

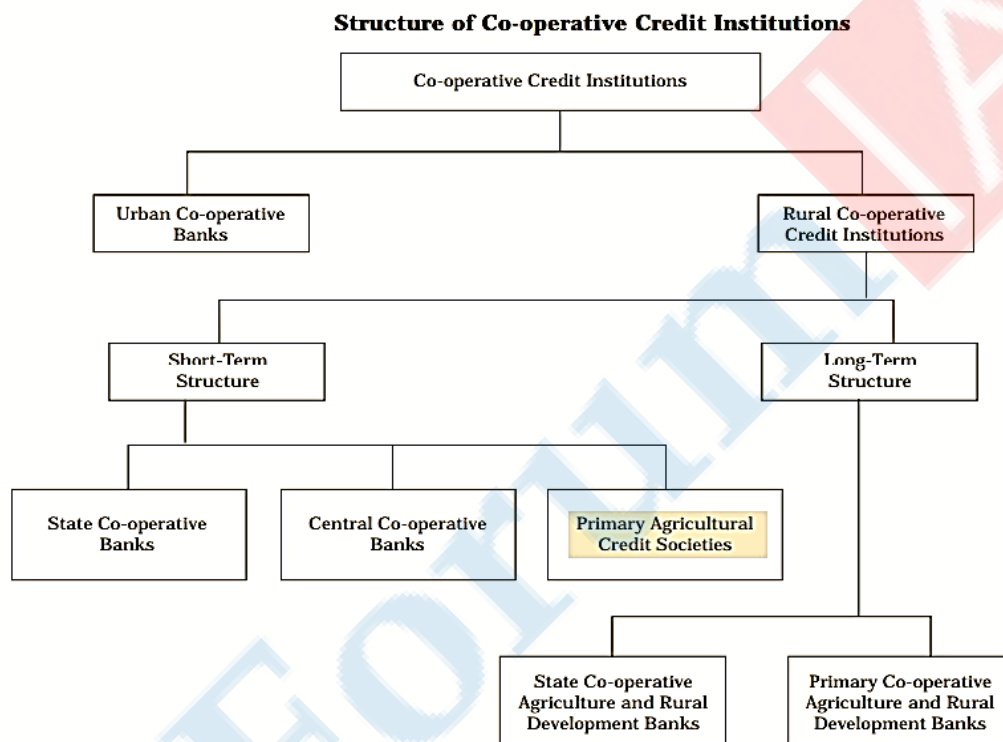
Q.1)

Ans) c

Exp) Option c is the correct answer.

The Union Budget 2023-24 has announced Rs 2,516 crore for **computerisation of 63,000 Primary Agricultural Credit Societies (PACS)** over the next five years. The short-term co-operative credit structure operates with a three-tier system - **Primary Agricultural Credit Societies (PACS) at the village level**, Central Cooperative Banks (CCBs) at the district level and State Cooperative Banks (StCBs) at the State level.

Statement 1 is correct: Primary Agricultural Credit Societies (PACS) constitute the lowest tier of the Short-Term Cooperative Credit (STCC) structure in the country. PACS provides **short-term and medium-term credit and other input services**, like seed, fertiliser, pesticide distribution, etc. to member farmers.



Statement 2 is correct: As PACS are cooperative bodies, **individual farmers can become members of the PACS** and office-bearers are elected from within them. Also the Chairpersons of PACS participate in electing the office-bearers of District Central Cooperative Banks (DCCBs).

Statement 3 is incorrect: PACS are outside the purview of the **Banking Regulation Act, 1949** and hence **not regulated by the Reserve Bank of India (RBI)**. The Reserve Bank regulates the banking functions of StCBs/DCCBs/Urban Cooperative Banks (UCBs) under the provisions of Sections 22 and 23 of the Banking Regulation Act, 1949.

Statement 4 is incorrect: Debit cards are issued by banks and are linked to a bank account. Credit cards are issued by scheduled commercial banks (excluding Payments banks), Regional Rural Banks (in collaboration with other banks), and Urban Cooperative Banks, Non-Bank Financial Companies (subject to approval from RBI). Prepaid cards are issued by eligible banks and authorised non-banks. **PACS does not issue credit and debit cards.**

Source: <https://taxguru.in/rbi/debit-cards-credit-cards-prepaid-cards.html>

https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2755#:~:text=purview%20of%20the-,Banking,-Regulation%20Act%2C%201949

<https://indianexpress.com/article/explained/what-are-primary-agricultural-credit-societies-8430329/>

<https://economictimes.indiatimes.com/industry/banking/finance/co-operative-societies-pacs-are-not-allowed-to-raise-public-deposits-rbi-cautions/articleshow/59388218.cms?from=mdr>

Q.2)

Ans) d

Exp) Option d is the correct answer.

Foreign portfolio investment or FPI is a form of investment wherein investors hold assets and securities outside their country. It is made with the expectation of earning a return. It is not intended to provide the investor with direct ownership of financial assets and is relatively liquid depending on the volatility of the market. As per SEBI regulations, a foreign portfolio investor shall invest only in the following securities, namely-

- (a) shares, debentures and warrants issued by a body corporate; listed or to be listed on a recognized stock exchange in India;
- (b) units of schemes launched by mutual funds under Chapter V, VI-A and VI-B of the Securities and Exchange Board of India (Mutual Fund) Regulations, 1996;
- (c) units of schemes floated by a Collective Investment Scheme in accordance with the Securities and Exchange Board of India (Collective Investment Schemes) Regulations, 1999;
- (d) derivatives traded on a recognized stock exchange;
- (e) units of real estate investment trusts, infrastructure investment trusts and units of Category III Alternative Investment Funds registered with the Board;
- (f) Indian Depository Receipts;
- (g) any debt securities or other instruments as permitted by the Reserve Bank of India for foreign portfolio investors to invest in from time to time; and
- (h) such other instruments as specified by the Board from time to time

Source: https://www.sebi.gov.in/legal/regulations/dec-2019/securities-and-exchange-board-of-india-foreign-portfolio-investors-regulations-2019-last-amended-on-december-19-2019-_44436.html

Q.3)

Ans) c

Exp) Option c is the correct answer.

Small Savings Schemes are a set of savings instruments managed by the central government with an aim to encourage citizens to save regularly irrespective of their age. They are popular as they not only provide returns that are generally higher than bank fixed deposits but also come with a sovereign guarantee and tax benefits.

Statement 1 is incorrect. The interest rates on small savings schemes are **reviewed and revised every quarter by the Government of India and not by the Reserve Bank of India**. The interest rates are based on yields of G-Secs of corresponding maturity. The formula to arrive at the interest rates for a small savings scheme was given by the Shyamala Gopinath Committee.

Statement 2 is correct. The Union Finance Minister in the Union Budget 2023-24 launched a new small savings scheme called Mahila Samman Savings Certificate (MSSC). The Mahila Samman Savings Certificate is a one-time small savings scheme for women. Under this, an individual may open an unlimited number of accounts, subject to the maximum deposit limit, and a three-month period must elapse between one account and the opening of another. A minimum of Rs 1000 and any sum in multiples

of Rs 100 can be deposited in an account with maximum limit of Rs 2 lakh, with no additional deposits permitted.

Statement 3 is incorrect. All deposits under small savings schemes are credited to the 'National Small Savings Fund' (NSSF), established under the Public Account of India (not the Consolidated Fund of India).

Source: <https://www.businesstoday.in/personal-finance/investment/story/small-savings-schemes-central-govt-says-interest-rates-on-key-instruments-better-than-banks-370352-2023-02-15>

<https://economictimes.indiatimes.com/wealth/invest/mahila-samman-savings-certificate-what-are-the-charges/articleshow/99784725.cms>

https://www.business-standard.com/podcast/finance/what-are-small-savings-schemes-types-teturns-and-interest-rates-121122400043_1.html

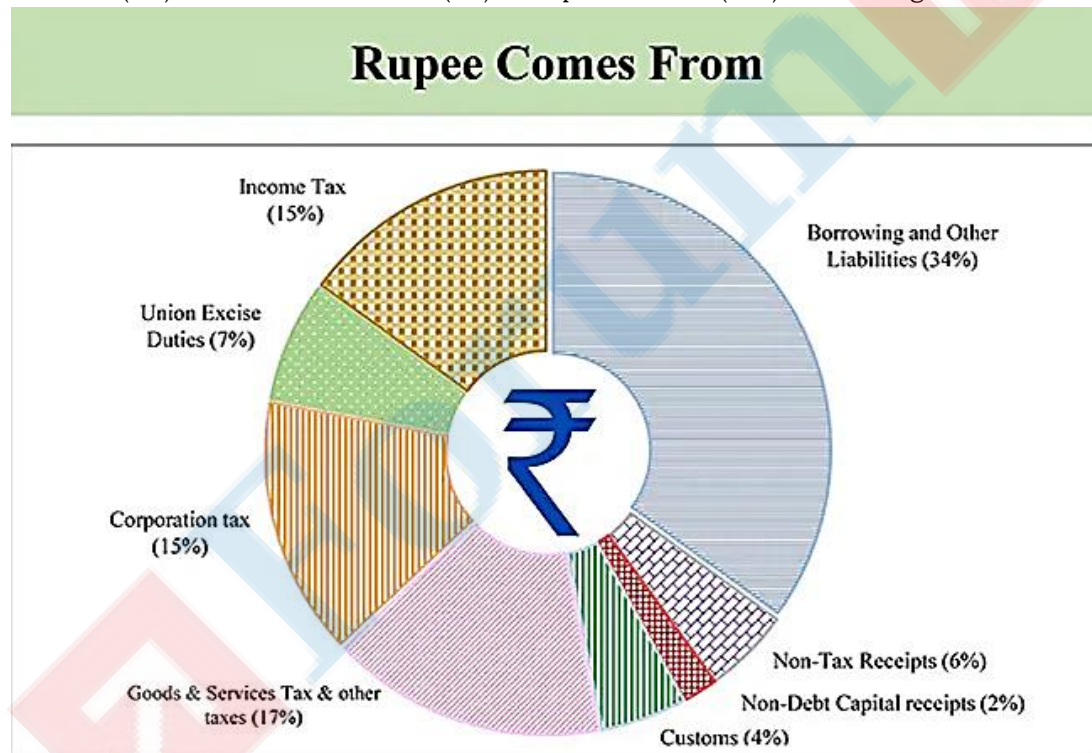
Q.4)

Ans) b

Exp) Option b is the correct answer.

From the Pie-chart given below the correct increasing order of various sources of income of Union government according to their share in the total estimated income of the Union government as per the Budget 2023-24:

Customs (4%) < Union Excise Duties (7%) < Corporation Tax (15%) < Borrowings and other Liabilities (34%)



Source: https://www.indiabudget.gov.in/doc/Budget_at_Glance/bag1.pdf

https://www.indiabudget.gov.in/doc/Budget_at_Glance/budget_at_a_glance.pdf

Q.5)

Ans) a

Exp) Option a is the correct answer.

Monetary policy is a set of actions adopted by the Central Bank of a nation to control a nation's overall money supply. In respect of India, the **Reserve Bank changes interest rate** to increase or decrease money supply in the economy. **Tight monetary/Contractional monetary policy means increase in interest rate**

(to reduce money supply) and **expansionary policy** means decrease in interest rate (to increase money supply).

Option 1 is correct: The rising interest rate will **encourage savings and discourage borrowing**/investment in the economy. Hence it is true that **increased Savings rate in an economy is one of possible impacts of tight monetary policy**/ contractionary monetary policy by the Reserve Bank of India (RBI).

Option 2 is incorrect: Although tight monetary policy (by increasing the interest rate) will be effective in controlling demand pull inflation which is caused by high demand (too much money chasing few goods), it may not be effective in controlling cost push inflation which is caused by rising prices of raw materials, **supply side bottlenecks etc.** For instance, rising interest rates will not be effective in handling inflation caused by **rising crude oil prices**. Thus, it essentially brings down cost push inflation is not true.

Option 3 is incorrect: The tight monetary policy associated with **increased interest rate would result in increased inflow of foreign institutional investments** as higher interest rates act as an incentive for them to invest in India.

Option 4 is correct: Bond yield is represented by dividing the bond coupon rate (interest rate) by the price of a bond and **bond yield is directly proportional to interest rate**. Thus, **tight monetary policy (Higher interest rates) will increase the yield of bonds**.

Bond yield = Annual interest rate / Face value of bond.

Source: Indian Economy Key concepts - Sankar Ganesh

Q.6)

Ans) b

Exp) Option b is the correct answer.

Additional Tier-1 bonds are a type of unsecured, perpetual bonds that bank issue to shore up their core capital base to meet the Basel III norms.

Statement 1 is incorrect. Additional Tier-1 bonds are a type of unsecured perpetual bonds having no maturity period. Instead, they carry call options that allow banks to redeem them after five or 10 years. However, banks are not obliged to use this call option and can opt to pay only interest on these bonds for eternity.

Statement 2 is correct. AT-1 bonds are issued by banks to shore up their core tier-1 capital base to meet the Basel-III norms.

Statement 3 is incorrect. Banks issuing AT-1 bonds can skip interest payments to the investor for a particular year or even reduce the bonds' face value, provided their capital ratios fall below certain threshold levels.

Statement 4 is incorrect. AT1 bonds **can be traded in secondary markets** which means AT1 bond holders can sell these bonds to others in the stock market to raise money.

Source: <https://www.thehindubusinessline.com/opinion/columns/slate/all-you-wanted-to-know-about-at-1-bonds/article31024984.ece>

[https://www.cnbctv18.com/market/bonds/additional-tier1-bonds-and-its-importance-in-capitalization-of-financial-services-entities-in-india-](https://www.cnbctv18.com/market/bonds/additional-tier1-bonds-and-its-importance-in-capitalization-of-financial-services-entities-in-india-16291261.htm#:~:text=Additional%20tier%2D1%20bonds%20are,repurchase%20them%20from%20the%20investors.)

[16291261.htm#:~:text=Additional%20tier%2D1%20bonds%20are,repurchase%20them%20from%20the%20investors.](https://www.cnbctv18.com/market/bonds/additional-tier1-bonds-and-its-importance-in-capitalization-of-financial-services-entities-in-india-16291261.htm#:~:text=Additional%20tier%2D1%20bonds%20are,repurchase%20them%20from%20the%20investors.)

Q.7)

Ans) b

Exp) Option b is the correct answer.

National Career Service Portal provides career guidance and Jobs in India and related services. It comes under the Ministry of Labour & Employment.

Statement 1 is correct. In partnership with the pioneers in the industry, **NCS organizes various training program to augment the employability skills**, cognitive as well as non-cognitive, of the jobseekers. For instance, National Career Service partnered with Microsoft India and launched Digisaksham, a joint digital skills initiative for employability through digital skills.

Statement 2 is incorrect: The criteria for registering on NCS Portal are as follow. Anyone can seek services provided in the NCS portal through a simple registration process if the

- 1) Qualification: There is no minimum education qualification for registration
- 2) Age: 14 years and above (not 18 and above)

Statement 3 is incorrect: The NCS portal provides assistance, access and opportunity mapping to employers. It is only a platform, with a repository of jobs from various sectors, which aims to facilitate the process of job search for the jobseekers. **NCS is not involved in the recruitment process**, which is done by the concerned employer. **Hence, NCS is not involved in the recruitment process for certain kind of government jobs.**

Statement 4 is correct: The Ministry of Labour & Employment. is implementing the National Career Service (NCS) Project as a Mission Mode Project for transformation of the National Employment Service. It aims to provide a variety of employment related services like career counselling, vocational guidance, information on skill development courses, apprenticeship, internships etc.

Source: https://www.ncs.gov.in/search/_layouts/15/ncsp/faqs.aspx

<https://dge.gov.in/dge/ncs>

Q.8)

Ans) b

Exp) Option b is the correct answer.

Tokenization refers to replacement of actual card details with an alternate code called the “token”, which shall be unique for a combination of card, token requestor (i.e. the entity which accepts request from the customer for tokenization of a card and passes it on to the card network to issue a corresponding token) and device (referred hereafter as “identified device”).

Statement 1 is correct: A tokenized card transaction is considered safer as the actual card details are not shared / stored with the merchants to perform the transaction. Actual card data, token and other relevant details are stored in a secure mode by the token service provider (card payment network or card issuer). Token requestors cannot store Primary Account Number (PAN), i.e., card number, or any other card detail. Card networks are also mandated to get the token requestor certified for safety and security that conform to international best practices / globally accepted standards.

Statement 2 is incorrect: It is not mandatory for any customer to tokenize his/her card. A customer can choose whether or not to let his / her card tokenized. If one does not choose to tokenize his/her card then he/she will have to enter all the card details including card number, expiry and CVV for every payment that he/she makes.

Statement 3 is incorrect: Tokenization and de-tokenization can be performed by the authorized card payment network (like Mastercard or Visa) or by the card issuer. The card holder can get the card tokenized by initiating a request on the app provided by the token requestor. The token requestor will forward the request to the card network which, with the consent of the card issuer, will issue a token corresponding to the combination of the card, the token requestor, and the device.

Source: <https://www.rbi.org.in/commonman/English/Scripts/FAQs.aspx?Id=2917>

Q.9)

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: PLI Schemes are a cornerstone of the Government's push for achieving an Atmanirbhar Bharat. The objective is to make domestic manufacturing globally competitive and to create global Champions in manufacturing. **The strategy behind scheme is to offer companies incentives on incremental sales from products manufactured in India**, over the base year.

Statement 2 is correct: They have been specifically designed to **boost domestic manufacturing, in sunrise and strategic sectors**, curb cheaper imports and **reduce import bills**, improve **cost competitiveness** of domestically manufactured goods, and enhance domestic capacity and exports. Hence it aims to achieve large scale production by increasing investment in targeted sectors.

Statement 3 is incorrect: Currently Production Linked Incentive (PLI) scheme is open for 14 sectors like:

- 1) Electronic/Technology Products – **MeitY**
- 2) Pharmaceuticals drugs – **D/o Pharmaceutical**
- 3) Telecom & Networking Products – **D/o Telecommunications**
- 4) Food Products – **Ministry of Food Processing Industries**
- 5) White Goods (ACs & LED) – **DPIIT**
- 6) High Efficiency Solar PV Modules – **MNRE**
- 7) Automobiles & Auto Components – **D/o Heavy Industry**
- 8) Advance Chemistry Cell (ACC) Battery – **D/o Heavy Industry**
- 9) Textile Products: MMF segment and technical textiles – **M/o Textiles**
- 10) Specialty Steel – **M/o Steel etc**

Source: <https://www.meity.gov.in/esdm/pli>

<https://www.investindia.gov.in/production-linked-incentives-schemes-india>

Q.10)

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct: Rubber Board is a **statutory body constituted by the Government of India, under the Rubber Act 1947, for the overall development of the rubber industry in the country.** Commercial cultivation of natural rubber was introduced in India by the British, although the experimental efforts to grow rubber on a commercial scale in India were initiated as early as 1873 at the Botanical Gardens, Calcutta. The first commercial Hevea plantations in India were established at Thattekadu in 1902.

Based upon the importance of rubber and its regulation, the government set up an ad-hoc committee in 1945 to study the situation and to make appropriate recommendations. On the recommendation of this ad-hoc committee, **the government passed the Rubber (Production and Marketing) Act, 1947, on 18th April 1947, and the “Indian Rubber Board” was constituted forthwith. The Rubber Production and Marketing (Amendment) Act, 1954, amended the name of the Board to “The Rubber Board”.**

Statement 2 is incorrect: It functions under Ministry of Commerce and Industry (not under Ministry of Agriculture and Farmers' Welfare)

Statement 3 is correct: Rubber Board has been designated by the Government of India as Export Promotion Council (EPC) in the case of export of Natural Rubber. **Board issue Registration-cum-Membership Certificate (RCMC) and Certificate of Origin (CoO) for export of natural rubber.** Board also provides assistance to exporters for preparing natural rubber into exportable form and provides market information on different forms of natural rubber in the target countries. Board undertakes export promotional activities of NR by participating in international trade fairs and exhibitions and provides

international publicity to Indian Natural Rubber. It also conducts training programmes in export management and procedures.

Source: <http://rubberboard.org.in/menuview>

Q.11)

Ans) a

Exp) Option a is the correct answer.

Statement 1 is correct. Internationalization of the rupee can reduce transaction costs for Indian businesses as they will not have to incur exchange rate fees for converting rupees into foreign currencies for international transactions. This can make it more attractive for foreign investors to do business in India and make India's exports more competitive in global markets.

Statement 2 is correct. An internationalized Rupee can reduce the cost of holding foreign reserve by the Reserve Bank of India (RBI). When the Rupee is widely used and accepted in international transactions, the RBI may not need to hold as much foreign currency to conduct its operations, thereby reducing costs.

Statement 3 is correct: Reducing dependence on foreign currency makes India less vulnerable to external shocks. For example, during phases of monetary tightening in the US and a strengthening dollar, excessive foreign currency liabilities of domestic businesses result in a de facto domestic tightening. India will also be able to save significant amount of its precious foreign exchange reserves for the exigencies caused by the sudden capital outflows due to the reasons such as rising international crude oil prices, exacerbating situation in Eastern Europe due to Russia-Ukraine conflict and possibility of further hike in interest rates by the US federal reserve to arrest the rising price levels in USA etc.

Statement 4 is incorrect: While the 'internationalisation' of the rupee may lower transaction costs of cross-border trade and investment operations by mitigating the exchange rate risk, **it will lead to complications in terms of formulating the monetary policy. Simultaneous pursuit of the exchange rate stability and a domestically oriented monetary policy will be more challenging.** A recent RBI's report warns that the 'internationalisation' of the rupee can potentially limit the ability of the central bank to control domestic money supply and influence interest rates as per the domestic macroeconomic conditions.

Source: [https://www.pib.gov.in/PressReleasePage.aspx?PRID=1896727#:~:text=RBI%20framework%20for%20invoicing%20and%20payments%20for%20international%20trade%20in%20Indian%20Rupee&text=The%20Reserve%20Bank%20of%20India,in%20Indian%20Rupees%20\(INR\)%E2%80%9D](https://www.pib.gov.in/PressReleasePage.aspx?PRID=1896727#:~:text=RBI%20framework%20for%20invoicing%20and%20payments%20for%20international%20trade%20in%20Indian%20Rupee&text=The%20Reserve%20Bank%20of%20India,in%20Indian%20Rupees%20(INR)%E2%80%9D)

<https://www.linkedin.com/pulse/empowering-indian-rupee-internationalisation-catalyst-vivek-irs>

S4: <https://thewire.in/economy/explainer-rbi-rupee-settlement-international-trade>.

Q.12)

Ans) d

Exp) Option d is the correct answer.

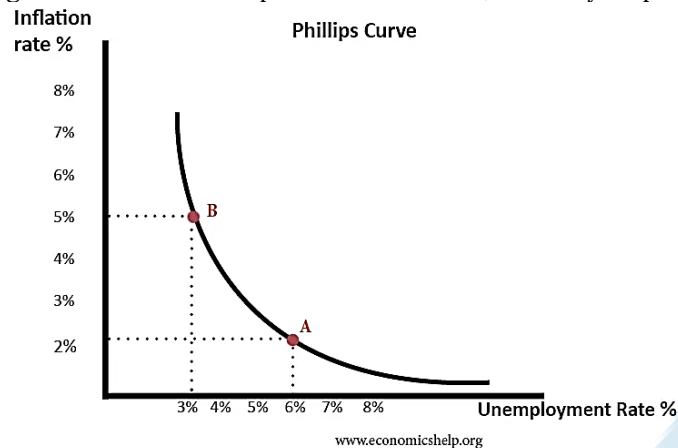
Inflation is a rise in prices, which can be translated as the decline of purchasing power over time. The rate at which purchasing power drops can be reflected in the average price increase of a basket of selected goods and services over some period of time.

Statement 1 is correct. Higher inflation can lead to faster economic growth in the short term. Elevated inflation discourages saving since it erodes the purchasing power of the savings over time. That prospect can encourage consumers to spend and businesses to invest.

Statement 2 is correct. When a business borrows money, the cash it receives now will be paid back with cash it earns later. A basic rule of inflation is that it causes the value of a currency to decline over time. In other words, **cash now is worth more than cash in the future. Thus, inflation lets debtors pay lenders back with money worth less than it was when they originally borrowed it.**

Statement 3 is correct. Inflation leads to higher interest rates in the long run. **When inflation occurs, the central bank may try to control it by increasing interest rates.** This is because higher interest rates make borrowing more expensive, which reduces the money supply and demand for goods and services. As a result, the overall demand for goods and services decreases, which can help reduce inflation. **In the long run, inflation erodes the value of money over time, which makes it less attractive to lenders. In response, lenders demand higher interest rates to compensate for the inflation risk.** Therefore, in the long run, inflation leads to higher interest rates.

Statement 4 is correct. The Phillips Curve hypothesizes that there is a correlation between inflation and unemployment. **When inflation is high, unemployment is low. Conversely, when inflation is low, unemployment levels increase.** This connection poses a difficult challenge to policymakers. If the government takes steps to curb inflation, that may chip away at unemployment and trigger a recession.



Source: <https://inflationyourmind.com/macroeconomics/unit-7/section-3-harmful-effects-of-inflation/>
<https://www.bdfwealth.com/How-Does-Inflation-Affect-Me..>
<https://www.forbes.com/advisor/investing/inflation-and-unemployment>
<https://www.investopedia.com/ask/answers/111414>.

Q.13)

Ans) d

Exp) Option d is the correct answer.

Option d is correct: Several jute mills in West Bengal have announced temporary suspension of their operations.. This is because **mills are procuring raw jute at prices higher than what they are selling them at after processing.** Mills do not acquire their raw material directly from the farmers. There are two reasons for the same:

- 1) First, because the **farmers are far-off from the mills locations** and the procurement process is cumbersome. Mills would have to go to multiple farmers to acquire the requisite quantity as no single farmer produces enough to fulfil the requirements of the entire mill. The procurement now flows through middlemen or traders. As a standard practice, the middlemen charge mills for their services, which involves procuring jute from farmers, grading, bailing and then bringing the bales to the mills.
- 2) The government has a **fixed Minimum Support Price (MSP) for raw jute procurement** from farmers which is **₹4,750 per quintal** for the 2022-23 season. However, **jute reaches mill at ₹7,200 per quintal that is, ₹700 more than the ₹6,500 per quintal cap** for the final product. This is why the procuring price is higher than the selling price.

Source: [https://www.thehindu.com/specials/text-and-context/the-recent-woes-of-the-jute-industry-in-west-](https://www.thehindu.com/specials/text-and-context/the-recent-woes-of-the-jute-industry-in-west-bengal/article65373299.ece#:~:text=What%20made%20the%20situation%20particularly,yield%20compared%20to%20previous%20years.)

[bengal/article65373299.ece#:~:text=What%20made%20the%20situation%20particularly,yield%20compared%20to%20previous%20years.](https://www.thehindu.com/specials/text-and-context/the-recent-woes-of-the-jute-industry-in-west-bengal/article65373299.ece#:~:text=What%20made%20the%20situation%20particularly,yield%20compared%20to%20previous%20years.)

Q.14)

Ans) b

Exp) Option b is the correct answer.

Towards meeting the ambitious climate goals, the Central Government has recently enacted the Energy Conservation (Amendment) Act, 2022 ('Amendment'). This amendment to the two decades old Energy Conservation Act 2001 has been made to strengthen the regulatory framework on energy consumption and promoting energy efficiency in the country.

Statement 1 is incorrect. The Amendment Act has the provisions for creation of a carbon market by notification of a 'Carbon Credit Trading Scheme' (CCTS) by the Central Government. **While the term 'carbon credit' is not defined under the Amendment Act or the Principal Act, this refers to credits that could be earned from the reduction of greenhouse gas emissions which could be traded in accordance with Article 6 of the Paris Agreement (i.e., COP21).** The entities registered and complying with the carbon credit trading scheme will be issued a carbon credit certificate. These carbon credit certificates can be purchased by any person on voluntary basis.

Statement 2 is correct. The Central Government is empowered to prohibit manufacture or import of any equipment, appliance, vehicle, or vessel which does not conform to the specified energy consumption norms. Further, an industrial unit non-confirming to the norms can be ordered to close its operations.

Statement 3 is correct. In a significant move, the Amendment Act extends the applicability of the energy conservation regime to vehicles (as defined under the Motor Vehicles Act, 1988) and vessels (which include any watercraft used or capable of being used in inland waters or in coastal waters). Under the extant regime, the Central Government could only specify norms and standards for equipment and appliances. In addition to equipment and appliances, **the Amendment Act now empowers the Central Government to specify energy conservation norms to vehicles and vessels.**

Source: <https://www.lakshmisri.com/insights/articles/electricity-conservation-amendment-act-2022-an-overview/#>

<https://corporate.cyrilamarchandblogs.com/2023/01/the-energy-conservation-amendment-act-2022-key-highlights/>

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Q.15)

Ans) b

Exp) Option b is the correct answer.

The Poverty Reduction and Growth Trust (PRGT) is a financial facility established by the International Monetary Fund (IMF) to provide financial assistance and support to low-income countries. It succeeded the Poverty Reduction and Growth Facility (PRGF), which operated from 1999 to 2010. PRGT has three lending facilities:

Extended Credit Facility (ECF): Sustained medium- to long-term engagement in case of protracted balance of payments problems.

Standby Credit Facility (SCF): Financing for low-income countries with actual or potential short-term balance of payments and adjustment needs caused by domestic or external shocks, or policy slippages. It can also be used on a precautionary basis during times of increased risk and uncertainty.

Rapid Credit Facility (RCF): One-off disbursement for low-income countries facing urgent balance of payments needs. Repeated disbursements over a limited period are possible in case of recurring or ongoing balance of payments needs.

Source: <https://www.imf.org/en/About/Factsheets/IMF-Support-for-Low-Income-Countries>

Q.16)

Ans) a

Exp) Option a is the correct answer.

In 2000, the Conference of the Parties to the Convention on Biological Diversity (CBD) adopted a supplementary agreement to the Convention known as the Cartagena Protocol on Biosafety. The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms (LMOs) resulting from modern biotechnology. **It establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of LMOs into their territory.**

Advance informed agreement requires that before the first intentional transboundary movement of a specific LMO into its jurisdiction, the Party of import:

- 1) is notified of the proposed transboundary movement;
- 2) receives information about the LMO and its proposed use; and
- 3) is given an opportunity to decide whether or not to allow the import of the LMO, and upon what conditions (if any).

Source: <https://bch.cbd.int/protocol/background/>

<https://www.cbd.int/abs/#:~:text=The%20Nagoya%20Protocol>.

https://bch.cbd.int/protocol/cpb_faq.shtml#:~:text=4.%20What%20are%20LMO-,products,-%3F

<https://www.cbd.int/abs/>

Q.17)

Ans) c

Exp) Option c is the correct answer.

Mercury is the only liquid metal found at normal temperatures and it is used in thermometers, barometers, manometers etc. As **elemental mercury evaporates**, it can move easily through the air and end up thousands of kilometres away from where it was first released and is one of the major environmental pollutants in the world.

Option 1 is correct: Various **natural processes, including volcanic eruptions**, weathering of rocks, and undersea vents can release mercury from the Earth's crust into water bodies, soils, and the atmosphere.

Option 2 is correct: Mercury is a naturally occurring chemical element found in rocks in the earth's crust, including in deposits of coal. As such mercury will be released on combustion of coal and hence it is true that **coal fired thermal power plants are one of the sources of Mercury pollution.**

Option 3 is correct: **Forest fires/Wildfires are one of the important sources of Mercury pollution.** Mercury coming from industrial and natural sources often settles into soil and plant matter. Intense fires then release the mercury back into the atmosphere. For instance, forest fires and other blazes in the **United States release about 30 percent as much mercury** as the nation's industrial sources.

Option 4 is correct: The **manufacturing of cement**, and the extraction of metals from **ore** are important sources of mercury pollution. Other major industries acting as source of mercury are **iron and steel industries, pulp and paper manufacturing, non-ferrous smelting and refining (10%), and mining and rock quarrying industries.**

Option 5 is incorrect: A **light-emitting diode (LEDs) bulb are free of Mercury** and for this reason it is considered an effective **alternative to mercury containing Compact fluorescent lamps (CFLs).** Unlike LEDs, the broken CFL bulbs emit mercury into the atmosphere.

Knowledge Base: SOME IMPORTANT FACTS ABOUT MERCURY

- 1) Highly toxic to the nervous system
- 2) Persistent in the environment
- 3) Bioaccumulates (higher concentrations in tissues of aquatic plants and animals than in water)
- 4) Biomagnifies (higher concentrations at increasingly higher levels in the food chain)

Source: <https://www.canada.ca/en/environment-climate-change/services/pollutants/mercury-environment/about/sources.html#:~:text=natural%20processes%2C%20including-,volcanic,-eruptions%2C%20weathering%20of>

https://www.nsf.gov/news/news_summ.jsp?cntn_id=110320#:~:text=blazes%20in%20the-,United,-States%20release%20about

<https://www.canada.ca/en/environment-climate-change/services/pollutants/mercury-environment/products-that-contain/fluorescent-lamps.html#:~:text=lamps.%20As%20a-,mercury,-%2Dfree%20alternative%2C%20light>

<https://www.usgs.gov/mission-areas/water-resources/science/mercury#:~:text=FACTS%20ABOUT-,MERCURY,-Highly%20toxic%20to>

https://www.nsf.gov/news/news_summ.jsp

Q.18)

Ans) a

Exp) Option a is the correct answer.

Environmental Pollution is described as contamination of the environment with harmful wastes mainly arising from **certain human activities**. They can be categorised **based on their existence in nature into Quantitative & Qualitative pollutants.**

Option a is correct: Qualitative pollutants are the substances that are **not present in the environment naturally but are created by humans and cause environmental pollution.** Examples of Qualitative pollutants are Pesticides. Fungicides. Herbicides etc.

Option b is incorrect: **Quantitative pollutants** are present **naturally in the environment and also added by humans.** These become **pollutants** when their **concentration reaches beyond a threshold value** in the environment, e.g., **CO₂, nitrogen oxide etc.**

Option c is incorrect: **Qualitative pollutants are may or may not have high global warming potential and high ozone depleting potential.** It is not the criteria behind classification of some pollutants as qualitative pollutants.

Option d is incorrect: Qualitative pollutants are not the pollutants that reduce the negative impacts of other pollutants on environment.

Source: <https://old.amu.ac.in/emp/studym/7082.pdf>

Q.19)

Ans) b

Exp) Option b is the correct answer.

SPACES is an emerging coalition that mobilises spatial intelligence to support governments, businesses, finance institutions, funders and investors in achieving climate and nature goals. It emphasizes on the central role of spatial intelligence in achieving the UN Sustainable Development Goals and other international socio-environmental agreements, such as the Paris Agreement and the Post-2020 Global Framework on Biodiversity.

SPACES is coordinated by the UN Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC) and SYSTEMIQ, working with the UN Development Programme (UNDP), International Institute for Applied Systems Analysis (IIASA) and International Institute for Sustainability (IIS) amongst other collaborators.

Source: <https://www.spacescoalition.org/en/about>

Q.20)

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect: Sentinel species are organisms that are used to monitor the health and integrity of an ecosystem or to detect potential hazards, such as pollution or the presence of toxins. They are often selected because they are sensitive to environmental changes and their health or behavior can serve as an early warning system for other organisms in the ecosystem.

Endemic species (not the sentinel species) are those that are native or restricted to a specific geographic region and are not found naturally anywhere else in the world. They have evolved and adapted to the unique environmental conditions of that area.

Statement 2 is correct: An Umbrella species are species selected for making conservation-related decisions, typically because **protecting these species indirectly protects the many other species** in the particular habitat. For example, Tiger, Whales are umbrella species.

Statement 3 is incorrect: Dominant species are the species that have the highest abundance or biomass in a particular ecosystem. They often play a significant role in shaping the structure and dynamics of the ecosystem and can have a strong influence on other species within their habitat. For example, **Mangrove** is the dominant species in Tidal Swamp ecosystem.

Invasive species (not dominant species) are the non-native species that are introduced to an ecosystem and have a negative impact on native species, habitats, or ecosystem processes.

Source: <https://aboutzoos.info/evolution/edge>

<https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/sentinel-species>

https://wwf.panda.org/discover/our_focus/wildlife_practice/flagship_keystone_indicator_definition/

<https://www.treehugger.com/what-is-an-umbrella-species-definition-and-examples-5186302>

Q.21)

Ans) b

Exp) Option b is the correct answer.

The IUCN Red List of Threatened Species is the global standard for assessing the risk of extinction that individual species of animal, fungus, and plant faces. But we also need an optimistic vision of species conservation that presents a road map for recovery. To achieve this, the Red List assessment process has been expanded to include new classifiers of species recovery and conservation impact, **known as the Green Status of Species.**

Statement 1 is incorrect: The Green Status of Species is a new global standard of measurement to **understand how a species is functioning within the ecological system it lives, and how much it has recovered through conservation action.** The IUCN Green Status of Species complements the Red List by **providing a tool for assessing the recovery of species' populations and measuring their conservation success.** It provides evidence that conservation works, giving cause for optimism and impetus for stronger action. It will be integrated into the IUCN Red List of Threatened Species which will then provide a fuller picture of species' conservation status including both their extinction risk and recovery progress. **Hence, the Green Status of Species is not related to the assessment of those species which are no longer in need of conservation.**

Statement 2 is correct: The Green Status of Species is a new global standard of measurement **created by the IUCN (International Union for the Conservation of Nature).** Preliminary IUCN Green Status assessments for 181 species are presented. These include some key species like the pink pigeon, which was saved from extinction by conservation measures, and the Mountain Chicken which is currently Critically Endangered, and remains highly dependent on ongoing conservation action.

Source: <https://www.iucnredlist.org/about/green-status-species>

<https://www.zsl.org/news-and-events/feature/iucns-new-green-status-species-will-help-measure-impact-conservation-wildlife>

Q.22)

Ans) c

Exp) Option c is the correct answer.

Peat is the surface organic layer of a soil that consists of partially decomposed organic matter, derived mostly from plant material, which has accumulated under conditions of waterlogging, oxygen deficiency, high acidity and nutrient deficiency.

Option 1 is correct: Due to **waterlogged conditions**, partially decomposed plant remains accumulate and become compacted, forming peat that changes the substrate chemical and physical properties leading to a succession of plant communities.

Option 2 is incorrect: The presence of oxygen (aerobic conditions) is necessary for fungal and microbial activity and promotes decomposition, but peat is formed in waterlogged soils with **little or no access to oxygen (anaerobic conditions)**, largely preventing the complete decomposition of organic material.

Option 3 is correct: Peat is the surface organic layer of a soil that consists of partially decomposed organic matter, derived mostly from plant material which has accumulated under **conditions of nutrient deficiency.**

Option 4 is correct: Peat formation is the **result of incomplete decomposition of the remains of plants.**

Option 5 is incorrect: Peat formation does not require high or low temperature.

In temperate, boreal and sub-arctic regions, where **low temperatures exist** (below freezing for long periods during the winter), it reduces the rate of decomposition, peat can be formed mainly from **bryophytes (mostly sphagnum mosses), herbs, shrubs and small trees.**

In the lowland humid tropics, peat is derived mostly from **rain forest trees (leaves, branches, trunks and roots) under near constant annual high temperatures.**

Source:

[https://peatlands.org/peat/peat/#:~:text=What%20is%20peat%3F%20Peat%20is%20the%20surface%](https://peatlands.org/peat/peat/#:~:text=What%20is%20peat%3F%20Peat%20is%20the%20surface%20layer%20of%20the%20soil,which%20is%20formed%20from%20partially%20decomposed%20plant%20material,which%20has%20accumulated%20under%20conditions%20of%20waterlogging,which%20is%20characteristic%20of%20lowland%20environments,where%20the%20rate%20of%20decomposition%20is%20slow,which%20allows%20the%20material%20to%20accumulate%20over%20time.)

20organic,waterlogging%2C%20oxygen%20deficiency%2C%20high%20acidity%20and%20nutrient%20d efficiency.

<https://lisbdnet.com/how-is-peat-formed/>

Q.23)

Ans) a

Exp) Option a is the correct answer.

Kaziranga National Park is a national park in the Golaghat and Nagaon districts of the state of Assam, India. The park, which hosts two-thirds of the world's Indian rhinoceroses, is a UNESCO World Heritage Site. Notable rivers within the park are the Brahmaputra, Mora Diphlu, Diphlu and Mora Dhansiri.

Option 1 is correct: The park area is circumscribed by the **Brahmaputra River**, which forms the northern and eastern boundaries.

Option 2 is correct: Mora Diphlu forms the southern boundary of Kaziranga national park. River Mora Diphlu is a rivulet and a tributary of the river Diphlu which originates from the Karbi Anglong hills, Assam and passes through the Kaziranga National Park and joins the river Brahmaputra on its south bank.

Option 3 is incorrect: The Orang national park is situated on the northern bank of the Brahmaputra river. The Pachnoi river flow along its eastern boundary.

Option 4 is incorrect: Manas river flows through Manas National Park and not Kaziranga national park.

Source: <https://www.kaziranga-national-park.com/kaziranga-location.shtml>

[https://www.researchtrend.net/jnbr/pdf/3_JNBR_7\(1\)_2018.pdf](https://www.researchtrend.net/jnbr/pdf/3_JNBR_7(1)_2018.pdf)

<http://datazone.birdlife.org/site/factsheet/orang-national-park-iba-india#:~:text=The%20Park%20is%20situated%20on,are%20tributaries%20of%20the%20Brahmaputra.>

Q.24)

Ans) b

Exp) Option b is the correct answer.

Ex situ conservation method is when threatened animals and plants are taken out from their natural habitat and placed in special setting where they can be protected and given special care.

While in situ conservation method is on site conservation of plants and animals.

Options 2, 4 and 5 are correct: Botanical gardens, Zoological parks and wildlife safari parks are examples of ex situ conservation method.

Options 1, 3 and 6 are incorrect: Biosphere Reserve, National parks and Wildlife sanctuaries are examples of in-situ conservation methods.

Source: <https://ncert.nic.in/ncerts/l/lebo115.pdf>

Q.25)

Ans) c

Exp) Option c is the correct answer.

The Emissions Gap assesses the gap between the **pledges taken by different countries to reduce greenhouse gas emissions and the estimated reduction required to maintain the average global temperature rise to below 2°C, preferably 1.5°C, by the end of this century**. UNEP Copenhagen Climate Centre (UNEP CCC) has managed the production of UNEP's flagship report on climate change – the Emissions Gap Report – since 2011. **Hence, option c is correct.**

Source: <https://unepccc.org/project/un-environment-emissions-gap-report/>

<https://www.un->

<library.org/content/books/9789210476690c008#:~:text=In%20line%20with%20previous%20reports,to wards%20limiting%20warming%20to%20below>

[https://www.un-
library.org/content/periodicals/26633477#:~:text=Nations%20Environment%20Programme-
,The%20UN%20Environment%20Emissions%20Gap%20Report%20assesses%20the%20latest%20scientif
ic,goals%20of%20the%20Paris%20Agreement.](https://www.un-
library.org/content/periodicals/26633477#:~:text=Nations%20Environment%20Programme-
,The%20UN%20Environment%20Emissions%20Gap%20Report%20assesses%20the%20latest%20scientif
ic,goals%20of%20the%20Paris%20Agreement.)

Q.26)

Ans) c

Exp) Option c is the correct answer.

Corals are known as the “rainforests of the sea” because of the enormous underwater biodiversity they support. Their marine habitat shelters various marine species, from fish and seabirds to crustaceans, turtles, sharks, and dolphins. **Despite covering less than 1% of the ocean floor, reefs harbour more than 25% of all marine creatures.** This is the reason why they are called ‘Rainforests of the Oceans’. Reefs provide a healthy habitat and assist young fish to grow. Coral reefs are the primary habitat for more than 4,000 species of fish, 700 species of corals, molluscs, crustaceans and various plants.

Option a is incorrect. Coral reefs are vulnerable to environmental changes. Many grow optimally in water temperatures between 23°–29°Celsius. Most reef-building corals also require saline water ranging from 32 to 42 parts per thousand. However, it is not a reason why Coral reefs often referred to as the “rainforests of the Ocean”.

Option b is incorrect. Corals have calcium-carbonate skeletons and cover large areas. **They are one of the slowest growing creatures on Earth, with an estimated 1-centimetre growth in height per Annum.** However, this is not the reason why we call them rainforests of the ocean as growth is not the element of comparison to determine their importance with respect to tropical rainforests.

Option d is incorrect. Epiphytes are plants that grow on the surface of other plants, such as trees, without taking nutrients from the host plant. The combination of high moisture levels, competition for light, nutrient availability, and the creation of microhabitats makes rainforests an ideal environment for the growth and proliferation of epiphytes. **Epiphytes are not typically found in coral reefs. Epiphytes are plants that grow on the surface of other plants, particularly trees in terrestrial ecosystems.**

Source: <https://wildlifecos.org/conservation-awareness/corals-the-underwater-rainforests/>
<https://www.marineinsight.com/environment/15-amazing-facts-about-coral-reefs/>

Q.27)

Ans) c

Exp) Option c is the correct answer.

Option 1 is correct: The Coalition for Disaster Resilient Infrastructure (CDRI) – established in 2019 under the leadership of the Government of India and with the support UNDRR is a multi-stakeholder global partnership of national governments, UN agencies and programmes, multilateral development banks, the private sector, and academic institutions. CDRI aims to promote the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development. It seeks to rapidly expand the development and retrofit of resilient infrastructure to respond to the Sustainable Development Goals imperatives of expanding universal access to basic services, enabling prosperity and decent work.

Option 2 is correct: Mangrove Alliance for Climate (MAC) was launched during COP-27 of the UNFCCC. It was spearheaded by United Arab Emirates (UAE) and Indonesia. **India has also joined the initiative.** The MAC seeks to scale up, accelerate conservation, restoration and growing plantation efforts of mangrove ecosystems for the benefit of communities globally.

Option 3 is correct: TPGRFA is a legally binding comprehensive agreement adopted in November 2001 at Rome during the 31st session of Food and Agriculture Organization of the United Nations, which entered into force on June 29, 2004^[1] and currently has 149 Contracting Parties, including India. India recently

hosted the 9th Session of Governing Body of the 'International Treaty on Plant Genetic Resources for Food and Agriculture' (ITPGRFA) in September 2022 in New Delhi.

Option 4 is incorrect: International Drought Resilience Initiative (IDRA) has been launched to catalyze political momentum and mobilize resources for enhancing drought resilience. The IDRA was **first announced by the Spain at the 77th session of UN General Assembly**. However, the initiative has been **officially launched during the COP-27 of the UNFCCC**. Presently **India is NOT a member of this alliance**. More than 30 countries have joined the alliance till date. These include- United States of America (USA), Argentina, Belgium, Chile, China, Egypt, France, Germany, Ghana, Kenya etc. European Union is also a member. **The alliance is open to all member states of the UN.**

Source: <https://indianexpress.com/article/explained/what-is-the-mangrove-alliance-for-climate-which-india-joined-at-cop27-8261674/>

https://www.business-standard.com/article/economy-policy/india-joins-first-movers-coalition-to-decarbonise-carbon-heavy-sectors-122052500887_1.html

<https://mangrovealliance4climate.org/>

<https://www.fibre2fashion.com/news/textile-news/26-nations-eu-launch-forests-and-climate-leaders-partnership-284035-newsdetails.htm>

<https://idralliance.global/>

Q.28)

Ans) a

Exp) Option a is the correct answer.

The Global Environment Facility (GEF) is a family of funds dedicated to confronting biodiversity loss, climate change, pollution, and strains on land and ocean health. The Global Environment Facility (GEF), established on the eve of the 1992 Rio Earth Summit, is a catalyst for action on the environment – and much more.

The GEF serves as a "financial mechanism" to five conventions:

- 1) Convention on Biological Diversity (CBD),
- 2) United Nations Framework Convention on Climate Change (UNFCCC),
- 3) Stockholm Convention on Persistent Organic Pollutants (POPs),
- 4) UN Convention to Combat Desertification (UNCCD), and
- 5) Minamata Convention on Mercury.

The Ramsar Convention on Wetlands is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. **GEF does not serve as a financial mechanism for Ramsar Convention.**

Source: <https://www.unep.org/about-un-environment/funding-and-partnerships/global-environment-facility>

<https://www.thegef.org/partners/conventions>

Q.29)

Ans) d

Exp) Option d is the correct Answer.

Among the states/UTs Odisha has the lowest mangrove cover followed by Andhra Pradesh the Andaman and Nicobar Islands then Gujarat and finally West Bengal.

Mangrove Cover Assessment 2021					(in sq km)	
Sl. No.	State/UT	Very Dense Mangrove	Moderately Dense Mangrove	Open Mangrove	Total	Change with respect to ISFR 2019
1.	Andhra Pradesh	0	213	192	405	1
2.	Goa	0	21	6	27	1
3.	Gujarat	0	169	1,006	1,175	-2
4.	Karnataka	0	2	11	13	3
5.	Kerala	0	5	4	9	0
6.	Maharashtra	0	90	234	324	4
7.	Odisha	81	94	84	259	8
8.	Tamil Nadu	1	27	17	45	0
9.	West Bengal	994	692	428	2,114	2
10.	AGN Islands	399	168	49	616	0
11.	DGNH and Daman & Diu	0	0	3	3	0
12.	Puducherry	0	0	2	2	0
Total		1,475	1,481	2,036	4,992	17

Source: <https://fsi.nic.in/forest-report-2021-details>

Q.30)

Ans) a

Exp) Option a is the correct answer.

The froth is a sign of a polluted river. Experts say the release of untreated or poorly treated effluents, including sewage from those parts of the city that are not connected to the sewerage network and industrial waste, could lead to frothing. **Ex, phosphates in the river form the froth.** Surfactants and phosphates from detergents in households and industrial laundry find their way into the river, as all the sewage is not treated.

Whereas the major industrial pollutants affecting air quality are sulfur dioxide, volatile organic solvents, and particulate materials, such as metal dust. Burning waste, particularly plastics, can also produce dioxins and other hazardous chlorinated compounds.

Source: <https://www.encyclopedia.com/environment/energy-government-and-defense-magazines/industrial-pollution#:~:text=The%20major%20industrial%20pollutants%20affecting,and%20other%20hazardous%20chlorinated%20compounds.>

<https://indianexpress.com/article/explained/what-causes-frothing-in-delhi-yamuna-7615109/>

Q.31)

Ans) c

Exp) Option c is the correct answer.

The Indian temples are broadly divided into Nagara, Vesara and Dravida styles of architecture. In Odisha a distinct part of temple architecture developed known as the Kalinga or Odisa style of temple architecture.

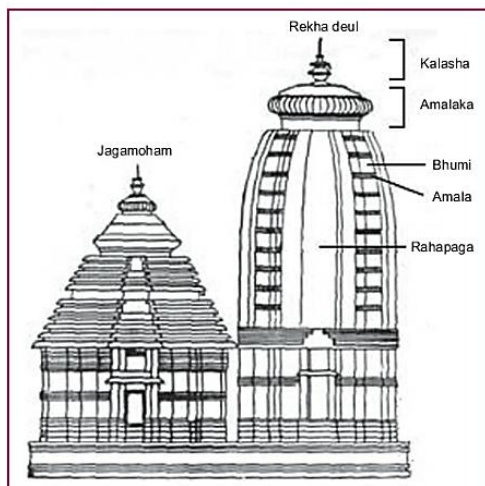


Fig. 1.23: Basic structure of a temple in Odisha school of architecture

Statement 1 is correct: The temples of Odisha constitute a distinct sub-style within the nagara style of temple architecture. In general, here the shikhara, called deul in Odisha, is vertical almost until the top when it suddenly curves sharply inwards. Deuls are preceded, as usual, by mandapas called Jagamohana in Odisha.

Statement 2 is incorrect: Unlike the nagara temple, the Dravida temples has a huge entrance gateway in centre of their front boundary wall, which is known as a gopuram. The Gopurams are the distinctive feature of Dravida style of temple architecture and not the Odisha school of Temple architecture.

Statement 3 is correct: In Odisha style of temple architecture, **temples were surrounded by a boundary wall as in Dravidian style** of temple architecture.

Statement 4 is correct: **Lingaraja temple** is an east-facing temple built in Sandstone and laterite. Built in the typical Kalinga Nagara architectural style or Deula style. The Vimana or Garbh Griha is the tallest, followed by Jagmohan or the Mandapa, followed by a Natyamandapa or the dancing hall, and finally Bhog Mandapa or the hall of offerings. All of them have roofs in decreasing order of height. Besides Lingraj Temple, Other examples of this style are **Sun Temple at Konark** (also known as Black Pagoda), **Jagannath temple at Puri**, etc,



Fig 1.24: Lingaraj temple, Bhubaneswar

Source: Nitin Singhania - Chapter 1 (Temple Architecture)
<https://morena.nic.in/en/tourist-place/mitawali/>

Q.32)

Ans) b

Exp) Option b is the correct answer.

Due to the popularity of Buddhism and Jainism, stupas, chaityas and viharas were constructed on a large scale in ancient India. Each structure was built to serve different purposes of the religion.

Statement 1 is correct: Vihara is a dwelling place where the Buddhist monks resided and meditated whereas Chaitya refers to a shrine or prayer hall in the Buddhism.

Statement 2 is correct: Some chaityas have stupas inside it. For example, in Ellora there are many chaityas with a stupa in it. Viharas do not have stupas inside it.

A stupa is a mound-like or hemispherical structure containing remains of Buddhas that is used as a place of meditation.



Fig- Chaitya at Bhaja caves with Stupa

Statement 3 is incorrect: Stupa, Vihara and Chaitya all are part of Buddhist and Jaina monastic complexes, but the largest number belongs to the Buddhist religion.

Source: <https://ncert.nic.in/ncerts/l/kefa103.pdf>

https://dbpedia.org/page/Jain_stupa

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Minal Karanwal

Q.33)

Ans) d

Exp) Option d is the correct answer.

He was born in 1865 in a small village named Dhudike in Punjab's **Ferozepur** district. He is also known as Punjab Kesari and Lion of Punjab. He was influenced by the teachings of Swami Dayananda Saraswati who had maximum impact on Rai. He believed that the ideals in Hinduism combined with nationalism would lead to the establishment of a secular state.

Statement 1 is correct: He visited USA and Japan where he kept in touch with the Indian revolutionaries. In England, he also became a **member of the British Labour party**.

Statement 2 is correct: **Servants of the People Society** is a non-profit social service organization founded by Lala Lajpat Rai, a prominent leader in the Indian Independence movement, in 1921 in Lahore. **The society was devoted to enlisting and train national missionaries for the service of the motherland.**

Statement 3 is correct: **"England's Debt to India"** is a critique written by the nationalist leader Lala Lajpat Rai (1865-1928). In this "historical narrative of Britain's fiscal policy in India", which was published in 1917, Rai argues that the British owe a debt to India for the exploitation they put the country and its people through. The book is not written in a spirit of hostility to British rule, says Rai in the book. He says it is not his object "to irritate or to excite" but to "give matter for reflection". His other books are **"Unhappy India"**, **"Young India: An Interpretation"**, **"History of Arya Samaj"**, and a series of popular biographies on Mazzini, Garibaldi and Swami Dayanand.

Source:

[https://pib.gov.in/newsite/printrelease.aspx?relid=148720#:~:text=Lala%20Lajpat%20Rai%20\(1865%2D1928\)](https://pib.gov.in/newsite/printrelease.aspx?relid=148720#:~:text=Lala%20Lajpat%20Rai%20(1865%2D1928))

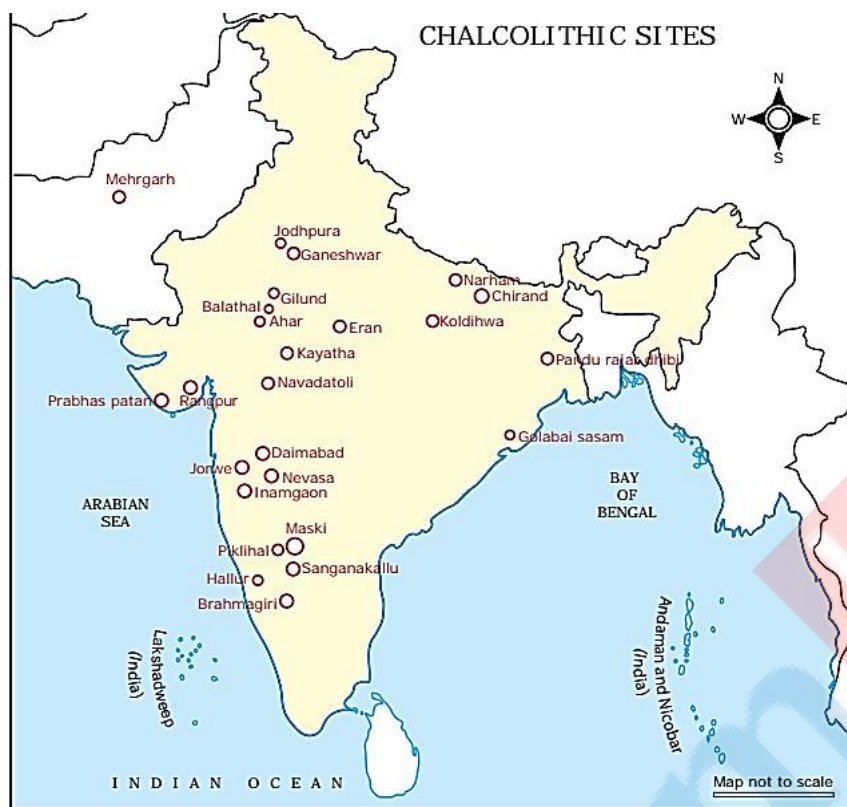
<https://amritmahotsav.nic.in/district-repository-detail.htm?11385#:~:text=%22England's%20Debt%20to%20India%22%20is,country%20and%20its%20people%20through.>

Q.34)

Ans) c

Exp) Option c is the correct answer.

The **Jorwe** culture was predominantly a **Chalcolithic** culture practised in modern day **Maharashtra and the Malwa region of Madhya Pradesh**. While the early phase of the culture is dated to **1400-1000 BCE**, the **late phase is dated to c. 1000-700 BCE**. Sites of the Jorwe culture include **Jorwe, Daimabad, Inamgaon, Prakash, Navdatoli, Walki**.



Statement 1 is incorrect: Jorwe culture belongs to **Chalcolithic culture of South India** and as such they know the metals such as **Copper**, but they did not know the metal **Iron**. Generally Chalcolithic culture was followed by **Iron age** and people belonging to **Iron ages** know **Iron**. For example, Indo Aryans belonged to the Iron age and they mastered the art of making metals from Iron.

Statement 2 is correct: The Jorwe culture was found along the regions, such as **Prakash in the Tapi valley, Daimabad in the Godavari valley and Inamgaon in the Bhima valley**.

Statement 3 is incorrect: People of Jorwe culture did not burn the dead, they buried the dead. One of the unique features of Jorwe culture was their mode of disposal of the dead. In case of **adults**, the portion below the **ankles was chopped off before burying them**.

Source: <https://egyankosh.ac.in/bitstream/123456789/41362/1/Unit-3.pdf>

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Q.35)

Ans) c

Exp) Option c is the correct answer.

The term '**jajmani**' is derived from a Vedic term '**Yajman**' which means a patron. Jajmani is a system of distribution whereby high caste land owning families are provided services by various lower castes such as carpenter, barber, sweeper, etc. The jajmani system is **essentially based on the caste system**.

Option c is correct: Jajmani system is a system in which people belonging to different castes exchange services among themselves. Caste system is a unique feature of Indian society. As **each caste has a specialised occupation** it leads to the **exchange of services in the rural society**. The Jajmani system is an economic system in which the **servicing castes called Kamins** provide services to the **served castes called Jajmans**. For services rendered, the servicing castes are paid in cash or in kind (grains, fodder,

clothes, animal products like milk, butter, etc.). Relationship under Jajmani was **permanent and hereditary**.

The Rajput, Bhumihar and Jat are the Patron (**jajmans**) castes in the North and Kamma, Reddi, and Lingayat in the South. The service castes (**Kamins**) comprise barber, carpenter, blacksmith, washermen, leatherworker, etc.

Source: <https://egyankosh.ac.in/bitstream/123456789/74568/1/Unit-4.pdf> (pg no 60)

Q.36)

Ans) b

Exp) Option b is the correct answer.

In Bengal, the indigo planters forced the Peasants (cultivators) to grow indigo on their lands instead of the more paying crops like rice. The planters also forced the peasants to take advance sums and enter into fraudulent contracts which were then used against the peasants. The anger of the peasants exploded in 1859 and gave birth to the Indigo Revolt (1859-60).

Statement 1 is incorrect: The Indigo revolt was not a completely nonviolent movement as peasants countered the force of Planters using forces and also peasants attacked indigo factories with spears and swords. The Peasants at the same time adopted nonviolent means like refusing to pay the enhanced rents and by physically resisting the attempts to evict them. Gradually, they learned to use the legal machinery and initiated legal action supported by fund collection.

Statement 2 is correct: The Indigo revolt was made popular by the play called Neel- Darpan written by Dinabandhu Mitra (1829-1873) who was a Bengali writer and dramatist. The Indigo Revolt or Neel Bidroha inspired literature, music and films. Dinabandhu Mitra's play **Nil Darpan** or the 'Mirror of Indigo' is based on this revolt which remains a classic because it was written during the movement in 1859. It narrated the sufferings, oppression and struggle of indigo cultivators.

Statement 3 is incorrect: The Indigo revolt was led by Digambar Biswas and Bishnu Biswas.

Pabna Peasant uprising was led by Ishan Chandra Roy.

Source: Spectrum - A brief history of Modern India (Peasant Movements 1857-1947 pg no 575)

<https://indianculture.gov.in/stories/indigo-revolt-bengal>

Q.37)

Ans) b

Exp) Option b is the correct answer.

Right to freedom of religion is well described in the Articles 25, 26, 27 and 28 of the Indian constitution. Citizens are free to preach, practice and propagate any religion of their choice.

Option a is incorrect: Freedom of Conscience and free Profession and Propagation of religion (Art 25 of the Constitution of India) provides that all persons (Both Citizens and Foreigners) are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion.

Option b is correct: Freedom from Taxation for promotion of a religion (Art 27 of Constitution of India) lays down that no person shall be compelled to pay any tax for promotion or maintenance of any particular religion or religious denomination.

Option c is incorrect: Rights of minority to Establish and administer educational Institutions (Art 30 of Constitution of India) provides for minority rights to establish and administer educational institution.

Option d is incorrect: Protection of Interest of Minorities (Art 29 of Constitution of India) protects rights of citizen to conserve their distinct language, script or culture.

Source: M Laxmikanth – Fundamental Rights.

Q.38)

Ans) d

Exp) Option d is the correct answer.

Statements 1, 2 and 3 are correct: Lalleshwari, also known locally as Lal Ded (1320–1392CE), was a Kashmiri Shaivite mystic Bhakti saint of the Kashmir Shaivism school of Hindu philosophy. She was the creator of the style of mystic poetry called Vaakhs, (literally “sayings” or “utterances”, from the Sanskrit vaak).

<https://frontline.thehindu.com/arts-and-culture/literature/who-was-lal-ded/article28757471.ece>

<https://www.nios.ac.in/media/documents/SecIHCour/English/CH.07.pdf>

Q.39)

Ans) b

Exp) Option b is the correct answer.

The Balance of Payment of a country can be defined as a systematic statement of all economic transactions of a country with the rest of the world during a specific period usually one year. Current account, capital account and error and omissions are components of Balance of payments. Capital account shows the capital expenditure and income for a country.

Option 1 is correct. There are two types of foreign investments. One is foreign direct investment and another is portfolio investment. FDI in India **forms a part of capital account.**

Option 2 is correct. External assistance means the transaction of official (government) bilateral and multilateral loans. The bilateral loans are loan transactions between two countries. Multilateral loans are official loan transactions between a country and multilateral bodies like World Bank, IMF and Asian Development Bank, etc. They form part of capital account.

Option 3 is incorrect. Current account transactions are single time and one-way transactions. It means that the transaction, either receipt or payment, happens once and the transaction ends there. **Trade balance is a component of current account and not of Capital account.** The balance of trade is the difference between export receipts and import payments.

1) Trade balance = Export – Import

If the trade balance is positive, it is called favorable balance of trade and if it is negative, it is called unfavorable balance of trade.

Option 4 is correct. Banking capital forms part of capital account. It comprises three components:

- 1) Foreign assets of commercial banks
- 2) Foreign liabilities of commercial banks and
- 3) Others

“Foreign assets” of commercial banks consist of

- a. Foreign currency holdings and
- b. Rupee overdrafts to non-resident banks.

“Foreign liabilities” of commercial banks consist of

- a. Non-resident deposits and
- b. Liabilities other than non-resident deposits, which comprise rupee and foreign currency liabilities to non-resident banks and official and semi-official institutions.

“Others” under banking capital include transaction in balances of foreign central banks and international institutions like the IBRD, IDA, ADB, IFC, IFAD, etc., maintained with the Deposit Accounts Department (DAD) of the RBI as well as transaction in balances held abroad by the embassies of India in London and Tokyo.

Option 5 is incorrect: Private transfer receipts, mainly representing remittances by Indians employed overseas form component of current account of Balance of payment.

Source: <https://ncert.nic.in/ncerts/l/leec106.pdf>

Indian economy key concepts by karuppiash shankarganesh. Chapter 11.

Q.40)

Ans) a

Exp) Option a is the correct answer.

Option 1: Shunga Dynasty was established by Pushyamitra Shunga in 185 BCE.**Option 2:** Kanva Dynasty was established by Vasudev Kanva in 72 BCE.**Option 3:** Vakataka Dynasty was established by Vindhyaashakti in 250 CE.**Option 4:** Pushyabhuti dynasty was established by Narvardhana in 500 CE.

Source: egyankosh

Q.41)

Ans) b

Exp) Option b is the correct answer.

Each Veda consists of four portions, namely, Samhita, Brahmanas, Aranyaka and Upanishads. The word 'Veda' generally refers to 'Mantras' and 'Brahmanas'. **Mantras are hymns in praise of gods who are invoked in a ritual and Brahmanas are those portions which give various instructions on the performance of rituals.** Based on this, Veda is said to be of two kinds, **Mantras and Brahmanas.** An anthology of **mantras is known as 'Samhitas'** and the **Brahmana portions are an elaboration and are treated as the commentary to the Samhita portions.** The **Brahmana portions are further divided into three, the Brahmanas, the Aranyakas and the Upanisads.**

Option 1 is correct: The **Samhitas are the most ancient part of the Vedas**, which are the most ancient Hindu and yogic texts. **The Samhitas contain mantras, prayers, and hymns to God.** It is believed that the Samhitas are the most ancient part of the Vedas, which are heard by the Rishis. Hindus believe that the texts were received direct from God by scholars, and that they were then passed on orally for thousands of years.

Option 3 is correct: The **Brahmana** portions primarily teach the nature of ritual (yagya) and thus the word Brahmana also means 'yajna' (ritual). It is a part of Vedic literature.

Option 4 is correct: The **Aranyakas** are so named because **it deals with meditation** which is generally taken up while living in forest (Aranya). The importance of study of one's own scripture and **fivefold compulsory acts (pancha-mahayajna)** are found in this portion. The fivefold compulsory acts are worship of gods, worship of lineage of teachers, worship of ancestors, service to humanity and service to the animal and plant kingdom. We find here the description of meditation on prana or vital breath.

Option 6 is correct: **The Upanisads reveal the Absolute Truth**, which provides the means to liberation and is popularly known as the '**Vedanta**'. **The Upanisads are the prime source of many philosophical conclusions.** Primarily the source with the four portions, namely, Samhita, Brahmana, Aranyaka and the Upanishad is known as the Veda. But popularly the ritualistic and meditative portions (or at times only the ritualistic portions) came to be known as Veda and the philosophical discovery in the Upanisads got a distinct identity. **Therefore, we say, the Veda and Upanisads (But upanisads are also part of the Vedas).**

Option 2 and 5 are incorrect: **Shiksha (phonetics) and Jyotisha (astronomy) are part of Vedangas.** **Vedangas are also known as shadangas**, which means six organs. **The function of these six organs is to explicate the intricate thoughts of the Vedas.** Those organs are shiksha (phonetics), vyakarana (grammar; to be more specific, Vedic grammar), chhandas (prosody), nirukta (etymology and dictionary), Jyotisha (astronomy) and kalpa (rituals). It was believed that **proper understanding of the Vedic texts is possible only when all these organs are strictly followed.**

Source :

https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson4.pdf<https://egyankosh.ac.in/handle/123456789/34649><https://egyankosh.ac.in/bitstream/123456789/37928/1/Unit-2.pdf>https://ignca.gov.in/PDF_data/A_glimpse_VEDIC_LITERATURE.pdfhttps://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000829IC/P001497/M015106/ET/14600120053ET.pdf<https://ncert.nic.in/textbook/pdf/klss102.pdf>

Q.42)

Ans) d

Exp) Option d is the correct answer.

This significant Act was enacted in the wake of the Revolt of 1857—also known as the First War of Independence or the ‘sepoys’ mutiny’. The act known as the Act for the Good Government of India, abolished the East India Company, and transferred the powers of Government, territories and revenues to the British Crown.

Statement 1 is correct: On August 2, 1858, Parliament passed the Government of India Act, **transferring British power over India from the East India Company to the crown.** India was to be governed by and in the name of the Crown through a secretary of state and a council of India. Hence, the act made India a direct British colony and eliminated the role of intermediary (East India Company).

Statement 2 is correct: **The act vested the Secretary of State for India in British cabinet, with complete authority and control over Indian administration.** The secretary of state was a member of the British Cabinet and was **responsible ultimately to the British Parliament.** The act also established a 15-member council of India to assist the Secretary of State for India. The council was an advisory body. The secretary of state was made the Chairman of the council.

Statement 3 is correct: **The act ended the system of double Government by abolishing the Board of Control and Court of Directors.** The dual system introduced by the Pitt’s India Act came to an end.

Source: Lakshmikanth Chapter 1: Historical Background

Spectrum, Chapter 26: Constitutional, Administrative, and Judicial Developments

<https://egyankosh.ac.in/bitstream/123456789/20342/1/Unit-23.pdf>

Q.43)

Ans) b

Exp) Option b is the correct answer.

The Heraka movement has been variously described as a religious reform movement, a cult, and the "Naga renaissance". It also came to be known as the "Kacha Naga movement" or the "Gaidinliu movement"

Option a is correct: **The Heraka movement was initiated by Haipou Jadonang, a cousin of Gaidinliu, during the 1920s.** However, in 1931, Jadonang was arrested by the British and was hanged for opposing colonial rule. To ensure that the movement did not die down, Gaidinliu took up the movement.

Option b is incorrect: Heraka was primarily a **socio-religious movement** that arose in the 1920s in the Zeliangrong territory. It was started by Jadonang **to resist the infiltration of Christian missionaries as well as the reforms imposed by the British government.** It began as a protest against British interference in the religious and cultural practices of the local inhabitants and their strategies of conversion. Moreover, it also fought against the forced labour and high revenue that the British imposed on the people.

While the cause of the **Munda revolt** was the 'unfair land grabbing practices by colonial and local authorities that demolished the tribal conventional land system'.

Option c is correct: Gaidinliu took the movement forward after Jadonang’s demise. She motivated her supporters with Gandhi’s example and his vision of the Indian nation. In order to involve more people into the fold of non-payment of taxes, Gaidinliu began her own version of a Non-Cooperation movement among the tribes. Thus, the Heraka movement which was begun by her cousin was given final shape and leadership by Rani Gaidinliu. Acknowledging her role in the struggle against the British, Jawaharlal Nehru called her **the “Daughter of the Hills”** and gave her the title of **“Rani” or queen.**

Option d is correct: Heraka religious reformist movement recognises supremacy of one God who is behind creation of nature be it air, water or earth. **'Hera' means small gods; 'Ka' means fence or to obstruct or give up.** This, therefore, implies that sacrifices associated with the smaller gods must be

fenced out or avoided and only God **Tingwang** must be worshipped. Rani Gaidinliu told to offer sacrifices to one God, Tingwang. The movement later turned into a political movement seeking to drive out the British from Manipur and the surrounding Naga areas. Within the Heraka cult, Rani Gaidinliu came to be considered an incarnation of a goddess.

Source: <https://pibindia.wordpress.com/2015/09/30/rani-gaidinliu-daughter-of-the-hills/>

<https://amritmahotsav.nic.in/district-repository-detail.htm?17578>

<https://thenortheasttoday.com/entertainment/artsculture/rani-gaidinliu-heraka-religious-movement-what-you-must/cid2514712.htm>

<https://theprint.in/features/rani-gaidinliu-daughter-of-the-hills-who-spent-14-years-in-jail-for-indias-independence/591570/>

Q.44)

Ans) a

Exp) Option a is the correct answer.

Roughly every 10 years the British would introduce constitutional legislation - i.e. reforms to the structure of the Legislature and Executive in British India in order to pacify the growing demands of the nationalists for increasing the share of Indians in the governance of the country. Morley Minto Reforms (Indian Councils Act) 1909, Montagu Chelmsford Reforms (Government of India Act) 1919, Government of India Act 1935 and the Indian Independence Act 1947 were all such legislations.

Statement 1 is correct: The concept of **separate electorate** was **first introduced** in India in the **Morley Minto Reforms (Indian Councils Act) of 1909**. At that time, they were **provided only to Muslims**. However, seeing how it was a **good idea to create division** among Indians, the Britishers kept using it and even **expanded it** in subsequent important constitutional legislations. In the **Government of India Act of 1919**, the **separate electorates** were **extended** to the **Sikhs, Christians and Anglo Indians** besides the Muslims. The **Government of India Act, 1935** tried to **extend** this to the **Depressed Classes** as well, but the **nationalists** sensed their intentions and **prevented** this by working out a formula for representation by reservation of seats amongst themselves.

Statement 2 is correct: Although **Indians** had already been a part of the Governor General's Legislative Council **before 1909**, but they were **nominated** and not elected. The **Morley Minto Reforms of 1909** made the **provision of election** of some members to the **Central Legislative Council** for the **first time in India**. However, it must be noted that the **elections were indirect**, and the elected members were still a **minority**.

Statement 3 is correct: The **Montagu Chelmsford Reforms of 1919** introduced in India for the **first time** - the concept of **Bicameralism**. The Indian Legislative Council at the Centre was replaced by the **Council of State** (Upper House) and a **Legislative Assembly** (Lower House).

Each of these Houses was to have a **majority of elected representatives**. So **Direct/ Popular Elections** were introduced for the first time in India as well. Although it must be noted that the rules **restricted the franchise** a great deal.

Statement 4 is incorrect: The **Montagu Chelmsford Reforms of 1919** (and **not the Indian Independence Act, 1947**) introduced a **responsible government** for the **first time in India**.

The Montagu Chelmsford reforms introduced **Dyarchy** at the **Provincial Level**, wherein the Provincial Governments were to be **run by directly elected popular governments** that were **responsible** to the **people's representatives** in the **Provincial Legislative Assembly** in matters of **Transferred subjects**, as in a proper democracy.

A proper **fully responsible government** was introduced by the **Government of India Act, 1935** as distinctions between Transferred and reserved subjects were ended in Provinces and the **Provinces** were **given full autonomy**.

Source: Brief History of Modern India by Spectrum, 27th Edition, Ch-26, Pg -550 to 553

Q.45)

Ans) c

Exp) Option c is the correct answer.

The expansion of agriculture and the growth of trade from the tenth century led to the emergence of many merchant guilds or organizations in South India. Ayyavole, Manigramam and Anjuvannam typically refer to merchant guild primarily active in south India.

Option a is incorrect: The Cholas maintained a regular standing army consisting of elephants, cavalry, infantry and navy. About seventy regiments were mentioned in the inscriptions. The royal troops were called Kaikkolaperumpadai. Within this there was a **personal troop to defend the king known as Velaikkarakar.**

Option b is incorrect: Nagaram is a **commercial town** involved in a more market-oriented exchange of goods and services in the Chola domain. It has loosely linked villages in the surroundings where merchants used to buy local produce at a wholesale rate. They later distributed these products at a retail rate in the local market.

Option c is correct: Ayyavole, Manigramam and Anjuvannam, typically refer to merchant guilds. The merchant guild called Ayyavole was also known as the guild of "**the 500 Swami of Aihole**" Nanadeshi. The organization might have had an initial membership of 500. The number "five hundred" also became conventional as the guild became a much larger body and drew its members from various regions, religions and castes. It is in this context that the term **nanadeshi** came to be used for this organization. **The commercial influence of Ayyavole spread even beyond South India. It is indicated by the inscriptions found in Burma, Java, Sumatra and Sri Lanka.** As the mercantile activities of Ayyavole increased, some of its members became quite rich and powerful, and acquired the title of **samaya Chakravarti** i.e., the emperor of the trading organization.

Another important merchant guild of South, India was the **Manigramam**. It first appeared along the Kerala coast in the ninth century CE. However, as it gradually came into close contact, with the Ayyavole, it greatly improved upon its interregional activities and covered a large part of the peninsula. A ninth century Tamil inscription indicates that it was engaged in the long-distance sea trade from the very beginning.

Anjuvannam was another body of merchants in South India, which **probably represented an association of foreign merchants**. Like the Manigramam, it also began its commercial activity along the Kerala coast in the eighth or ninth century, and gradually spread out to other coastal areas of South India by the eleventh century. It interacted both with local merchants as well as the Ayyavole and Manigramam organizations.

Option d is incorrect: The land revenue department was well organized during Cholas. It was called **puravuvarithinaikkalam**. All land was carefully surveyed and classified for assessment of revenue. The residential portion of the village was called ur nattam.

Source: https://drive.google.com/file/d/1v5Tz__5mVbHe1C604Ynmoxcp927drUPC/view

<https://egyankosh.ac.in/bitstream/123456789/44512/1/Unit-15.pdf>

Q.46)

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect. The idea of creating an army out of the Indian prisoners of war (POWs) was **originally that of Mohan Singh**. The Indian National Army (INA) was formed in 1942 by Indian prisoners of war captured by the Japanese in Singapore. The Japanese handed over the Indian prisoners of war to Mohan Singh who recruited them into an Indian National Army.

Option b is correct. One INA battalion commanded by Shah Nawaz was allowed to accompany the Japanese Army to the Indo-Burma front and participate in the Imphal campaign. However, the Indians received discriminatory treatment from the Japanese, which included being denied rations and arms and being made to do menial work for the Japanese units, and this disgusted and demoralised the INA units.

Option c is incorrect. Bose had a very progressive approach for women. In 1943, he called on women to serve in INA. He formed a women's regiment and named it as Rani of Jhansi Regiment. It was commanded by Captain Lakshmi Sehgal.

Bose insisted that there should be a separate Planning Commission for women when he set up the Planning Commission in 1938. This commission was chaired by Rani Lakshmi Bai Rajawade and was to deal with the role of women in planned economy in future India.

Option d is incorrect. Tensions developed in late 1942 between Mohan Singh and the Japanese over terms of cooperation. The Japanese were determined to exercise control over the INA that Mohan Singh was not willing to accept. He was relieved of command and imprisoned. Rash Behari Bose was still in good standing with the Japanese, but he had no popular following. A more charismatic leader was needed. Subhash Chandra Bose became commanding officer of the INA and also set up a provisional government of free India, which was recognized by the Axis powers.

Source: <https://ncert.nic.in/ncerts/l/hess205.pdf>

<https://www.nios.ac.in/media/documents/SecSocSciCour/English/Lesson-08.pdf>

Spectrum Chapter 24



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Q.47)

Ans) d

Exp) Option d is the correct answer.

In March 1942, a mission headed by Stafford Cripps was sent to India with constitutional proposals to seek Indian support for the war. Stafford Cripps was a left-wing Labourite, the leader of the House of Commons, and a member of the British War Cabinet who had actively supported the Indian national movement.

Option a is incorrect: Cripps Mission proposed that Indian Union with a dominion status would be set up; it would be **free to decide its relations with the Commonwealth**. Hence, Free India could withdraw from the Commonwealth. Therefore, it was not the reason for the failure of Cripps Mission.

Option b is incorrect: The Congress objected to the proposal by Cripps mission of **representation of the princely states by nominees** and not by elected representatives. So, the Crips mission did not deny the representation of the princely states in the constituent assembly to be formed.

Option c is incorrect: **The proposals provided that any province not willing to join the Union could have a separate constitution and form a separate Union.** The congress objected to this provision of the right to provinces to secede as it went against the principle of national unity.

Option d is correct: **The immediate transfer of power into Indian hands was not explicitly mentioned in the Cripps proposal.** However, it was implied that the transfer of power would be gradual, which was not acceptable to the Indian National Congress.

Source: Spectrum - Nationalist Response in the Wake of World War II

Knowledge Base:

The main proposals of the Crips mission were as follows:

- 1) An **Indian Union with a dominion status would be set up**; it would be free to decide its relations with the Commonwealth and free to participate in the United Nations and other international bodies.
- 2) After the end of the war, a **constituent assembly** would be convened to frame a new constitution. **Members of this assembly would be partly elected by the provincial assemblies through proportional representation and partly nominated by the princes.**
- 3) The British government **would accept the new constitution subject to two conditions:**
 - (a) any province not willing to join the Union could have a separate constitution and form a separate Union, and
 - (b) the new constitution-making body and the British government would negotiate a treaty to affect the transfer of power and to safeguard racial and religious minorities.
- 4) In the meantime, **defence of India would remain in British hands** and the governor general's powers would remain intact.

Source : Spectrum

<https://www.nios.ac.in/media/documents/SecSocSciCour/English/Lesson-08.pdf> (PAGE 184)

<https://egyankosh.ac.in/bitstream/123456789/44328/3/Unit-20.pdf>

Q.48)

Ans) a

Exp) Option a is the correct answer.

The Mughals retained many features of the administrative system of the Sultanate and Sher Shah Suri's administration. The administration was highly centralised, and the territories of the empire were divided into Jagir, Khalisa (income went directly to the royal exchequer), and Inam (lands allowed to learned and religious men). Few aspects of the jagirdari system under the Mughals are discussed below:

Statement 1 is correct: Iqta of the Sultanate period in a modified form became Jagir under the Mughals. Iqtas were the lands assigned to officials instead of cash payment for their services.

Statement 2 is correct: The Jagirdari system is the system of assignment of revenue of a particular territory to the nobles for their services to the state and was an integral part of the Mansabdari system.

Statement 3 is incorrect: There were various types of jagirs such as-

- 1) Tankha Jagirs: Which were given in lieu of salaries and they were transferable every three to four years.
- 2) Mashrut Jagirs: These were given on certain conditions. It meant an increase of sawar rank for a temporary period. This was an emergency measure adopted in the time of crisis, that is, the permission to recruit more horsemen at the expense of the state.

Source: Poonam Dahiya Ancient and Medieval India.

Q.49)

Ans) a

Exp) Option a is the correct answer.

Government of India had recently nominated Assam's Charaideo Maidams or Maidams of the Ahom kingdom for the UNESCO World Heritage Site tag.

Option a is correct: The Maidams of Charaideo known as the 'Pyramids of Assam' are architectural marvels with unique designs. Comparable to the pyramids of Egypt, the maidams are actually burial grounds of Ahom Kings and Queens. They are substances of wonder seen-through the brilliant architecture and expertise of the artisans and masons of Assam of the medieval era. Apart from being the sacred burial grounds of Ahom kings and queens and these are also the place of the ancestral Gods of the Ahoms. The Ahoms reigned for almost 600 years until the British annexed their kingdom in 1826 following the Treaty of Yandabo.

Source: <https://indianexpress.com/article/explained/explained-culture/charaideo-moidams-indias-latest-nominee-to-unescos-world-heritage-sites-8399377/>

<https://charaideo.assam.gov.in/tourist-place-detail/218>

<https://whc.unesco.org/en/tentativelists/?action=listtentative&state=in&order=states>

Q.50)

Ans) d

Exp) Option d is the correct answer.

Sittanavasal Cave (Arivar Koil) Paintings are dated from 1st century BC to 10th century AD and located in Tamil Nadu.

Option a is incorrect These famous rock-cut cave temples are known for the **paintings based on Jainism, not Shaivism and Vaishnavism.**

Sittanavasal is a distorted form of Siddhanivasan, which means abode of Siddhas or Jain Gods. The paintings are not only on the walls but also on the ceiling and pillars. The paintings are with the theme of Jain Samavasarana (Preaching Hall).

The medium used for painting was vegetable and mineral dyes and was done by putting colours on surface of thin wet lime plaster. The common colours included **yellow, green, orange, blue, black and white.**



Sittanavasal Cave Paintings in Tamil Nadu

Option b is incorrect: The **central element** of the paintings in Sittanavasal is a **pond with lotuses**. Flowers in this pond are collected by monks and there are ducks, swans, fishes and animals. This scene shows Samavasarana - an important scene of Jain religion.

Option c is incorrect: Sittanavasal Caves represent one of the best cave paintings of early medieval India. Most paintings date to the Pandyan period i.e. 9th century AD. Bhimbetka Cave paintings date back to approximately 30,000 years.

Option d is correct: Sittanavasal Cave Paintings have a striking resemblance to paintings from Bagh and Ajanta.

These caves together represent a Jain temple complex, situated in a small village near Trichy in Pudukkottai district of Tamil Nadu. The most famous monument is a rock-cut monastery of the Jains which contains remnants of beautiful frescoes from the 7th century. Many of them are typical of the 9th century Pandyan period and include detailed pictures of animals, fish, ducks, masculine figures gathering lotuses from a pond and dancing girls.

Source: Nitin Singhania Chapter 2 Indian Paintings

Q.51)

Ans) c

Exp) Option c is the correct answer.

Long Term Low Emission Development Strategies (LT-LEDS) are forward-looking national economic development plans that encompass climate-resilient economic growth. LT-LEDS are intended to advance national climate change and development policy in a more coordinated, coherent and strategic manner.

Statement 1 is incorrect: India's LT-LEDS did not proposed any target of doubling its capacity of carbon sequestration in the forest and tree cover. However, the strategy mentioned that **India is on track to fulfilling its NDC commitment of 2.5 to 3 billion tonnes** of additional carbon sequestration in forest and tree cover by 2030.

Statement 2 is incorrect: India's LT-LEDS aims to make **India carbon neutral economy by 2070**, meaning India's **emission and absorption capacity of carbon will be equal**. It means India's LT-LEDS envisages making India a net zero economy by 2070, it is **different from eliminating the usage of carbon-based sources for its energy needs**.

Statement 3 is correct: It is true that India's LT-LEDS aims to triple the nuclear power generation capacity of the nation by 2032 to reduce its dependence on fossil fuels. Further India's LT-LEDS aims to make India a Green Hydrogen Hub, to achieve a Ethanol blending target of 20% by 2025 etc. to reduce the dependence of the Indian economy on Fossil fuels for its energy needs.

Statement 4 is correct: It is true that India's LT-LEDS is based on the Principle of Common but Differentiated responsibility – Respective Capabilities (CBDR-RC). Further India's LT-LEDS has been driven by the principle of Mission life which stresses the importance of change in lifestyle of individuals to better fight climate change.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1875816>

<https://www.niti.gov.in/life>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1811051#:~:text=with%20an%20associated-,market%20mechanism,-to%20enhance%20the>

Q.52)

Ans) b

Exp) Option b is the correct answer.

Ministry of Agriculture and Farmers Welfare has recognized the importance of Millets and declared Millets comprising of Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi/Mandua), Minor Millets i.e., Foxtail Millet (Kannngani/kakun), Proso Millet (Chenna), Kodo Millet (Kodo), Barnyard Millet (Sawa/Sanwa/Jhangora), Little Millet (Kutki), Brown top millet and two pseudo millets i.e., Buck- wheat (Kuttu), Amaranth (Chaulai) as “**Nutri-Cereals**” for production, consumption and trade point of view.

Pair 1 is correctly matched: Jowar/Sorghum (Scientific Name- Sorghum Vulgare) is a plant cultivated for grain for human consumption and for animal feed.

Pair 2 incorrectly matched: Bajra/Pearl Millet (Scientific Name- Pennisetum Glaucum) is the staple food for over 100 million people in parts of tropical Africa and India.

Pair 3 is incorrectly matched: Ragi/ Finger Millet (Scientific Name- Eleusine Coracana) is an important millet grown extensively in various regions of India and Africa.

Pair 4 is correctly matched: Chenna/Proso millet (Scientific Name- Panicum Miliaceum) is a short season crop that grows in low rainfall areas. This millet can be cultivated along with red gram, maize and sorghum.

Knowledge Base: Millets are gluten free and non- allergenic. Millet consumption decreases triglycerides and C- reactive protein, thereby preventing cardiovascular disease. All millets are rich in dietary fibre. Dietary fibre has water absorbing and bulking property. It increases transit time of food in the gut which helps in reducing risk of inflammatory bowel disease and acts as detoxifying agent in the body.

Source : <https://vikaspedia.in/health/nutrition/nutritive-value-of-foods/nutritive-value-of-cereals-and-millets/milletsthe-nutricereals>

<https://vikaspedia.in/health/nutrition/nutritive-value-of-foods/nutritive-value-of-cereals-and-millets/milletsthe-nutricereals>

Q.53)

Ans) a

Exp) Option a is the correct answer.

Luni is the river basin in Western Rajasthan, which forms the bulk of the arid zone. It originates from western slopes of the Aravalli ranges near Ajmer flowing in Southwest direction and traversing a course of 511 km in Rajasthan, and finally flows into the Rann of Kachchh.

Statement 1 is incorrect. Luni that originates from the Naga Hills of the Aravalli Range in Rajasthan's Ajmer district, **have freshwater** during the **first hundred kilometres** but as it reaches **Balotra in Barmer**, the water starts to turn saline from the rich salt content of the surface it flows on.

Statement 2 is incorrect. Luni river **does not drain in the Arabian Sea**, rather being a part of the inland drainage basin, **it ends in Barine**, located at the north-eastern part of the marsh called the Rann of Kutch in Gujarat, without flowing into any larger water body.

Statement 3 is incorrect. The major characteristic of the Luni River is that it tends to **increase its width rather than deepening the bed** because the banks are of soils, which are easily erodible whereas beds are of sand. Since the terrain is sandy, the river cannot cut a deep bed hence a wider channel is created as

the river moves forward and when there is more water, the banks overflow instead of deepening the river bed. So wide and shallow the river becomes, that it can evaporate from the surface.

Statement 4 is correct. The main tributaries of Luni are the **Jawai, Sukri, Guhiya, Bandi (Hemawas) and Jojari rivers**. Jojari is the **only right-bank tributary** while its left bank has 10 tributaries. Also, it is the **only tributary** of the Luni River which **does not have its origin at Aravalli hill**.

Source: <https://indiawris.gov.in/wiki/doku.php?id=luni>

<https://www.indiatoday.in/education-today/gk-current-affairs/story/luni-mysterious-indian-river-in-west-rajasthan-facts-html-1380307-2018-11-01>

Q.54)

Ans) c

Exp) Option c is the correct answer.

Oxbow lakes are **crescent-like water bodies formed due to erosion and deposition in meanders of rivers**. Meanders are loops or curved structures formed in the course of a river and the speed of water flow in the outer section of this meander is more than the inner part causing its neck to become narrower over time. Finally, the ends of this **meandered loop are separated by deposition of sediments or silt separating the river and a horseshoe-like structure called oxbow lake**.



Option a is incorrect: Pulicat Lake is the lagoon lake located on the border between Tamil Nadu and Andhra Pradesh. It is the second largest brackish water lagoon in India after Chilika lake. Major part of the lagoon comes under the Tirupati district of Andhra Pradesh.

Option b is incorrect: Chilika Lake is the lagoon lake located in the coastal area of Odisha, in the mouth of the Daya River flowing into the Bay of Bengal. A **lagoon is a shallow body of water separated from a larger body of water** by a narrow landform, such as reefs, barrier islands.

Tectonic lakes are formed due to plate tectonic events such as earthquakes. Chandubi lake is a tectonic lake located in Assam. It was formed as a result of a post-catastrophic consequence due to the **tectonic submergence of dense forests**, spread over an area of 450 hectares during the **earthquake of 1897**.

Option c is correct: The Kabartal Wetland (locally known as Kanwar lake) is Asia's largest oxbow lake situated in the Begusarai district of Bihar. It is a residual oxbow lake, formed due to the **meandering of Gandak river**, a tributary of Ganga. It was declared a Ramsar site in 2020, making it the first wetland in Bihar to be included in the Ramsar convention.

Vynthala Lake is Oxbow lake located in Kerala and it was formed due to the meandering of **Chalakudy river** in Kerala. The lake is the **only naturally created Oxbow lake** in the entire state of Kerala.

Option d is incorrect: Pangong lake is a Glacial lake situated in the Himalayan region bordering India and China. It is a **saline lake** and during winter the lake freezes completely, despite being saline water. It has a land-locked basin separated from the Indus River basin by a small elevated ridge. A glacial lake is a body of water with origins from glacier activity. **Glacial lakes are formed when a glacier erodes the land and then melts, filling the depression created by glaciers.**

Lonar Lake in Maharashtra is a result of a meteorite impact that occurred between 35,000 and 50,000 years ago.

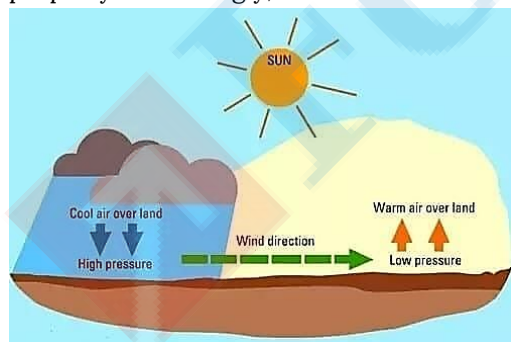
Source: <https://lakesofindia.com/2021/04/16/kabartal-wetland-the-oxbow-lake-of-india/>

Q.55)

Ans) c

Exp) Option c is the correct answer.

The **Loo** is a strong, dusty, gusty, hot and dry summer wind from the west which blows over the Indo-Gangetic Plain region of North India. It is especially strong in the months of May and June. It is the outcome of **advection process**. Advection is a lateral or horizontal transfer of mass, heat, or other property. Accordingly, winds that blow across Earth's surface represent advection movements of air.



Advection Movements of Air

Advective winds move from areas of higher temperature toward areas of lower temperature. In contrast, convection, the vertical movement of mass or transfer of heat, manifests itself as air currents. Accordingly, winds are a result of advection, while air currents are a result of convection.

Source: NCERT 11th Geography Unit 4 Climate, Chapter 8 COMPOSITION AND STRUCTURE OF ATMOSPHERE

Q.56)

Ans) a

Exp) Option a is the correct answer.

Steel production and consumption are frequently seen as measures of a country's economic development because it is both a raw material and an intermediary product. The Steel sector has been a major contributor to India's manufacturing output.

Statement 1 is correct: It is true that **India is the world's second-largest producer of crude steel and China occupies the first position.** In the Financial year 2022, the production of **crude steel and finished steel** stood at **133.596 MT and 120.01 MT**, respectively. The growth in the Indian steel sector has been driven by the domestic availability of raw materials such as iron ore and cost-effective labour.

Statement 2 is incorrect: Major Steel producing states in India are **iron driven Odisha, Chhattisgarh, Jharkhand and Karnataka.** Maharashtra and Tamil Nadu are the largest steel-using states as they are major automobile hubs in India.

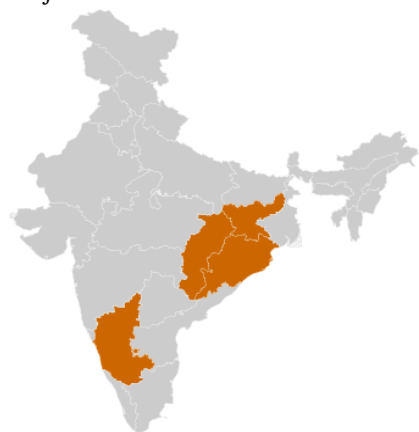


Fig- Major Steel producing states in India.

Statement 3 is incorrect: According to the Ministry of Steel's year-end review of 2022, India's steel sector accounts for 12% of India's CO₂ emission with an emission intensity of 2.55 t CO₂/TCS compared to global average emission intensity of 1.85 t CO₂/TCS. Globally, the iron & steel industry accounts for around 8% of total carbon dioxide (CO₂) emissions by the country vis-a-vis 12% by the iron & steel industry in India. Thus, Indian steel industry needs to reduce its emissions substantially in view of the commitments made in the COP26.

Source: <https://www.ibef.org/industry/steel>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1886625>

<https://www.thehindubusinessline.com/news/science>

Q.57)

Ans) b

Exp) Option b is the correct answer.

India is one of the major producers, consumers and exporter of black pepper in the world. Black pepper is cultivated to a large extent in Kerala, Karnataka and Tamil Nadu and to a limited extent in Maharashtra, Northeastern states and Andaman & Nicobar Islands. Kerala and Karnataka account for a major portion of production of black pepper in the country.

Option 1 is correct: Pepper is grown mainly as a rainfed crop. A well distributed annual rainfall of 125-200 cm is considered ideal for black pepper. High humidity and warm climate are conducive for the growth of black pepper. As Black pepper is a plant of humid tropics requiring high rainfall and humidity, the hot and humid climate of sub mountainous tracts of Western Ghats is ideal for its cultivation.

Option 2 is correct: Generally, soils with pH value more than 8.5 are considered as alkaline soil. Black pepper can be grown well in soil pH range of 4.5 to 6.5. So, alkaline soils are not much conducive for the growth of the black pepper, and it needs acidic soils to grow well.

Options 3 and 4 are incorrect: Black pepper is a tropical plant, and it tolerates temperatures between 10° and 40°C. The ideal temperature is 23 -32°C with an average of 28°C. Black pepper requires a high humid climate (not low humid climate) to grow well.

Source: <https://vikaspedia.in/agriculture/crop-production/package-of-practices/spices/black-pepper> <https://kssdb.karnataka.gov.in/info-2/Package+of+Practices/Black+Pepper/en>

Q.58)

Ans) d

Exp) Option d is the correct answer.

Pair 1 is correct: Excavations by the Archaeological Survey of India (ASI) and Tamil Nadu State Archaeology Department (TNSDA) has unearthed artefacts of Sangam Age from Keeladi in Tamil Nadu to a period between sixth century BCE and first century BCE. The findings in the TNSDA report placed Keeladi artefacts about 300 years earlier than the previously believed third century BCE. Keeladi could provide crucial evidence for understanding the missing links of the Iron Age (12th century BCE to sixth century BCE) to the Early Historic Period (sixth century BCE to fourth century BCE) and subsequent cultural developments.

Pair 2 is correct: Bhirrana is a historical site located in Haryana which is related to the Harappan Civilization.

Pair 3 is correct: The Border Roads Organisation (BRO) has recently placed a signboard at the border village of “Mana” in Uttarakhand, declaring it to be the “First Indian Village.” Located in the Himalayas, Mana shares a border with China and was previously referred to as the “last village”.

Pair 4 is correct: Mawmluh Cave in Meghalaya, locally known as Krem Mawmluh, has been listed as UNESCO’s one of the ‘First 100 IUGS (International Union of Geological Sciences) Geological Sites’ in the world.

Source: <https://indianexpress.com/article/lifestyle/destination-of-the-week/mawmluh-cave-meghalaya-unescos-first-100-iugs-geological-sites-in-the-world-8188878/>

<https://timesofindia.indiatimes.com/city/chandigarh/haryanas-bhirrana-oldest-harappan-site-rakhigarhi-asias-largest-asi/articleshow/46926693.cms>

<https://www.thehindu.com/news/national/tamil-nadu/explained-the-significance-of-the-findings-in-keeladi/article66541961.ece>

<https://www.hindustantimes.com/india-news/mana-know-about-this-first-indian-village-located-in-uttarakhand-101682428341166.html>

<https://www.financialexpress.com/lifestyle/science/discovery-of-new-archaeological-site-in-haryanas-sandhai-village-and-a-brief-look-at-the-harappan-site-of-bhirrana/2391954/>

Q.59)

Ans) c

Exp) Option c is the correct answer.

The Environment Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development. This assessment also takes into account human health and socioeconomic impact on the community living in the proposed project area.

Option 1 is incorrect: Thermal power plants up to 15 MW based on biomass or non-hazardous municipal solid waste using auxiliary fuel such as coal, lignite or petroleum products up to 15 per cent

have been **exempted** from acquiring mandatory environmental clearances, as long as the fuel mix is eco-friendly.

Option 2 is correct: All Offshore and onshore oil and gas exploration, development & production projects require mandatory prior environmental Clearance under EIA.

Option 3 and 4 are correct: All projects and activities are broadly categorized into two categories Category A and Category B. The Category A projects required mandatory environmental clearance and following are Category A projects:

Hydroelectric power generation with a capacity of more than 50 MW.

More than **10,000 ha. of culturable command area under irrigation projects**

Therefore, it is true that certain Hydel power generation and Irrigation projects require mandatory environmental clearance.

Option 5 is incorrect: Recently the Ministry of Environment, Forests and Climate Change has notified amendment to the Environment Impact Assessment (EIA) Rules, exempting highway projects of strategic and defence importance, which are 100 km from the Line of Control, among other locations, from an environmental clearance before construction.

Option 6 is incorrect: The EIA rules exempted projects related to the expansion of **toll plazas that need more width for installation of toll collection booths** to cater to a large number of vehicles, and **expansion activities in existing airports** related to terminal building expansion without increase in the airport's existing area.

Source: <https://www.thehindu.com/news/national/tamil-nadu/environmental-clearance-mandatory-for-all-mining-leases-ngt/article31962495.ece>

[https://environmentclearance.nic.in/writereaddata/Form-](https://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/GuidanceManual.htm#:~:text=3.3.3-,Categorization,-of%20projects%20and)

[1A/HomeLinks/GuidanceManual.htm#:~:text=3.3.3-,Categorization,-of%20projects%20and](https://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/GuidanceManual.htm#:~:text=3.3.3-,Categorization,-of%20projects%20and)

<https://indianexpress.com/article/india/environment-ministry-amends-eia-rules-exempts-highways-strategic-importance-8039740/>

<https://tspcb.cg.gov.in/Environment/List%20of%20Projects%20requiring%20EC%20as%20per%20Schedule%20to%20EIA%20Notification.pdf>

Q.60)

Ans) a

Exp) Option a is the correct answer.

Option a is correct: A biome is a biogeographical unit consisting of a biological community that has formed in **response to the physical environment**. Biomes are divisions of the Earth's surface based on the adaptation of living organisms to climatic, soil, and other conditions.

Option b is incorrect: An **ecotone is an area that acts as a boundary or a transition between two ecosystems**. For example Mangrove forests are an ecotone between the marine and terrestrial ecosystems. Grassland and Estuary are other ecotone regions.

Option c is incorrect: Biome is different from habitat in the sense that a **habitat is the location where a group of one type of organism (a population) lives**, while a **biome is a community made of all the habitats in a given region and climate**. Thus Different organisms inhabit different types of biomes.

Option d is incorrect: **Ecosystems** are the interactions between biota, such as plants and animals, within the environment, and many ecosystems can make up a single biome.

Source: <https://ncert.nic.in/textbook/pdf/kegy215.pdf>

<https://education.nationalgeographic.org/resource/what-makes-biome/>

Q.61)

Ans) a

Exp) Option a is the correct answer.

The Ring of Fire, also referred to as the Circum-Pacific Belt, is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes. **Seventy-five percent of Earth's volcanoes** are located along the Ring of Fire. Ninety percent of Earth's earthquakes occur along its path, including the planet's most violent and dramatic seismic events.

Option a is correct: The abundance of volcanoes and earthquakes along the Ring of Fire is caused by the amount of movement of tectonic plates in the area. Along much of the Ring of Fire, **plates overlap at convergent boundaries called subduction zones**. That is, the plate that is underneath is pushed down, or subducted, by the plate above. As rock is subducted, it melts and becomes magma. The abundance of magma so near to Earth's surface gives rise to conditions ripe for volcanic activity.

Option b is incorrect: Transform plate boundaries and **lateral sliding creates very less volcanic activities** though they can be a potential reason for creation of earthquakes. A significant exception is the border between the Pacific and North American Plates. This stretch of the Ring of Fire is a transform boundary, where plates move sideways past one another. **This type of boundary generates a large number of earthquakes as tension in Earth's crust builds up and is released.**

Option c is incorrect: Divergent plate boundaries occur when two tectonic plates move apart, creating a gap where molten rock rises from the mantle to fill the void, which may lead to volcanic activity especially at Mid-Oceanic Ridges (MORs). Such volcanoes are small compare to volcanoes formed by two converging plates. Seafloor spreading is a prime example of this process. But **volcanoes activities in Circum-Pacific Belt are due to convergence of various tectonic plates.**

Option d is incorrect: The Circum-Pacific Belt is not a nuclear testing place of underground explosion. **Such underground explosion can create a localised earthquake.** But the probability of volcanic eruption is very less. Hence this statement is wrong.

Source: <https://education.nationalgeographic.org/resource/ring-fire/>

<https://www.nationalgeographic.org/article/plate-tectonics-ring-fire/#:~:text=The%20Ring%20of%20Fire%2C%20also,along%20the%20Ring%20of%20Fire.>

Q.62)

Ans) d

Exp) Option d is the correct answer.

- 1) Mizoram lies in the Eastern hills and mountains of the Himalayan Mountain System. Mizo Hills in Himalayas are inhabited by numerous tribal groups practicing Jhum cultivation. Mizoram is also known as the 'Molassis basin' as it is made up of soft unconsolidated deposits.
- 2) Mizoram is one of the biodiversity hotspots located in the North Eastern part of India. According to the 'India State of Forest Report 2021', in terms of forest cover as percentage of total geographical area, the top five States are Mizoram (84.53%), Arunachal Pradesh (79.33%), Meghalaya (76.00%), Manipur (74.34%) and Nagaland (73.90%).
- 3) The majority of the festivals celebrated in Mizoram reflect their tribal heritage and culture. There are three famous festivals celebrated in Mizoram: Chapchar Kut, Pawl Kut and Mim Kut. All three of these Mizoram festivals revolve around agriculture and celebrate the arrival of spring with feasts and beautiful traditional dance performances.

Source:

<https://www.tourmyindia.com/states/mizoram/festivals.html#:~:text=There%20are%20three%20famous%20festivals,and%20beautiful%20traditional%20dance%20performances.>

<https://ncert.nic.in/ncerts/l/kegy102.pdf>

[https://pib.gov.in/PressReleasePage.aspx?PRID=1789635#:~:text=In%20terms%20of%20forest%20cover,%25\)%20and%20Nagaland%20\(73.90%25\).](https://pib.gov.in/PressReleasePage.aspx?PRID=1789635#:~:text=In%20terms%20of%20forest%20cover,%25)%20and%20Nagaland%20(73.90%25).)

http://mizennis.nic.in/Database/Biodiversity_1444.aspx

Q.63)

Ans) b

Exp) Option b is the correct answer.

IUCN (International Union for Conservation of Nature) was established on 5 October 1948 in the French town of Fontainebleau. IUCN was fundamental to the creation of key international conventions including the Ramsar Convention on Wetlands (1971), the World Heritage Convention (1972), the Convention on International Trade in Endangered Species (1974), and the Convention on Biological Diversity (1992).

Option 1 is correct: IUCN hosts the Secretariat of the International Convention on Wetlands – the Ramsar Convention – at its headquarters near Geneva, Switzerland. Over the years, IUCN has collaborated with the Ramsar Convention on Wetlands in many ways, such as supporting countries in accession to the Convention, scientific assistance in the designation of Ramsar sites, providing help at site level management, and supporting the capacity to link local communities with government authorities to ensure the conservation of wetlands.

Option 2 is incorrect: The Basel, Rotterdam and Stockholm Conventions are some of the UNEP (not IUCN) administered Multilateral Environmental Agreements (MEAs). Basel Convention is concerned with the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Its objective is to protect human health and the environment against the adverse effects of hazardous wastes.

Option 3 is correct: IUCN co-drafted the World Heritage Convention text with UNESCO in 1972 and is explicitly recognised within the Convention as the technical Advisory Body on nature to the World Heritage Committee.

Option 4 is correct: The Convention on International Trade in Endangered Species (CITES) resulted from a resolution adopted at a 1963 meeting of member countries of the International Union for Conservation of Nature (IUCN). **The formal text of CITES was adopted at a meeting of 80 members of the IUCN in Washington, D.C.,** on March 3, 1973, and entered into force on July 1, 1975.

Option 5 is incorrect: The agreement on Convention on Migratory Species was signed under the auspices of the **United Nations Environment Programme (not IUCN)** and is concerned with conservation of wildlife and habitats on a global scale. Signed in 1979 in Bonn, West Germany, the convention entered into force in 1983.

Source: [https://www.iucn.org/about-](https://www.iucn.org/about-iucn/history#:~:text=IUCN%20was%20fundamental%20to%20the,on%20Biological%20Diversity%20(1992).)

[iucn/history#:~:text=IUCN%20was%20fundamental%20to%20the,on%20Biological%20Diversity%20\(1992\).](https://www.iucn.org/about-iucn/history#:~:text=IUCN%20was%20fundamental%20to%20the,on%20Biological%20Diversity%20(1992).)

<https://www.iucn.org/resources/information-brief/iucn-ramsar-collaboration-supporting-wise-use-wetlands#:~:text=IUCN%20%E2%80%93%20The%20International%20Union%20for,its%20headquarters%20near%20Geneva%2C%20Switzerland.>

[https://www.unep.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/partners/regional-seas-](https://www.unep.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/partners/regional-seas-related#:~:text=BRS%20is%20one%20of%20the,adverse%20effects%20of%20hazardous%20wastes.)

[related#:~:text=BRS%20is%20one%20of%20the,adverse%20effects%20of%20hazardous%20wastes.](https://www.unep.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/partners/regional-seas-related#:~:text=BRS%20is%20one%20of%20the,adverse%20effects%20of%20hazardous%20wastes.)

[https://www.iucn.org/our-work/informing-policy/international-policy/world-heritage-convention#:~:text=IUCN%20co%2Ddrafted%20the%20World,to%20the%20World%20Heritage%20Co](https://www.iucn.org/our-work/informing-policy/international-policy/world-heritage-convention#:~:text=IUCN%20co%2Ddrafted%20the%20World,to%20the%20World%20Heritage%20Committee.)

[mmittee.](https://www.iucn.org/our-work/informing-policy/international-policy/world-heritage-convention#:~:text=IUCN%20co%2Ddrafted%20the%20World,to%20the%20World%20Heritage%20Committee.)

<https://www.britannica.com/topic/Convention-on-International-Trade-in-Endangered-Species#:~:text=The%20convention%20resulted%20from%20a,force%20on%20July%201%2C%201975.>

Q.64)

Ans) b

Exp) Option b is the correct answer.

India has a unique culture and is one of the oldest and greatest civilizations of the world. India has achieved all-round socio-economic progress since its Independence. India covers an area of 32,87,263 sq. km, extending from the snow-covered Himalayan heights to the tropical rain forests of the south. As the 7th largest country in the world.

Statement 1 is correct: The climate of India can broadly be classified as a tropical monsoon one. **The Indian Meteorological Department (IMD) designates four official seasons:** Winter, from December to early April; Summer or pre-monsoon, from April to June (April to July in north-western India); Monsoon or rainy, from June to September; Post-monsoon, from October to December.

Statement 2 is incorrect: The total length of India's coastline is **7516.6 kilometers**. Of this, the mainland coastline length is 5422.6 kilometers whereas the island territories coastline length is 2094 kilometers. Gujarat has the longest mainland coastline (1214.7 km) among the states. Among the UTs, **Andaman and Nicobar Islands** has the **longest coastline (1962 km)**. Hence, **Andaman and Nicobar (and not Gujrat) Islands has the longest coastline** among all the States and Union Territories (UTs).

Statement 3 is incorrect: Within only about 2 percent of the world's total land surface, India is known to have over 7.5% (not 15%) of the species of animals that the world holds. The Zoological Survey of India (ZSI), with its headquarters in Kolkata and 16 regional stations is responsible for surveying the faunal resources of India. Possessing a tremendous diversity of climate and physical conditions, India has great variety of fauna, numbering 92,037 species, of which insects alone include 61,375 species. **It is estimated that about two times that number of species still remain to be discovered in India alone.**

Statement 4 is correct: Lying entirely in the northern hemisphere, the mainland extends between latitudes 8° 4' and 37° 6' north, longitudes 68° 7' and 97° 25' east and measures about 3,214 km from north to south between the extreme latitudes and about 2,933 km from east to west between the extreme longitudes. The total length of the coastline of the mainland, Lakshadweep Islands and Andaman & Nicobar Islands is **7,516.6 km**. It has a **land frontier of about 15,200 km, which is roughly double of total length of coastline.**

Source: <https://knowindia.india.gov.in/national-identity-elements/national-calendar.php>

<https://knowindia.india.gov.in/profile/climate.php>

<https://knowindia.india.gov.in/profile/fauna.php>

<https://knowindia.india.gov.in/profile/india-at-a-glance.php>

Q.65)

Ans) d

Exp) Option d is the correct answer.

Pair 1 is correct: TEMPO is the short name for Tropospheric Emissions: Monitoring of Pollution. It is NASA's mission which will provide first-ever hourly daytime observation of atmospheric air pollution at high spatial resolution over North America from a geostationary orbit. TEMPO will be able to observe hourly air quality conditions as they unfold across North America.

Pair 2 is correct: NASA's **OSIRIS-REx**, the first U.S. mission to collect a sample from an asteroid, will return to Earth on Sept. 24, 2023, with material from asteroid Bennu. When it arrives, the OSIRIS-REx spacecraft will release the **sample capsule** for a safe landing in the Utah desert. The pristine material from Bennu – rocks and dust collected from the asteroid's surface in 2020 – will offer generations of scientists a window into the time when the Sun and planets were forming about 4.5 billion years ago.

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Pair 3 is correct: NISAR is a joint Earth-observing mission between NASA and the Indian Space Research Organization (ISRO) with the goal to **make global measurements of the causes and consequences of land surface changes** using advanced radar imaging.

Pair 4 is correct: NASA's Low-Earth Orbit Flight Test of an Inflatable Decelerator, or LOFTID, is demonstrating a cross-cutting aeroshell -- a type of heat shield -- for atmospheric re-entry. **NASA completed its LOFTID mission, demonstrating an inflatable decelerator that could potentially help land astronauts on Mars in the future.** The inflatable decelerator technology is scalable to both crewed and large robotic missions to Mars. **This technology enables a variety of proposed NASA missions to destinations such as Mars, Venus, Titan as well as return to Earth.**

Source:

https://eosps.nasa.gov/sites/default/files/publications/NASA_TEMPO%20Mission%20Brochure_508.pdf


<https://climatekids.nasa.gov/mission-tempo/#:~:text=TEMPO%20is%20the%20short%20name,America%20during%20each%20daylight%20hour.>

<https://www.nasa.gov/osiris-rex>

<https://www.nasa.gov/osiris-rex>

<https://nisar.jpl.nasa.gov/mission/isro-partnership/>

https://www.nasa.gov/mission_pages/tdm/loftid/index.html



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I had enrolled in ForumIAS academy for my GS and Essay test series. I am grateful to Aditya sir, and the entire ForumIAS academy.
Anudeep D.
AIR-1, CSE-2017

Q.66)

Ans) c

Exp) Option c is the correct answer.

Lumpy Skin Disease is a vector-borne pox disease that is caused by Capripoxvirus and is an emerging threat to livestock worldwide. It is genetically related to the goat pox and sheep pox virus family.

Statement 1 is incorrect: A zoonosis or zoonotic disease is any disease or infection that is naturally transmissible from vertebrate animals to humans. Lumpy Skin disease is a non-zoonotic disease. Largely it has been found that it is safe for humans to consume milk from cattle infected by Lumpy Skin Disease. Lumpy skin disease is host-specific, causing natural infection in cattle and Asian water buffalo (*Bubalus bubalis*). Lumpy skin disease does not affect humans. **Hence, the disease is non-zoonotic, meaning it does not spread from animals to humans.**

Statement 2 is incorrect: Recently, **Lumpi-ProVacInd vaccine** has been developed by **Indian Council of Agricultural Research (ICAR)**. It is a homologous, live attenuated vaccine specifically targeted to protect cattle against LSD virus. **Hence, Vaccine is available for lumpy skin disease.**

Statement 3 is correct: **Infected pregnant cows are known to deliver calves with skin lesions. The virus may be transmitted to suckling calves through infected milk.** Transmission of virus occurs through movements of cattle. Infected animals showing lesions in the skin and mucous membranes of the mouth and nasal cavities excrete infectious LSDV in saliva, as well as in nasal and ocular discharges, which may contaminate shared feeding and drinking sites. The virus persists in the semen of infected bulls so that natural mating or artificial insemination may be a source of infection for females.

Statement 4 is correct: Local blood-feeding insect vectors feeding on cattle can transmit the virus. The common stable fly (*Stomoxys calcitrans*), **the Aedes aegypti mosquito**, and some tick species of the *Rhipicephalus* and *Amblyomma* spp., have demonstrated ability to spread the LSDV.

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>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1887700>

<https://vikaspedia.in/agriculture/livestock/cattle-buffalo/lumpy-skin-disease/lumpy-skin-disease-in-cattle>

Q.67)

Ans) a

Exp) Option a is the correct answer.

Antimicrobial resistance (AMR) represents a major threat to human health with significant global economic and security implications. In 2015, WHO Member States unanimously approved a Global Action Plan to tackle AMR (GAP-AMR).

Option a is correct: Surveillance is the cornerstone for assessing the spread of AMR and to inform and monitor the impact of local, national and global strategies. **On 22 October 2015, WHO launched the Global Antimicrobial Resistance and Use Surveillance System (GLASS), the first global collaborative effort to standardize AMR surveillance.** GLASS was created to support the second objective of the GAP-AMR initiative to “strengthen knowledge through surveillance and research”, and to continue filling knowledge gaps, with the aim to inform strategies at all levels. GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, such as monitoring of resistance and the use of antimicrobial medicines, including AMR in the food chain and in the environment.

Option b is incorrect: **The EYE strategy is a comprehensive and long-term strategy built on lessons learned that aims at ending yellow fever epidemics by 2026.** The comprehensive global strategy to

eliminate yellow fever epidemics (EYE) has been developed by a coalition of partners (Gavi, UNICEF and WHO) to face yellow fever's changing epidemiology, resurgence of mosquitoes, and the increased risk of urban outbreaks and international spread.

Option c is incorrect: In line with the WHO Framework Convention on Tobacco Control (WHO FCTC), WHO introduced the MPOWER measures in 2008. MPOWER is a set of six cost-effective and high impact measures that help countries reduce demand for tobacco.

Option d is incorrect: WHO, in collaboration with international partners, launched the SAFER initiative in 2018. "SAFER" is an acronym for the 5 most cost-effective interventions to reduce alcohol related harm.

Source: <https://www.who.int/initiatives>

<https://www.who.int/initiatives/glass>

<https://www.who.int/initiatives/mpower>

<https://www.who.int/initiatives/SAFER>

<https://www.who.int/initiatives/eye-strategy>

Q.68)

Ans) c

Exp) Option c is the correct answer.

Statement 1 is correct. Photonic crystals are optical nanostructures in which the refractive index changes periodically. This change in the refractive index affects the propagation of light in the same way that the structure of natural crystals gives rise to X-ray diffraction and that the atomic lattices (crystal structure) of semiconductors affect their conductivity of electrons.

Statement 2 is correct. Photonic crystals promise to be useful in a range of applications ranging from reflection coatings to optical computers when artificially produced or engineered in laboratories. Photonic crystals are widely used for the development of low and high reflection coatings for lenses and mirrors. They are also used to produce color-changing paints and inks. They enable the PCs to exhibit structural colours in the visible spectral regime.

Statement 3 is incorrect. Quasicrystal, also called quasi-periodic crystal, is a matter formed atomically in a manner somewhere between the amorphous solids of glasses and the precise pattern of crystals. In quasicrystals, the atoms are arranged in a pattern that repeats itself at **irregular**, yet predictable intervals.

Statement 4 is correct. Quasicrystals have poor heat conductivity, which makes them good insulators. They are used in manufacturing non-stick frying pans, needles for acupuncture and surgery, dental instruments and razor blades.

Source: <https://indianexpress.com/article/explained/explained-sci-tech/scientists-discover-new-quasicrystal-explained-8440730/>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1876132>

<https://blog.forumias.com/graphene-stabilized-tunable-photonic-crystal-can-make-more-durable-better-reflective-display-and-lasers-devices/>

<https://blog.forumias.com/third-source-of-natural-quasicrystals-preserves-their-reputation-for-violent-origins/>

Q.69)

Ans) d

Exp) Option d is the correct answer.

Light pollution is the excessive or inappropriate use of outdoor artificial light affecting human health, wildlife behaviour, and our ability to observe stars and other celestial objects.

Option 1 is correct: Studies suggest that **light pollution around lakes prevents zooplankton, such as Daphnia, from eating surface algae, helping cause algal blooms** that can kill off the lakes' plants and lower water quality.

Option 2 is correct: Several published studies also suggest a **link between exposure to light at night and risk of breast cancer, due to suppression of the normal nocturnal production of melatonin.**

Option 3 is correct: Studies show that **light pollution is also impacting animal behaviours, such as migration patterns**, wake-sleep habits, and habitat formation. Because of light pollution, sea turtles and birds guided by moonlight during migration get confused, lose their way, and often die.

Option 4 is correct: According to a 2010 study by the National Oceanic and Atmospheric Association, **photo pollution increases air pollution by suppressing a naturally occurring radical that cleans the air at night. Nitrate radical, a form of nitrogen oxide, breaks down vehicle and factory emissions at night.** The nightly process prevents the emissions from becoming smog, ozone pollution, or other harmful irritants. **The process only takes place at night because sunlight destroys nitrate radical.** However, artificial lights from buildings, cars, and streetlights, although 10,000 times dimmer than sunlight, also affect nitrate radical and slow down the cleansing process by 7%. **Artificial light also increases the chemicals for ozone pollution by 5%.**

Source: <https://www.thehindu.com/sci-tech/science/the-dark-sky-is-a-natural-resource-and-too-much-light-is-polluting-it/article66423147.ece>

<https://www.unep.org/news-and-stories/story/global-light-pollution-affecting-ecosystems-what-can-we->

do#:~:text=Artificial%20light%20at%20night%20can,artificial%20structures%20such%20as%20buildings

<https://www.nationalgeographic.org/article/light-pollution/>

<https://www.ijsr.net/archive/v3i10/T0NUMTQyMTA=.pdf>

<https://www.delmarfans.com/educate/basics/lighting-pollution>

<https://cescos.fau.edu/observatory/lightpol-envIRON.html>

Q.70)

Ans) a

Exp) Option a is the correct answer.

Wave interference plays a very important role in signal jamming. Each wave comes with a corresponding frequency. To put simply, the number of times it pulsates. When a wave peaks and meets another wave which is also at its peak, it creates **constructive interference** which creates a new wave. However, when a wave trough merges with another wave trough, they automatically cancel each other and end up creating **destructive interference** instead. **Signal jamming a cellphone needs a destructive interference pattern** with its radio waves. To do this, jamming devices have to flood **a space with a radio wave that matches the phone's frequency.** Doing so will then create a white noise type of wave that can mess with the phone's waves. When this is successful, any smartphone within the affected radius of that device will not receive any signal.

Source: What Is Signal Jamming And How Does It Work? (techlog360.com)

Q.71)

Ans) a

Exp) Option a is the correct answer.

Statement 1 is incorrect. Pure water doesn't conduct electricity; by itself, it is a poor conductor of electricity. However, water contains charged ions and impurities that make it a very good conductor of electricity. "Pure" water has no ions, consequently, no charge flows through water, so pure water does

not conduct electricity. In distilled water, there are no impurities and thus no ions. There are only neutral molecules, and these neutral molecules lack a charge. For this reason, distilled water is also unable to conduct electricity.

Statement 2 is correct. All substances, including water, become less dense when they are heated and denser when they are cooled. So, if water is cooled, it becomes denser and forms ice. Water is one of the few substances whose solid state can float on its liquid state. Water continues to become denser until it reaches 4°C. After it reaches 4°C, it becomes LESS dense. When freezing, molecules within water begin to move around more slowly, making it easier for them to form hydrogen bonds and eventually arrange themselves into an open crystalline, hexagonal structure. Because of this open structure as the water molecules are being held further apart, the volume of water increases about 9%. **So, molecules are more tightly packed in water's liquid state than its solid state.** This is why a can of soda can explode in the freezer.

Statement 3 is incorrect. At the room temperature, **only one liquid has a higher surface tension than water – mercury.** This property explains why bubbles are round, small insects can walk on water, items that are heavier than water (such as a needle and a razor blade) can float on water if the conditions are right, and water drops are shaped the way they are.

Source:

[https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_\(Physical_and_Theoretical_Chemistry\)/Physical_Properties_of_Matter/States_of_Matter/Properties_of_Liquids/Unusual_Properties_of_Water](https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_(Physical_and_Theoretical_Chemistry)/Physical_Properties_of_Matter/States_of_Matter/Properties_of_Liquids/Unusual_Properties_of_Water)

Q.72)

Ans) a

Exp) Option a is the correct answer.

Option a is correct. A side-channel attack (SCA) is a security exploit that attempts to extract secrets from a chip or a system. This can be achieved by measuring or analyzing various physical parameters. Examples include supply current, execution time, and electromagnetic emission. These attacks pose a serious threat to modules that integrate cryptographic systems.

Option b is incorrect: A software bug (not a side channel attack) is an error, flaw or fault in the design, development, or operation of computer software that causes it to produce an incorrect or unexpected result, or to behave in unintended ways.

Option c is incorrect: A Trojan Horse Virus is a type of malware that downloads onto a computer disguised as a legitimate program. The delivery method typically sees an attacker use social engineering to hide malicious code within legitimate software to try and gain users' system access with their software.

Option d is incorrect: A wiper is a type of malware with a single purpose: to erase user data beyond recoverability. Wipers are used to destroy computer networks in public or private companies ranging from industrial to entertainment sectors. Threat actors also use wipers to cover up traces left after an intrusion, weakening their victim's ability to respond.

Source: <https://blog.forumias.com/indian-researchers-develop-low-energy-chip-architecture-to-prevent-attacks-on-iot-devices/>

<https://www.google.com/url?sa=t&source=web&rct=j&url=https://indianexpress.com/article/technology/science/indian-researchers-develop-low-energy-chip-architecture-prevent-attacks-iot-devices-7803340/lite/&ved=2ahUKEwiVibnTrfH-AhX4amwGHTZMC3cQFnoECA0QAQ&usg=AOvVaw1qf92vdssbJ48EJnA0ruGA>

Q.73)

Ans) c

Exp) Option c is the correct answer.

Multiple ovulation and embryo transfer technology (MOET) is a reproductive technique that primarily aims to fertilize several oocytes in a shorter time period to produce more viable embryos, which are transferred into the recipient, resulting in a higher birth rate. By using MOET technology, one can get 10-20 calves in a year from a cow/buffalo.

To make the farmers of Uttarakhand breed Badri and not to shift to other high milk-producing alternative breeds like Jersey cows, the government has decided to opt for Multiple Ovulation Embryo Transfer (MOET)".

Option a is incorrect. Vegan Meat Production Uses Extrusion Technology. During this process, the plant-based proteins go through thermal and mechanical stresses.

Option b is incorrect. There are six different vaccine technology platforms which include Live-attenuated vaccines, Inactivated vaccines, Subunit vaccines, Toxoid vaccines, Viral vector vaccines and Messenger RNA (mRNA) vaccines.

Option d is incorrect. Multiple ovulation and embryo transfer technology (MOET) is not aimed at treating genetic disorders.

Source: <https://www.thehindu.com/news/national/other-states/uttarakhand-plans-genetic-enhancement-of-its-indigenous-badri-cow/article66247599.ece>

Q.74)

Ans) c

Exp) Option c is the correct answer.

Statement a is incorrect: The **Ministry of Jal Shakti** has released the report of India's first water bodies census, a comprehensive data base of ponds, tanks, lakes, and reservoirs in the country. The census was conducted in 2018-19 and enumerated more than 2.4 million water bodies across all states and Union Territories of India.

Option b is incorrect. The census covered both natural and manmade waterbodies. The definition of water body under the census covers **"All natural or man-made water units bounded on all sides with some or no masonry work, used for storing water for irrigation or other purposes—such as industrial, pisciculture, drinking, ground-water recharge, etc—qualify.**

Seven specific types of water bodies were excluded from the count. **They were:**

- 1) oceans and **lagoons;**
- 2) **rivers**, streams, springs, waterfalls - which are free flowing, without any bounded storage of water;
- 3) swimming pools.
- 4) covered water tanks created for a specific purpose by a family or household for their own consumption;
- 5) a water tank constructed by a factory owner for consumption of water as raw material or consumable;
- 6) temporary water bodies created by digging for mining, brick kilns, and construction activities, which may get filled during the rainy season; and
- 7) Pucca open water tanks created only for cattle to drink water.

Option c is correct. The census has enumerated 2.42 million water bodies, **out of which 97.1% (2.35 million) are in rural areas and 2.9% (69,485) in urban areas.** According to the census, 55.2% are owned by private entities and 44.8% are under public ownership.

Option d is incorrect. Information on encroachment of water bodies has been collected, according to which **only 1.6% water bodies out of all the enumerated bodies have suffered encroachment.**

Source: <https://www.financialexpress.com/economy/explainer-indias-first-water-bodies-census/3066308/>

Q.75)

Ans) b

Exp) Option b is the correct answer.

The TREM IV and V standards are in general alignment with the European Stage IV and V standards for **diesel engines used in nonroad mobile machinery**. The new TREM IV emission norms are applicable to tractors with engines bigger than 50 HP and other farm equipment. The tractor industry of less than 50 HP will continue to be governed by TREM III A norms. The major upgrades required for the diesel tractors to pass TREM 4 standards include fuel injection systems, air handling systems, exhaust gas recirculation, diesel oxidization catalyst reduction systems and diesel particulate filters.

Source: <https://timesofindia.indiatimes.com/auto/commercial-vehicles/diesel-tractors-to-get-more-expensive-from-january-2023-as-bs-trem-4-norms-kick-in/articleshow/96593267.cms>

https://theicct.org/sites/default/files/publications/India_Stage_IV_V%20Policy_Update%20_21080604.pdf

Q.76)

Ans) c

Exp) Option c is the correct answer.

The amount of insolation received on the earth's surface is not uniform everywhere. It varies from place to place and from time to time. The tropical zone receives the **maximum annual insolation**. It gradually decreases towards the poles. Insolation is more in summers and less in winters.

Statement 1 is correct: Maximum insolation is received over the subtropical deserts, where the cloudiness is the least. The cloudless skies allow for maximum insolation in the subtropical deserts as compare to other cloudy regions that reflects sunlight.

Statement 2 is incorrect: Equator receives **comparatively less insolation than the tropics due to presence of clouds**.

Statement 3 is correct: The **middle and higher latitudes receive less radiation in the winter season** than in the summer. Seasonal change has impact on insolation in this region, hence, dissimilarities are found in the amount of solar radiation.

Statement 4 is correct: At the equinoxes, solar insolation is at a maximum at the equator and is zero at the poles. At the summer solstice of the northern hemisphere, daily insolation reaches a maximum at the North Pole because of the 24-hour-long solar day. At the winter solstice, the sun does not rise above the horizon north of about 66.5°, where solar insolation is zero.

Source: NCERT 11th Geography Unit 4 Climate, Chapter 9 SOLAR RADIATION, HEAT BALANCE AND TEMPERATURE

[https://www.uou.ac.in/lecturenotes/science/MSCGE-](https://www.uou.ac.in/lecturenotes/science/MSCGE-19/Insolation,%20Atmospheric%20temperature%20and%20Heat%20Budget%20of%20the%20Earth.pdf)

[19/Insolation,%20Atmospheric%20temperature%20and%20Heat%20Budget%20of%20the%20Earth.pdf](https://www.uou.ac.in/lecturenotes/science/MSCGE-19/Insolation,%20Atmospheric%20temperature%20and%20Heat%20Budget%20of%20the%20Earth.pdf)

Q.77)

Ans) b

Exp) Option b is the correct answer.

Statement 1 is incorrect: Municipal corporations are created for the administration of big cities like Delhi, Mumbai, Kolkata, Hyderabad, Bangalore and others. They are established in the states by the acts of the concerned state legislatures, and in the union territories by the acts of the Parliament of India. There may be one common act for all the municipal corporations in a state or a separate act for each municipal corporation. A municipal corporation has three authorities, namely, the council, the standing committees and the commissioner. The Council is headed by a mayor. He is elected in a majority of the states for a one-year renewable term. **Thus, the municipal corporation is a statutory body, and the office of mayor is also a statutory body and is not a constitutional body.**

Statement 2 is correct: A municipal corporation has three authorities, namely, the council, the standing committees and the commissioner. **The Council is the deliberative and legislative wing of the corporation. The Council is headed by a mayor.**

Statement 3 is incorrect: The manner of elections of Mayor is decided by the state legislature. In states like Rajasthan, Himachal Pradesh, Haryana, Karnataka, Kerala, West Bengal, Maharashtra and Gujarat, the Mayors are elected from amongst the elected Councillors, i.e., by an "indirect election". In states like Andhra Pradesh, Uttar Pradesh, and Tamil Nadu, Mayors are elected "directly" through adult franchise.

Source: Indian Polity by M. Laxmikant, 5th edition, chapter 39

Q.78)

Ans) c

Exp) Option c is the correct answer.

Statement 1 is incorrect: The term "political party" is mentioned several times in the Anti defection law, but it is not specifically defined in the Tenth Schedule.

A legislature party is a group of elected members of a legislative body who belong to the same political party. It consists of lawmakers who are elected under the banner of a specific political party.

According to a recent Supreme Court judgment (Subhash Desai v. Principal Secretary, Governor of Maharashtra and Ors), **it is the "political party" which has the power to appoint a whip in Parliament and not the "legislature party"**. Supreme Court held that, "When the anti-defection law seeks to curb defections from a political party, it is only a logical corollary to recognize that the power to appoint a Whip vest with the political party."

Statement 2 is correct: The **leader of the opposition in the houses of Indian parliament is a statutory post**. This post is defined in the **Salaries and Allowances of Leaders of Opposition in Parliament Act, 1977** as simply the leader of the numerically biggest party in opposition to the government.

Statement 3 is incorrect: Under the Anti defection law, presiding officer can take up a defection case only when he receives a complaint from a member of the house. Thus, the presiding officer cannot exercise Suo-moto powers to initiate a case of anti-defection in the house. **Recently Haryana High Court held that presiding officer of the house has no power to take Suo moto cognizance to treat a case under Tenth Schedule of the Constitution of India** as the constitutional mandate as under Tenth Schedule under Paragraph 6 thereof, the Speaker has only been conferred with the power to take decision on questions as to the disqualification on ground of defection if any question to that effect is referred.

Source: <https://theprint.in/judiciary/political-party-legislature-party-not-same>.

<https://www.livelaw.in/top-stories>.

<https://www.mea.gov.in/Images/pdf1/S10.pdf> (page 3)

<https://www.sconline.com/blog/post/2020/12/21/jhar-hc-whether-speaker-has-the-power-to-take-suo-moto-cognizance-to-treat-a-case-under-schedule-x-of-the-constitution-hc-enumerates/>

Q.79)

Ans) d

Exp) Option d is the correct answer.

Most of Fundamental Rights in Indian Constitution are available against the arbitrary action of the State, but some are also available against the action of private individuals.

Option 1 and 4 are correct:

1) Right to Equality Before Law (Article 14) of the Indian Constitution guarantees that no person shall be denied the right to equality before law or the equal protection of law in the territory of India. This is a right that can be claimed by any person, whether a citizen or a non-citizen, on Indian soil. It is **available only against the state and not against the private individual**.

2) Article 22 (Right to Protection Against Arrest and Detention) deals with the protection against arrest and detention in certain cases. This article is applicable to both citizens and non-citizens. This provision

extends certain procedural safeguards for individuals in case of an arrest. **It is available only against the state and not against the individual.**

Option 2, 3 and 5 are incorrect:

1) Prohibition of traffic in human beings and forced labour (Article 23) explicitly prohibits human trafficking, child labor, untouchability, and various other activities related to it. Anyone residing in any part of the country practicing any such kind of activity will be punished according to the law. **It protects the individual not only against the State but also against private persons.**

2) Abolition of Untouchability (Article 17) abolishes 'untouchability' and forbids its practice in any form. The enforcement of any disability arising out of untouchability shall be an offence punishable in accordance with law. The Supreme Court held that the **right under Article 17 is available against private individuals.**

3) Article 21 of the Indian Constitution provides for the Protection of life and personal liberty of a person. **In January 2023**, a constitution bench of the Supreme Court has said that the **fundamental rights in Article 19 and 21 of the constitution are enforceable even against other persons, and not just the state and its instruments.**

Source: M laksmikant (Chp 7- Fundamental rights)

Horizontal application of Fundamental Rights: Issues and Concerns (madhavuniversity.edu.in)

<https://thewire.in/law/article-19-21>.

Q.80)

Ans) c

Exp) Option c is the correct answer.

The Constitution contains certain provisions to secure cooperation and coordination between the Centre and the states.

Statement 1 is correct: Article 262 says that: the Parliament can provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valley.

Statement 2 is correct: Under Article 263, The President can establish an Inter-State Council to investigate and discuss subject of common interest between the Centre and the states.

Statement 3 is correct: Article 261 says that: Full faith and credit is to be given throughout the territory of India to public acts, records and judicial proceedings of the Centre and every state.

Statement 4 is incorrect: The Constitution itself does not provide for formation of Zonal Councils. Zonal Councils are the statutory (and not the constitutional) bodies. They are established by an Act of Parliament, i.e., the States Reorganization Act of 1956. The act divided the country into five zones (Northern, Central, Eastern, Western and Southern) and provided a zonal council for each zone. The zonal councils aim at promoting cooperation and coordination between states, union territories and the Centre. They discuss and make recommendations regarding matters like economic and social planning, linguistic minorities, border disputes, inter-state transport, and so on. They are only deliberative and advisory bodies.

Source: Indian Polity by M Laxmikant chapter 14

Q.81)

Ans) c

Exp) Option c is the correct answer.

Delimitation literally means the act or process of fixing limits or boundaries of territorial constituencies in a country or a province having a legislative body. The job of delimitation is assigned to a high-power body. Such a body is known as Delimitation Commission or a Boundary Commission.

Statement 1 is correct: Delimitation is the act of redrawing boundaries of Lok Sabha and state Assembly seats to represent changes in population. The main objective of delimitation is to provide equal representation to equal segments of a population. **The Delimitation Commission in India is a high-power body whose orders have the force of law and cannot be called in question before any court.**

Statement 2 is incorrect, and Statement 3 is correct: The orders of commission come into force on a date to be specified by the President of India in this behalf. The copies of its orders are laid before the House of the People and the State Legislative Assembly concerned, **but no modifications are permissible therein by them.**

Statement 4 is incorrect: Article 81(3) states that the change in the number of Lok Sabha seats can happen only after 2026. **The government will have to constitute a Delimitation Commission in order to decide the number of Lok Sabha seats. After a detailed study, the Delimitation Commission will submit a report on total number of Lok Sabha seats and number of seats in each state.** One must note that the government will have to bring a Constitution Amendment Bill in the Parliament. Article 81 (1) will have to be changed so that the number of Lok Sabha seats can be increased. **Thereafter, state wise re-allocation of seats can be done as per the provisions of the Delimitation Act.**

Knowledge Base:

Other Facts of Delimitation Commission:

- 1) Under Article 82, Parliament is to enact a Delimitation Act after every Census. Once the Act is in force, the Union government sets up the Delimitation Commission.
- 2) It is composed of the following: a retired Supreme Court judge, the Chief Election Commissioner of India and respective State Election Commissioners.
- 3) The Commission is supposed to determine the number and boundaries of constituencies in a way that the population of all seats, so far as practicable, is the same.
- 4) The Commission is also tasked with identifying seats reserved for Scheduled Castes and Scheduled Tribes.

Source : <https://eci.gov.in/delimitation-website/delimitation/>

<https://indianexpress.com/article/explained/what-is-delimitation-8348977/>

<https://news.abplive.com/news/india/govt-to-increase-lok-sabha-strength-to-1-000-know-the-constitutional-provisions-under-article-81-1472932>

Q.82)

Ans) b

Exp) Option b is the correct answer.

Statement 1 is correct: Sub section (2) of section 161 of the Code of Criminal Procedure, 1973 grants a **right to silence during interrogation by police.** In Nandini Sathpathy V. P.L.Dani case, SC stated that no one can force any accused to answer any question or give a statement and the accused has the right to remain silent during the process of interrogation. It highlights Article-20(3) of the Indian Constitution, which says that no person accused of any offense shall be compelled to be a witness against himself i.e., the principle of Self-Incrimination. That means the accused has a right to remain silent.

Statement 2 is correct. During Judicial Custody, the police officer in charge of the case is **not allowed to interrogate the suspect.** However, the court may allow the interrogations to be conducted if it opines the interrogation being necessary under the facts produced before the court. However, during police custody, the police officer in charge of the case, may interrogate the suspect.

Statement 3 is incorrect: The Constitution has divided the legislative power with regard to preventive detention between the Parliament and the state legislatures. The Parliament has exclusive authority to make a law of preventive detention for reasons connected with defence, foreign affairs and the security of India. Both the Parliament as well as the state legislatures can concurrently make a law of preventive

detention for reasons connected with the security of a state, the maintenance of public order and the maintenance of supplies and services essential to the community.

Statement 4 is correct: Just like a confession made in the police station is not admissible, a statement made during the narco analysis test is not admissible in the Court, except under certain circumstances when the Court thinks that the facts and nature of the case permit it.

Source: Laxmikanth

Q.83)

Ans) b

Exp) Option b is the correct answer.

Pair 1 is incorrect: The Supreme Court recently unveiled its Artificial Intelligence (AI) portal SUPACE, designed to make research easier for judges, thereby easing their workload. The Supreme Court Portal for Assistance in Court's Efficiency (SUPACE) is a tool that collects relevant facts and laws and makes them available to a judge. It is a tool that collects relevant facts and laws and makes them available to a judge.

To strengthen e-Governance in Panchayati Raj Institutions (PRIs) across the country, the Ministry of Panchayati Raj (MoPR) has launched eGramSwaraj, a user-friendly web-based portal.

Pair 2 is correct: CHAMPIONS (Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength) is the single window system for the MSMEs. It has been felt necessary to put up and promote a unified, empowered, robust, bundled and technology driven platform for helping and promoting the Micro, Small and Medium Enterprises (MSMEs) of the country. As the name suggests it will aim at Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength. Accordingly, the name of the system is CHAMPIONS. This is basically for making the smaller units big by helping and handholding, in particular, by solving their problems and grievances.

Pair 3 is incorrect: Bhashini aims to build a National Public Digital Platform for languages to develop services and products for citizens by leveraging the power of artificial intelligence and other emerging technologies. **It aims to ensure that as more Indians connect to the internet, they are able to access global content in their own languages.**

Pair 4 is correct: Unified Mobile Application for New-age Governance (UMANG) is a mobile app, a Digital India initiative of Ministry of Electronics and Information Technology. UMANG provides a single platform for all Indian Citizens to access pan India e-Gov services ranging from Central to Local Government bodies. It offers hundreds of services including payment, registration, information search and application forms. It intends to **make government services always available to the public online.**

Knowledge Base:

Teres platform is an Artificial Intelligence powered natural language processing platform run by Nomology Technology Private Limited, a Bengaluru based company. **The Supreme Court is using Teres platform to transcribe its judicial proceedings.** It is the second major decision towards making the court more transparent after the SC's decision to livestream its proceedings before Constitution Benches.

Source: <https://indianexpress.com/article/explained/explained-law/ai-is-transcribing-sc-proceedings-how-is-it-happening-and-why-8458492>

<https://indianexpress.com/article/india/cji-launches-top-courts-ai-driven-research-portal-7261821/>

<https://champions.gov.in/Government-India/Ministry-MSME-Portal-handholding/msme-problem-complaint-welcome.htm>

<https://bhashini.gov.in/en/about>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1922983>

<https://web.umang.gov.in/landing/>

data?actid=AC_CEN_2_2_00040_202133_1629961891898§ionId=57360§ionno=6&orderno=6#:~:text=Eligibility%20for%20re%2D,appointment,-.

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Q.85)

Ans) b

Exp) Option b is the correct answer.

Option a is incorrect: Article 43A of the Constitution of India states that the State shall take steps, by suitable legislation or in any other way, to secure the participation of workers in the management of undertakings, establishments or other organizations engaged in any industry. This provision is a part of Directive Principles of State Policy but is not a part of Fundamental Duties under the Constitution of India. Hence option a is incorrect.

Option b is correct: Article 48 A of the Constitution of India states that the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country. So, Protection of Environment is a part of Directive Principles of State Policy.

Also, Article 51A (g) of the Constitution of India states that it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures. So, the Protection of Environment is also the part of Fundamental duties under the Constitution of India. Hence option b is correct.

Option c is incorrect: Article 51A (k) of the Constitution of India states that “who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

Also, after the 86th amendment to the Constitution of India, Article 45 of the Constitution of India states that the State shall endeavour to provide early childhood care and education for all children until they complete the age of six years. So, providing the opportunity for education to children by Guardians is part of Fundamental Duties of citizens but not the Directive Principles of the State policy as Directive Principles are for State and not for the citizens (here the guardians) to follow. Hence option c is incorrect.

Option d is incorrect: Article 44 of the Constitution of India states that the State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India. Hence Uniform civil code is part of Directive Principles of State Policy but not the Fundamental Duties for Citizens. Hence option d is incorrect.

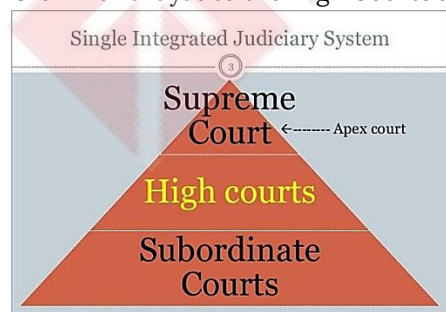
Source: M Laxmikant Chapter 8 and 9

Q.86)

Ans) d

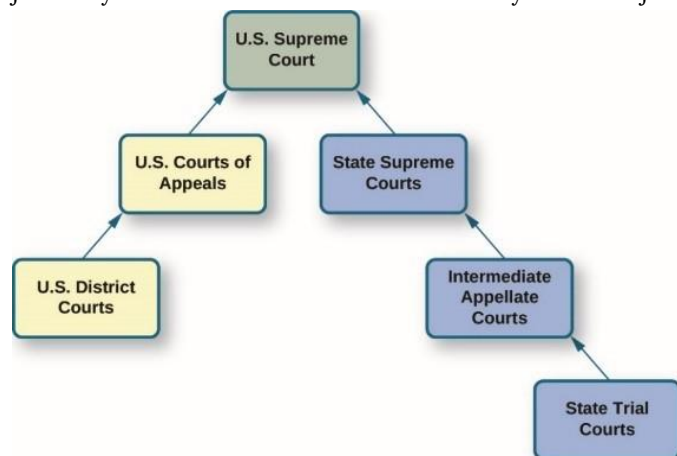
Exp) Option d is the correct answer.

The Indian Constitution has established an integrated judicial system with the Supreme Court at the top and the high courts below it. Under a high court (and below the state level), there is a hierarchy of subordinate courts, that is, district courts and other lower courts. Integrated judicial system means that **decisions made by higher courts are binding on the lower courts**. All the lower courts from the Gram Panchayat to the High Courts are integrated into the Supreme Court of India.



Integrated Judicial system.

This single system of courts, adopted from the Government of India Act of 1935, **enforces both Central laws as well as the state laws**. In USA, on the other hand, the federal laws are enforced by the federal judiciary and the state laws are enforced by the state judiciary.



US Supreme court.

Option a and b are incorrect: Features of Indian judicial system is that single system of courts, enforces both Central laws as well as the state laws. **It does not exclusively enforce state laws or central laws or laws based on the concurrent list.**

Option c is incorrect: Though the statement is correct but are not correctly explaining the reason behind why Indian judiciary system are integrated. **It is the reason behind greater power of the jurisdiction of the Supreme Court that of its predecessor.**

Source: Laxmikant Ch 26 (Supreme court)

Q.87)

Ans) b

Exp) Option b is the correct answer.

The concept of positive and negative liberty has been propounded by philosopher JS Mill.

Statement 1 is incorrect: Negative liberty' seeks to define and defend an area in which the individual would be inviolable, in which he or she could 'do, be or become' whatever he or she wished to 'do, be or become'. **This is an area in which no external authority can interfere. It is a minimum area that is sacred and in which whatever the individual does, is not to be interfered with.** The existence of the 'minimum area of non- interference' is the recognition that human nature and human dignity need an area where the person can act unobstructed by others. How big should this area be, or what should it contain, are matters of discussion, and will continue to be matters of debate since the bigger the area of non-interference the more the freedom.

Statement 2 is correct: Positive liberty recognises that one can be free only in society (not outside it) and hence tries to make that society such that it enables the development of the individual. **It is concerned with looking at the conditions and nature of the relationship between the individual and society and of improving these conditions such that there are fewer constraints to the development of the individual personality.** The individual to develop his or her capability must get the benefit of enabling positive conditions in material, political and social domains. That is, the person must not be constrained by poverty or unemployment; they must have adequate material resources to pursue their wants and needs.

Source: <https://ncert.nic.in/textbook/pdf/keps102.pdf>

Q.88)

Ans) d

Exp) Option d is the correct answer.

The Indian government defines an online game as “a game that is offered on the Internet and is accessible by a user through a computer resource or an intermediary.”

Statement 1 is correct: Betting and gambling activities are banned under various State laws, while few games of skill have been held to be constitutionally valid by the Supreme Court in various judgements. Now, to address the various concerns related to online gaming in India through legal means, the Ministry of Electronics and IT (MeitY) has introduced various checks and balances through relevant amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 notified on April 06, 2023. The purpose of these amendments is to control the unabated and unwarranted negative impact of online gaming activities on users, especially children and other vulnerable sections of society.

Statement 2 is correct: As per new rules, Self-Regulatory Bodies (SRBs) will determine whether an online game is permissible or not, based on whether it involves wagering or betting. Three SRBs will be initially notified, but the government can add more later. The government will set up several SRBs with representatives from various sectors. These SRBs will decide if a game is allowed or not.

Statement 3 is correct: The rules will ensure that online games or sites that involve wagering will be banned completely including advertising or any time of presence. For this, the rules introduce the concept of ‘permissible online game’. These rules will ultimately allow only such online real money games in India that are verified by SRBs as- (a) not involving wagering on any outcome; (b) being compliant with the obligations under these rules; (c) the age under law at which an individual is competent to enter into a contract, and (d) the framework made by the SRB.

Source: <https://indianexpress.com/article/technology/gaming/meity-new-online-gaming-rules-explained-8544334/>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1918383>

<https://www.businesstoday.in/technology/news/story/government-introduces-new-regulations-around-online-gaming-industry-prohibits-games-involving-betting-376488-2023-04-07>

[https://thewire.in/government/govt-notifies-norms-to-regulate-online-gaming-games-involving-betting-to-be-](https://thewire.in/government/govt-notifies-norms-to-regulate-online-gaming-games-involving-betting-to-be-banned#:~:text=New%20Delhi%3A%20The%20Union%20government,SROs)%20will%20certify%20online%20games.)

[banned#:~:text=New%20Delhi%3A%20The%20Union%20government,SROs\)%20will%20certify%20online%20games.](https://thewire.in/government/govt-notifies-norms-to-regulate-online-gaming-games-involving-betting-to-be-banned#:~:text=New%20Delhi%3A%20The%20Union%20government,SROs)%20will%20certify%20online%20games.)

Q.89)

Ans) a

Exp) Option a is the correct answer.

The Seventh schedule of the Indian Constitution provides for the **three fold distribution of legislative powers** between the Central and State Governments. The Schedule has three lists namely the Union, State and Concurrent lists, over which the Union and State governments exercise different degrees of powers.

Statement 1 is correct: Any provisions related to the **federal structure of the polity** can be amended by a **special majority** of the Parliament and also with the consent of **half of the state legislatures by a simple majority**. As such **any change in the Seventh schedule** requires a special majority of the Parliament along with the consent of half of the State legislatures.

Statement 2 is correct: The Subjects that **are not mentioned in the Seventh schedule** are known as the **residuary powers** and it is the exclusive domain of the Parliament. This means the Parliament alone has the power to enact laws on the residuary lists.

Statement 3 is incorrect: In case of a conflict between the Central law and the state law on a subject enumerated in the Concurrent List, the Central law prevails over the state law. **But, there is an exception:** If the state law has been reserved for the consideration of the President and has received his assent, then the state law prevails in that state. But it would still be competent for the Parliament to override such a law by subsequently making a law on the same matter.

Source: Laxmikanth - Indian Polity

Q.90)

Ans) d

Exp) Option d is the correct answer.

Option 1, 2 and 4 are incorrect: According to the article 124(4) of Constitution of India A Judge of the Supreme Court cannot be removed from office except by an order of the President passed after an address in each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of members present and voting, and presented to the President in the same Session for such removal on the ground of proved misbehavior or incapacity.

According to article 217 1(b) of Constitution of India, a High Court Judge may be removed from his office by the President in the manner provided in clause (4) of Article 124 for the removal of a Judge of the Supreme Court.

According to the Article 148 of Constitution of India, Comptroller and Auditor-General of India who shall be appointed by the President by warrant under his hand and seal and shall only be removed from office in like manner and on like grounds as a Judge of the Supreme Court. So, Parliament plays a crucial role in CAG's removal.

Option 3 is correct: According to article 317 of Constitution of India the Chairman or any other member of a State Public Service Commission shall only be removed from his office by order of the President on the ground of misbehavior after the Supreme Court, on reference being made to it by the President, has, on inquiry held in accordance with the procedure prescribed in that behalf under article 145, reported that the Chairman or such other member, as the case may be, ought on any such ground to be removed. Hence Parliament does not play any role in the removal of the Chairperson of a State Public Service Commission.

Option 5 is correct: According to article 76 of Constitution of India the Attorney-General shall hold office during the pleasure of the President and shall receive such remuneration as the President may determine. Parliament does not play any role in the removal of the Chairperson of a State Public Service Commission.

Source: M Laxmikant

Q.91)

Ans) c

Exp) Option c is the correct answer.

The Prevention of Money Laundering Act (PMLA) 2002 was enacted to prevent money-laundering and make provisions for confiscating property made from money-laundering. Assets derived under money-laundering activities have been termed as 'proceeds of crime'.

Statement 1 is correct: According to Section 5 of PMLA, the Director of the Enforcement Directorate or any other officer authorised by him can issue orders for attachment of a property that is suspected to have been acquired with the proceeds of crime in a case of scheduled offence. These **provisions for attachment under the PMLA are not hindered due to the property being present in a foreign jurisdiction. To attach any property that is located outside India a 'Letter Rogatory' is sent to the respective nation issued by the ED after taking prior permission from a special court.** Once the competent authority of the foreign country receives this request, they start the procedure to attach the property that falls under their jurisdiction depending on the material that has been provided to them.

Statement 2 is incorrect: The Supreme Court reiterated that an **Enforcement Case Information Report (ECIR) cannot be equated with an FIR**, and providing a copy of it to the person concerned in every case is not mandatory. **ECIR is considered an “internal document” and not given to the accused.** The Supreme Court observed there is no need to formally register an Enforcement Case Information Report (ECIR) before initiating penal action or prosecution against the person involved with process or activity connected with proceeds of crime **under the Prevention of Money Laundering Act, 2002.**

Statement 3 is correct: Recently, the country's chartered and cost accountants as well as company secretaries have been brought under the anti-money laundering law for five specified financial transactions, including buying and selling of any properties and management of bank accounts, undertaken on behalf of their clients, the Centre announced recently.

Source: [https://www.mondaq.com/india/money-laundering/816466/attachment-of-properties-in-foreign-jurisdiction-under-](https://www.mondaq.com/india/money-laundering/816466/attachment-of-properties-in-foreign-jurisdiction-under-pmla#:~:text=Under%20FEOA%20attachment%20of%20proceeds,for%20which%20confiscation%20is%20sought.)

[pmla#:~:text=Under%20FEOA%20attachment%20of%20proceeds,for%20which%20confiscation%20is%20sought.](https://www.mondaq.com/india/money-laundering/816466/attachment-of-properties-in-foreign-jurisdiction-under-pmla#:~:text=Under%20FEOA%20attachment%20of%20proceeds,for%20which%20confiscation%20is%20sought.)


<https://www.firstpost.com/business/centre-tweaks-anti-money-laundering-law-role-of-cas-cs-cost-accountants-now-under-pmla-12562022.html>

<https://indianexpress.com/article/explained/explained-economics/disclosures-ngos-pmla-rules-new-8488484/>

https://fiuindia.gov.in/files/AML_Legislation/pmla_2002.html

<https://wirc-icai.org/wirc-reference-manual/part6/prevention-of-money-laundering-act-pmla.html>

<https://www.deccanherald.com/national/ecir-not-fir-presenting-copy-to-accused-is-not-mandatory-supreme-court-1130696.html>




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Q.92)

Ans) b

Exp) Option b is the correct answer.

The **Supreme Court of India** is the **final interpreter of the Indian Constitution**. The Supreme Court is the **highest appellate Court of India**, and it exercises its appellate jurisdiction in all civil, criminal, and constitutional matters. The Supreme Court has been vested with advisory jurisdiction to advise the President on any question of fact or law that may be referred to it. It upholds the federal principle of maintaining the balance between the various organs of government and the centre and the states; it guards and protects the fundamental rights of the citizens; it ensures the constitutional validity of legislative, quasi-legislative, executive, or quasi-judicial actions of the state; it also interprets the laws made by the government.

Source: <https://egyankosh.ac.in/bitstream/123456789/70387/1/Unit-5C.pdf>

Q.93)

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct. The border dispute between Maharashtra and Karnataka is over the Belgaum district. Belgaum has a sizable population of both Marathi and Kannada speaking people and the two states have wrestled over the region in the past. The area used to be part of the Bombay presidency from the time of the Britishers but was included in Karnataka after the states reorganization exercise in 1956.

Pair 2 is incorrect. The border dispute between Assam and Nagaland has been going on since the formation of Nagaland in 1963. The two states lay claim to Merapani, a small village next to the plains of Assam's Golaghat district. There have been reports of violent clashes in the region since the 1960s.

Pair 3 is correct. Assam and Meghalaya have a longstanding dispute in 12 stretches of their 884-km shared border. Since 1993, twelve (12) areas of differences have evolved between the two states. The said areas are: Upper Tarabari, Gazang reserve forest, Hahim, Langpih, Borduar, Boklapara, Nongwah, Matamur, Khanapara-Pilangkata, Deshdemoreah Block I and Block II, Khanduli and Retacherra. The two states had signed a pact in March, 2023 resolving the dispute in six out of 12 areas.

The Langpih district in West Garo Hills, which borders the Kamrup district of Assam, is a major point of contention between Assam and Meghalaya. Langpih is still a disputed region between the two states.

Source: https://www.google.com/amp/s/m.timesofindia.com/india/total-seven-inter-state-border-disputes-in-country-assam-has-dispute-with-four-states-govt/amp_articleshow/84865195.cms
<https://blog.forumias.com/assam-mizoram-border-dispute/>

Q.94)

Ans) d

Exp) Option d is the correct answer.

Statement 1 is incorrect. Project 'UNNATI', as a skilling project intends to upgrade the skill base of the Mahatma Gandhi NREGA beneficiaries, and thereby improving their livelihoods, so that they can move from the current partial employment to full-time employment and hence reduce their dependence on Mahatma Gandhi NREGS.

Project Chunaoti is a start-up challenge under the Next Generation Incubation Scheme (NGIS) initiative. It is a Next Generation Startup Challenge Contest. It aims to further boost startups and software products with special focus on Tier-II towns of India; and to Identify around 300 startups working in identified areas and provide them seed fund of upto Rs. 25 Lakh and other facilities.

Statement 2 is incorrect. Project Unnati is an initiative of the Ministry of Rural Development to upgrade the skill base of the MGNREGA beneficiaries. The Ministry of Electronics and Information Technology (MeitY) launched Project Chunauti.

Source: <https://blog.forumias.com/project-unnati-skill-training-of-mgnregs-workers-lags-centre-blames-it-on-the-states/>

<https://blog.forumias.com/union-it-minister-launches-chunauti-next-generation-start-up-challenge-contest/>

Q.95)

Ans) a

Exp) Option a is the correct answer.

Statement a is incorrect. The Indian Council for Cultural Relations (ICCR) has planned and envisaged a special project called 'The Language Friendship Bridge'.

Statement b is correct. The project aims to create a pool of experts in languages spoken in countries like Myanmar, Sri Lanka, Uzbekistan and Indonesia to facilitate better people-to-people exchanges.

Statement c is correct. The idea is to enable India to translate its epics and classics, as well as contemporary literature, into these languages so that people in both countries can read them.

Statement d is correct. As of now, the ICCR has zeroed in on 10 languages: Kazakh, Uzbek, Bhutanese, Ghoti (spoken in Tibet), Burmese, Khmer (spoken in Cambodia), Thai, Sinhalese and Bahasa (spoken in both Indonesia and Malaysia).

Source: <https://www.thehindu.com/news/national/strengthening-old-friendships-by-bridging-the-language-divide/article66716808.ece>

<https://blog.forumias.com/language-friendship-bridge-project-india-to-bridge-language-gap-with-neighbours/>

Q.96)

Ans) a

Exp) Option a is the correct answer.

When a bill is sent to the Governor after it is passed by state legislature, he can give his assent to the bill, or withhold his assent to the bill, or return the bill or reserve the bill for the consideration of the President.

Statement 1 is correct: In one case reserving the bill is obligatory, that is, where the bill passed by the state legislature **endangers the position of the state high court.**

Statement 2, 3 and 4 are incorrect: In addition, the **Governor can also reserve** (discretionary power of the Governor and not obligatory on the Governor) the bill if it is of the following nature:

- (1) Ultra-vires, that is, **against the provisions of the Constitution.**
- (2) Opposed to the **Directive Principles of State Policy. (Statement 3 is incorrect)**
- (3) **Against the larger interest of the country. (Statement 4 is incorrect)**
- (4) Of grave national importance.
- (5) Dealing with compulsory acquisition of property under Article the Constitution.

However, in the above-mentioned cases, the reservation is not obligatory but on the discretion of the Governor.

Source: Indian Polity by Laxmikant – 6th Edition – Chapter 30 – Governor.

Q.97)

Ans) c

Exp) Options c is the correct answer.

It is in the Theppakadu Elephant Camp where the Oscar Winning Short Documentary 'The Elephant Whisperers' was shot. It is the first ever Indian production that has bagged an Academy Award making a golden mark in the history of Indian films. Located at the foothills of the Nilgiris by the banks of the Moyar River, Theppakadu Elephant Camp was established in 1917 by the British for timber logging. **It is located in Mudumalai Tiger Reserve.** Mudumalai tiger reserve lies on the Northeastern and Northwestern slopes of Nilgiri hills which is a part of the Western Ghats. It is located in the Nilgiris District of Tamil Nadu, spread over 321 sq. km. at the tri-junction of three states, viz, Karnataka, Kerala, and Tamil Nadu.

Option a is incorrect. Sathyamangalam Tiger Reserve is in the strategic confluence region of Western and Eastern Ghats in the state of Tamilnadu. This area holds a significant population of tigers, and it is also contiguous to other Tiger conservation landscapes like BRT, Bandipur, Mudumalai and Nagarhole.

Option b is incorrect. Anamalai Tiger Reserve is a pristine 958.59 sq.km reserve of tropical jungle, shola forest and grassland rising to 2400m and spilling over the Western Ghats into Kerala between Kodaikanal and Coimbatore.

Option d is incorrect. The Kalakad Mundanthurai Tiger Reserve (KMTR) in Tirunelveli and Kanyakumari District of Tamil Nadu is one of the protected areas having diverse flora and fauna. This region has got vegetation types which gradually changes from dry thorn forest to dry deciduous.

Knowledge base: The film gives a peek into the lives of the Kattunayakan, an indigenous community that inhabits parts of South India. Kattunayakans are one of the 75 "Particularly Vulnerable Tribal Groups" (PTGs) in India, are settled in parts of Tamil Nadu and Kerala.

Source: <https://www.google.com/amp/s/www.cntraveller.in/story/a-guide-to-mudumalai-national-park-where-oscar-winner-the-elephant-whisperers-was-filmed/amp/>

<https://www.google.com/amp/story/s/timesofindia.indiatimes.com/travel/web-stories/inside-mudumalai-tiger-reserve-where-oscar-winner-the-elephant-whisperers-was-filmed/photostory/98601559.cms>

Q.98)

Ans) c

Exp) Option c is the correct answer.

Similar to the Parliament and State Legislatures, there is provision for the disqualification of candidates from contesting election and also for elected members. Some of them are:

Statement 1 is incorrect – The constitution for the state legislature says the candidate that must be not less than 30 years of age in the case of the legislative council and not less than 25 years of age in the case of the legislative assembly. However, for Panchayats According to Article 243F, no person shall be disqualified on the ground that he is less than 25 years of age if he has attained the age of 21 years.

Statements 2, 3 and 4 are correct – The Parliament has prescribed a number of additional disqualifications in the Representation of People Act (1951) for the purpose of disqualifications from state legislature. These are also applicable for the panchayats as the Article 243F says any laws applicable for disqualification of members in state legislature are applicable. Some of those are:

1) He must not have been found guilty of certain election offences or corrupt practices in the elections.

(Statement 2 is correct)

2) He must not have been convicted for any offence resulting in imprisonment for two or more years. But, the detention of a person under a preventive detention law is not a disqualification. **(Statement 4 is correct)**

3) He must not have failed to lodge an account of his election expenses within the time. **(Statement 3 is correct)**

4) He must not have any interest in government contracts, works or services.

- 5) He must not be a director or managing agent nor hold an office of profit in a corporation in which the government has at least 25 per cent share.
- 6) He must not have been dismissed from government service for corruption or disloyalty to the state.
- 7) He must not have been convicted for promoting enmity between different groups or for the offence of bribery.
- 8) He must not have been punished for preaching and practicing social crimes such as untouchability, dowry and sati.

Source: M Laxmikant – Chapter 38 – Panchayats

Q.99)

Ans) b

Exp) Option b is the correct answer.

Pair 1 is correct. The 13th Edition of India - USA Joint Special Forces Exercise VAJRA PRAHAR 2022 culminated at Bakloh (HP) on 28 August 2022. This annual exercise is hosted alternatively between India and the United States.

Pair 2 is incorrect: INDRA is a military exercise between India and Russia and not India and France.

Pair 3 is incorrect: GARUDA is a bilateral military exercise between Indian Air Force (IAF) and French Air and Space Force (FASF). It took place in Jodhpur from 26 October to 12 November 2022. This was the seventh edition of the bilateral exercise. This joint exercise provides a platform for both the countries to enhance operational capability and interoperability, while also sharing best practices.

Pair 4 is correct. The 4th edition of joint military exercise, “EX DHARMA GUARDIAN”, between India and Japan was conducted in Japan from 17 February to 02 March 2023. Exercise DHARMA GUARDIAN is an annual training event with Japan, which is crucial and significant in terms of security challenges faced by both nations in the backdrop of current global situation.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1871611>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1899832>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1739351>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1849960>

Q.100)

Ans) b

Exp) Option b is the correct answer.

UNESCO launched the Memory of the World (MoW) Programme in 1992. **The Programme’s vision is that the world’s documentary heritage belongs to all, should be fully preserved and protected for all** and, with due recognition of cultural mores and practicalities, should be permanently accessible to all without hindrance.

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- 2) Enable universal access to documentary heritage worldwide.
- 3) Enhance public awareness about the significance of documentary heritage among the wider public.

Source: <https://www.unesco.org/en/memory-world>

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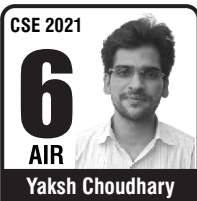
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