Ulgulan movement?

The Ulgulan movement of 1899 also involved the use of weapons and guerrilla warfare to drive out foreigners. Munda encouraged the tribals to refuse following colonial laws and paying rent. He encouraged changes in the social sphere too, challenging religious practices to fight against superstition, and became known as 'Bhagwan' (God) and 'Dharati Aba' (Father of the earth) by his followers. But the British were soon able to halt the movement. On March 3, 1900, Munda was arrested by the British police while he was sleeping with his tribal guerilla army at Jamkopai forest in Chakradharpur.

## 99. Answer: (b)

Statement 3 is incorrect. The Cabinet Committee on Economic Affairs, has approved the Minimum Support Prices (MSPs) for copra for the 2024 season. Copra is the dried, white flesh of the coconut. It's a major cash crop and is valued for the coconut oil that can be extracted from it. The palatable oil cake, known as copra cake, obtained as a residue in the production of copra oil is used in animal feeds.

## 100. Answer: (b)

Statement 2 is incorrect. The National Research Centre on Litchi (NRCL), has successfully expanded litchi cultivation to 19 states in India. Litchi cultivation for commercial production has commenced in states such as Andhra Pradesh, Tamil Nadu, Karnataka, Uttar Pradesh, Himachal Pradesh, and others.

#### **About Litchi:**

- Litchi (Litchi chinensis) is a small, oval roundish fruit that is native to Southeast Asia. It is a member of the soapberry family (Sapindaceae) and is also known as lychee or lichee.
- Litchi is a sensitive fruit, influenced by temperature, rainfall, humidity, and soil conditions.
- The fruit primarily grows in the foothills of the Himalayas, with Bihar alone contributing nearly 40% of India's litchi production. Litchi fruit contains a toxin, methylene cyclopropyl-glycine (MCPG), which is known to be fatal by causing encephalitis-related deaths. This is especially harmful when consumed by malnourished children.

