

**UPSC Civil Services Prelims 2021 | Set A | ForumIAS**

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**(UPSC CSE Prelims GS Paper 1 Questions with detailed explanations)**

**Q.1)** Consider the following statements:

1. The Governor of the Reserve Bank of India (RBI) is appointed by the Central Government.
2. Certain Provisions in the Constitution of India give the Central Government the right to Issue directions to the RBI in public interest.
3. The Governor of the RBI draws his power from the RBI Act.

Which of the above statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this question)** Recently, deputy governor of Reserve Bank of India (RBI) warned against government interference in Reserve Bank's working.

**Ans)** c

**Exp)** Option c is correct.

**Statement 1 is correct.**

**Section 8(1)(a) of the Reserve Bank of India Act, 1934**, provides that there shall be one Governor and not more than four Deputy Governors to be appointed by the **central government** on the central board of RBI.

**Statement 2 is incorrect.**

**Section 7 of the RBI Act** provides that **Central Government** may from time to time give such directions to the Bank as it may, after consultation with the Governor of the Bank, consider necessary in the **public interest**. Constitution of India does not provide any provision for Central Government the right to issue directions to the RBI in Public interest.

**Statement 3 is correct.**

According to RBI Act, the Governor shall have **powers of general superintendence and direction of the affairs and the business of the RBI**. He/she may exercise all powers and do all acts and things which may be exercised or done by the RBI.

**Source)** RBI Governor appointed by PMO on the recommendation of Finance Minister, RS told - The Hindu  
RBI vs Centre: What is Section 7 and why it is being seen as an extreme step against the RBI - The Economic Times (indiatimes.com)

RESERVE BANK OF INDIA ACT, 1934 (rbi.org.in)

**Subject)** Economics

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**Q.2)** With reference to casual workers employed in India, consider the following statements:

1. All casual workers are entitled for Employees Provident Fund Coverage.
2. All casual workers are entitled for regular working hours and overtime payment.
3. The government can by a notification specify that an establishment or industry shall pay wages only through its bank account.

Which of the above statement are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this question)** COVID-19 has exposed the vulnerability of urban casual workers: **Periodic Labour Force Survey**

**Ans) d**

**Exp) Option d is correct.**

**Statement a is correct.**

A casual worker is a worker on a temporary employment contract with generally limited entitlements to benefits and little or no security of employment. The main attribute is the absence of a continuing relationship of any stability with an employer, which could lead to their not being considered 'employees' at all.

Supreme Court has ruled that **casual workers are also entitled to social security benefits under the Employees' Provident Funds and Miscellaneous Provisions Act.**

"As per Section 2(f) of the EPF Act, the definition of an employee is an inclusive definition, and is widely worded to include any person engaged either directly or indirectly in connection with the work of an establishment, and is paid wages," a bench of SC said.

**Statement b is correct.**

Casual workers (should) have all those rights that are enjoyed by regular workers, since the definition of employee includes casual labour as per Supreme Court guidelines. Employees in India **are entitled for regular working hours and overtime payment according to Minimum Wages Rules, 1950.**

**Statement 3 is correct.**

The Payment of Wages (Amendment) Act 2017 provides that the Government may specify that the employer of any industrial or other establishment **shall pay wages to every employee only by cheque or by crediting the wages in his bank account**".

**Source)** Contractual workers also entitled to PF benefits: SC (indiatimes.com)

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Government introduces bill for wage payment via e-mode, cheques - The Economic Times (indiatimes.com)

**Subject)** Economics

**Q.3)** Which among the following steps is most likely to be taken at the time of an economic recession?

- a) Cut in tax rates accompanied by increase in interest rate
- b) Increase in expenditure on public project
- c) Increase in tax rates accompanied by reduction of interest rate
- d) Reduction of expenditure on public projects

**Why this question)** Aatma nirbhar Bharat scheme announced an economic stimulus package for Rs 20-lakh-crore (estimated at 10% of the GDP), amid Covid pandemic.

**Ans) b**

**Exp) Option b is correct.**

Economic Recession refers to a **significant decline in general economic activity in a designated region**. Increase in expenditure on public projects will have a **multiplier effect** on the pace of economic growth of the country. Public expenditure has the expansionary effect on the growth of national income, employment opportunities, etc.

Private investors are incapable of making massive investments on the various infrastructural projects like road-bridge-dam construction, power plants, transport and communications, etc. It is imperative that the government undertakes such projects. **Greater the public expenditure, higher is the level of economic development.**

**Source)** Public Expenditure: Causes, Principles and Importance (economicsdiscussion.net)

**Subject)** Economics

**Q.4)** Consider the following statements:

Other things remaining unchanged market demand for a good might increase if

- 1. Price of its substitute increases
- 2. Price of its complement increases
- 3. The good is an inferior good and income of the consumers increases
- 4. Its price falls

Which of the above statements are correct?

- a) 1 and 4 only
- b) 2, 3 and 4 only

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c) 1, 3 and 4 only

d) 1, 2 and 3 only

**Why this question) Important static concept**

**Ans) a**

**Exp) Option a is correct.**

**The main factors that can increase the demand for a good in market are:**

- Prices of related goods
- Income
- Expectations
- Number of buyers
- Preferences

The following are the relations between the demand and price of the products, with changing economic conditions:

1. The demand for a good increase, if the price of one of its substitutes rises. The demand for a good decrease, if the price of one of its substitutes falls.
2. The demand for a good increase, if the price of one of its **complement's falls**. For example, ice cream and fudge sauce.
3. The demand for an **inferior good decrease if income increases**. The demand for a normal good increase if income increases.
4. If the Price of the good falls, then its demand increases.

Source) ch04lecture.ppt (unf.edu)

Subject) Economics

**Q.5) With reference to 'Urban Cooperative Banks' in India, consider the following statements:**

1. They are supervised and regulated by local boards set up by the state Governments.
2. They can issue equity shares and preference shares.
3. They were brought under the purview of the Banking Regulation act, 1949 through an amendment in 1966.

Which of the statement given above is/are correct?

a) 1 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2 and 3

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**Why this question)** The Reserve Bank of India (RBI) has revised the Supervisory Action Framework (SAF) for Urban Co-operative Banks; cooperative banks are brought under the supervision of the Reserve Bank of India (RBI).

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.**

The Urban Banks Department of the Reserve Bank of India is vested with the responsibility of regulating and supervising primary (urban) cooperative banks, which are popularly known as Urban Cooperative Banks (UCBs).

**Statement 2 is correct.**

A cooperative bank can, with prior approval of the RBI, **issue equity shares, preference shares, or special shares to its members** or to any other person residing within its area of operation, by way of public issue or private placements.

**Statement 3 is correct.**

Large cooperative banks with paid-up share capital and reserves of Rs.1 lakh were brought under the **purview of the Banking Regulation Act 1949 through an amendment in 1966.**

Source) Reserve Bank of India - About Us ([rbi.org.in](http://rbi.org.in))

Explained: Why is the NCP opposing RBI supervision of cooperative banks? | Explained News, The Indian Express

History of Urban Co-op Banking - The Sutex Co-operative Bank Ltd. ([sutexbank.in](http://sutexbank.in))

Subject) Economics

**Q.6)** Indian Government bond yields are influenced by which of the following?

1. Action of the United States Federal Reserve
2. Action of the Reserve Bank of India
3. Inflation and short-term interest rates

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) 1, 2 and 3

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**Why this question)** Recently, the Reserve Bank of India's (RBI) decision to step up purchase of Government Securities (G-Sec) under the Government Securities Acquisition Programme (G-SAP) led to the yield on the benchmark 10-year bond falling below 6%.

**Ans) d**

**Exp) Option d is correct.**

**Statement 1 is correct.**

Hike in interest rate in the US by United States Federal Reserve leads not only to an outflow of funds from equities into US treasury bonds, but also to **an outflow of funds from emerging economies to the US. Thus, it impacts Indian Government Bond Yields in negative manner.**

**Statement 2 is correct.**

The multifaceted roles played by the RBI in the payment system, monetary policy, financial stability policy, and policy coordination with the Treasury gives it the operational ability **to influence government bonds' nominal yields** by setting and changing **the short-term interest rate** and using other tools of monetary policy as it deems appropriate.

**Statement 3 is correct.**

Short-term interest rate and pace of inflation are the key drivers of interest rates on government bonds.

Source) adev\_a\_00127.pdf (silverchair.com)

Explained: Federal Reserve signals, and Indian markets | Explained News, The Indian Express

Subject) Economics

**Q.7) Consider the following:**

1. Foreign currency convertible bonds
2. Foreign institutional investment with certain conditions
3. Global depository receipts
4. Non-resident external deposits

Which of the above can be included in Foreign Direct Investments?

- a) 1, 2 and 3
- b) 3 only
- c) 2 and 4
- d) 1 and 4

**Why this question)** India sees growth of 10% (to \$82 bn) in Foreign Direct Investment (FDI).

**Ans) a**



Exp) Option a is correct.

Statements 1, 2 and 3 are correct.

'Foreign Currency Convertible Bond' (FCCB) is a bond issued under the Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depository Receipt Mechanism) Scheme, 1993, as amended from time to time.

Automatic Route for Issue of Foreign Currency Convertible Bonds (FCCBs) is allowed.

Foreign Portfolio Investment is any investment made by a person resident outside India in capital instruments where such investment is (a) less than 10 percent of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company or (b) less than 10 percent of the paid up value of each series of capital instruments of a listed Indian company.

It is the percentage which defines whether it is direct or institutional investment.

FII made above 10 percent of the post issue paid-up equity capital will be considered as FDI. But Once an FDI always an FDI.

Foreign investment in Indian securities has been made possible through the purchase of Global Depository Receipts, Foreign Currency Convertible Bonds and Foreign Currency Bonds issued by Indian issuers which are listed, traded and settled overseas.

Statement 4 is incorrect.

A Non-Resident External (NRE) account is a rupee dominated account opened by an NRI to facilitate deposit of foreign currency earnings. It is not an FDI.

Source) [https://www.sebi.gov.in/sebi\\_data/commondocs/ptlb5\\_h.html](https://www.sebi.gov.in/sebi_data/commondocs/ptlb5_h.html)

Subject) Economics

**Q.8)** Consider the following statements:

The effect of devaluation of a currency is that it necessarily

1. Improves the competitiveness of the domestic export in the foreign markets
2. Increases the foreign value of domestic currency
3. Improves the trade balance

Which of the above statements is/are correct?

- a) 1 only
- b) 1 and 2
- c) 3 only
- d) 2 and 3

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**Why this question)** Recently, the Indian rupee depreciated below the 74 levels against the US dollar.

**Ans)** a

**Exp)** Option a is correct.

A devaluation means there is a fall in the value of a currency. The main effects are:

**Statement 1 is correct.**

**Exports are cheaper to foreign customers:** If the value of the rupee decreases against the dollar, the price of the cars sold by Indian manufacturers in America, in dollars, will be effectively less expensive than they were before. On the other hand, a more valuable currency makes exports relatively more expensive for purchase in foreign markets.

**Statement 2 and 3 are incorrect.**

Devaluation of a currency decreases the foreign value of domestic currency.

**Devaluation also increases the debt burden of foreign-denominated loans when priced in the home currency. Thus, devaluation may not improve the trade balance in the long run.**

Source) 3 Reasons Why Countries Devalue Their Currency (investopedia.com)

Subject) Economics

**Q.9)** Which one of the following effects of creation of black money in India has been main cause of worry to the Government of India?

- a) Diversion of resources to the purchase of real estate and investment in luxury housing
- b) Investment in unproductive activities and purchase of precious stones, jewellery, gold, etc.
- c) Large donations to political parties and growth of regionalism
- d) Loss of revenue to the State Exchequer due to tax evasion

**Why this question)** Government has taken a number of measures to bring back the black money stashed abroad 'The Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015'.

**Ans)** d

**Exp)** Option d is correct.

Black money includes all funds earned through illegal activity and otherwise legal income that is not recorded for tax purposes. Black money causes financial leakage, as **unreported income that is not taxed causes the government to lose revenue**. In addition, these funds rarely enter the banking system. As a result, it can be more difficult for legitimate small businesses and entrepreneurs to obtain loans.

Source) Black Money Definition (investopedia.com)

Subject) Economics



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**Q.10)** Which one of the following is likely to be the most inflationary in its effects?

- a) Repayment of public debt
- b) Borrowing from the public to finance budget deficit
- c) Borrowing from the banks to finance a budget deficit
- d) Creation of new money to finance a budget deficit

**Ans) d**

**Exp) Option d is correct.**

**Why this question)** The Centre has decided to retain the inflation target of 4%

**Deficit financing** means generating funds to finance the deficit which results from excess of expenditure over revenue. The gap being covered by borrowing from the public by the sale of bonds or by **printing new money**. Government expenditure by printing money boosts incomes and raises private demand in the economy. Thus, it **fuels inflation**. A little increase in inflation is healthy as it encourages business activity. But if the government doesn't stop in time, **more and more money floods the market and creates high inflation**. And since inflation is revealed with a lag, it is often too late before governments realise, they have over-borrowed. **Higher inflation and higher government debt provide grounds for macroeconomic instability.**

Source: What is deficit financing? - The Economic Times (indiatimes.com)

Explained: To print more money, or not to | Explained News, The Indian Express

Subject) Economics

**Q.11)** The money multiplier in an economy increases with which one of the following?

- a) Increase in the Cash Reserve Ratio in the banks
- b) Increase in the Statutory Liquidity Ratio in the banks
- c) Increase in the banking habit of the people
- d) Increase in the population of the country

**Why this Question)** The RBI said money multiplier stood at 5.4 in 2020-21, which is marginally below its decennial average (2011-20) of 5.5.

**Ans) c**

**Exp) Option c is correct.**

The multiplier effect is an economic term, referring to the proportional amount of increase, or decrease, in final income that results from an injection, or withdrawal, of capital in effect. It measures the impact that a change in economic activity—like investment or spending—will have on the total economic output of something.

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**Increase in Banking habits of the people can lead to increase in money multiplier in an economy.** When a customer makes a deposit into a short-term deposit account, the banking institution can lend one minus the reserve requirement to someone else. While the original depositor maintains ownership of their initial deposit, the funds created through lending are generated based on those funds. If a second borrower subsequently deposits funds received from the lending institution, this raises the value of the money supply even though no additional physical currency actually exists to support the new amount.

Increase in the Cash Reserve Ratio in the banks, increase in the Statutory Liquidity Ratio in the banks and increase in the population of the country will not increase money multiplier.

Source) Multiplier Effect Definition (investopedia.com)

Subject) Economics

**Q.12)** With reference to Indian economy, demand-pull inflation can be caused/ increased by which of the following?

1. Expansionary policies
2. Fiscal stimulus
3. Inflation-indexing wages
4. Higher purchasing power
5. Rising interest rates

Select the correct answer using the code given below.

- a) 1, 2 and 4 only
- b) 3, 4 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5

**Why this Question)** Important static economic concept, current oil, gas prices.

**Ans)** a

**Exp)** Option a is correct.

Demand-pull inflation is the upward pressure on prices that follows a shortage in supply, a condition that economists describe as "too many dollars chasing too few goods."

1. **Expansionary policies:** When the government spends more freely, money in the market is increased. It leads to increase demand for the goods and fuels demand-pull inflation.
2. **Fiscal Stimulus:** It also increases the money in the market leads to increase demand for the goods and fuels demand-pull inflation

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3. **Higher Purchasing Power:** When consumers earn higher income, they feel confident and spend more. This leads to more demand and fuels Demand-pull inflation

**Inflation-indexing wages and rising interest rates do not increase or cause demand-pull inflation**

Source: Demand-Pull Inflation Definition (investopedia.com)

Subject) Economics

**Q.13)** With reference to India, consider the following statements:

1. Retail investors through demat account can invest in 'Treasury Bills' and 'Government of India Debt Bonds' in primary market.
2. The 'Negotiated Dealing System Order Matching' is a government securities trading platform of the Reserve Bank of India.
3. The 'Central Depository Services Ltd.' is jointly promoted by the Reserve Bank of India and the Bombay Stock Exchange.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2
- c) 3 only
- d) 2 and 3

**Why this Question)** RBI Retail Direct Scheme introduced recently for retail investors.

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is correct.** Retail investors have multiple channels to invest in treasury bills (T-Bills) and Government bonds. It is mandatory to open demat account for a retail investor to invest in 'Treasury Bills' and 'Government of India Debt Bonds' in primary market.

**Statement 2 is correct.** The Negotiated Dealing System Order Matching is an electronic trading platform operated by the Reserve Bank of India to facilitate the issuing and exchange of government securities and other types of money market instruments.

**Statement 3 is incorrect.** CDSL was promoted by BSE Ltd. jointly with leading banks such as State Bank of India, Bank of India, Bank of Baroda, HDFC Bank, Standard Chartered Bank and Union Bank of India. Reserve Bank of India is not its promoter.

Source: How to Invest in G-Sec (nseindia.com)

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Explained: Here's what to consider before investing directly in govt securities | Explained News, The Indian Express

Negotiated Dealing System (NDS) (investopedia.com)

<https://web.cdslindia.com/myeasi/Resource/AboutUs.html#:~:text=CDSL%20was%20promoted%20by%20BSE,and%20Union%20Bank%20of%20India.>

Subject) Economics

**Q.14)** With reference to WaterCredit', consider the following statements:

1. It puts microfinance tools to work in the water and sanitation sector.
2. It is a global initiative launched under the aegis of the World Health Organization and the World Bank.
3. It aims to enable the poor people to meet their water needs without depending on subsidies.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Important initiative, also Government of India schemes like Jal Jeevan Mission in news.

**Ans)** c

**Exp)** Option c is correct.

**Statement 1 is correct.** WaterCredit is a powerful solution and the first to put microfinance tools to work in the water and sanitation sector. WaterCredit helps bring small loans to those who need access to affordable financing and expert resources to make household water and toilet solutions a reality.

**Statement 2 is incorrect.** Watercredit is an initiative of Water.org. Water.org is a global non-profit organization working to bring water and sanitation to the world.

**Statement 3 is correct.** It helps people get access to safe water and sanitation through affordable financing, such as small loans.

Source: About Water.org - Learn About Our Water NGO | Water.org

Subject) Environment

**Q.15)** In India, the central bank's function as the 'lender of last resort' usually refers to which of the following?

1. Lending to trade and industry bodies when they fail to borrow from other sources
2. Providing liquidity to the banks having a temporary crisis

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3. Lending to governments to finance budgetary deficits

Select the correct answer using the code given below.

- a) 1 and 2
- b) 2 only
- c) 2 and 3
- d) 3 only

**Why this Question)** Basic economy concept. Punjab and Maharashtra Cooperative Bank crisis, rising NPAs of banks.

**Ans) b**

**Exp) Option b is correct.**

A lender of last resort is an institution, usually a country's central bank, that **offers loans to banks or other eligible institutions that are experiencing financial difficulty or are considered highly risky or near collapse.**

The lender of last resort functions to **protect individuals** who have deposited funds and to prevent customers from withdrawing out of panic from banks with temporary limited liquidity. Commercial banks usually try not to borrow from the lender of last resort because such action indicates that the bank is experiencing a financial crisis.

Source: Lender of Last Resort Definition (investopedia.com)

Subject) Economics

**Q.16)** R2 Code of Practices' constitutes a tool available for promoting the adoption of

- a) Environmentally responsible practices in electronics recycling industry
- b) Ecological management of 'Wetlands of International Importance' under the Ramsar Convention
- c) Sustainable practices in the cultivation of agricultural crops in degraded lands
- d) Environmental Impact Assessment' in the exploitation of natural resources

**Why this Question)** An updated version of the R2 Code of Practices (COP 2.1) was released on July 22, 2021.

**Ans) a**

**Exp) Option a is correct.**

The R2 Standard was originally developed to prevent the misuse and improper **recycling of electronic waste**. The Sustainable Electronics Recycling International (SERI) institute defines the R2 Standard as, "the premier global environmental, worker health and safety standard for the **electronics refurbishing and**

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recycling industry". A goal of this standard is to help prevent unnecessary recycling, and so a *reuse* business was born. Reuse refers to a product that's been used but still has life in it.

Source: Everything you've always wanted to know about the R2 Standard - B-Stock Solutions (bstock.com)

Subject) Environment

**Q.17)** Why is there a concern about copper smelting plants?

1. They may release lethal quantities of carbon monoxide into environment.
2. The copper slag can cause the leaching of some heavy metals into environment.
3. They may release sulphur dioxide as a pollutant.

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Vedanta copper smelting plant in Tamil Nadu in news recently.

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.** In copper smelting process, first, the carbon (C) combusts with oxygen (O<sub>2</sub>) in the air to produce carbon monoxide (CO). Second, the carbon monoxide reacts with the ore and removes one of its oxygen atoms, releasing carbon dioxide. Hence, it does not release lethal quantity of CO in the environment.

**Statement 2 is correct.** Copper smelters emit staggering amounts of toxic pollution i.e., lead, arsenic and selenium. These heavy metals and particulate matter from copper smelters contaminate the environment downwind and downstream.

**Statement 3 is correct.** Copper smelters are the largest source of sulphur oxides (SO<sub>x</sub>) and trace elements. Suspended particles have a pollution scope of 2-3 km, while Sulphur dioxide has a range of as much as 15 km.

Source: Toxic Air Pollution from Copper Smelters Challenged | Earthjustice

Air pollution emission from the copper smelter Complex Bor in Serbia (peertechzpublications.com)

Subject) Environment

**Q.18)** With reference to furnace oil, consider the following statements:

1. It is a product of oil refineries.
2. Some industries use it to generate power.



3. Its use causes sulphur emissions into environment.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** A plea in the National Green Tribunal about the use of pet coke and furnace oil is causing huge emission of Sulphur dioxide and other pollutants. (July 2020, The Hindu).

**Ans) d**

**Exp) Option d is correct.**

**Statement 1 is correct.** Furnace oil is a dark viscous residual fuel obtained by blending heavier component of crude oil. It is a product of oil refineries.

**Statement 2 is correct.** Furnace oil uses include heating up homes and fuel trucks to lighting up furnaces, producing steam for industrial uses and for **generating electric energy**. It is produced from the burnable liquids derived from crude oil and is also called kerosene, home heating oil, diesel fuel or coal oil.

**Statement 3 is correct.** Sulphur is a **natural component in crude oil** that is present in gasoline and diesel unless removed. Furnace oil has high component of sulphur leading to its emission when burned.

Source: FURNACE OIL(FO) (petrobazaar.com)

Furnace Oil in India | furnace oil uses in | Labdhi Petrochem

Subject) Environment

**Q.19) What is blue carbon?**

- a) Carbon captured by oceans and coastal ecosystems
- b) Carbon sequestered in forest biomass and agricultural soils
- c) Carbon contained in petroleum and natural gas
- d) Carbon present in atmosphere

**Why this Question)** Important environment concept, in news for environment issues, IUCN report.

**Ans) a**

**Exp) Option a is correct.**

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**Blue Carbon** refers to coastal, aquatic and marine carbon sinks held by vegetation, marine organisms and sediments. The coastal ecosystems of mangroves, tidal marshes and seagrass meadows contain large stores of carbon deposited by vegetation and various natural processes over centuries.

These ecosystems sequester and store more carbon – often referred to as ‘blue carbon’ – per unit area than terrestrial forests. The ability of these vegetated ecosystems to remove carbon dioxide (CO<sub>2</sub>) from the atmosphere makes them significant net carbon sinks, and they are now being recognised for their role in mitigating climate change.

Source: Factly :-News Articles For UPSC Prelims | 4 June, 2021 (forumias.com)

Blue carbon | IUCN

Subject) Environment

**Q.20)** In the nature, which of the following is/are most likely to be found surviving on a surface without soil?

1. Fern
2. Lichen
3. Moss
4. Mushroom

Select the correct answer using the code given below.

- a) 1 and 4 only
- b) 2 only
- c) 2 and 3
- d) 1, 3 and 4

**Why this Question)** Basic environment data. First Lichen Park in Uttarakhand in news.

**Ans)** c

**Exp)** Option c is correct.

1) Lichens have specific requirements for their habitats. These requirements are: water, air, nutrients, light, and substrates. Every lichen lives on top of something else. The surface of that "something else" is called a substrate. Just about anything that holds still long enough for a lichen to attach to and grow is a suitable substrate. Trees, rocks, soil, houses, tombstones, cars, old farm equipment and more can be substrates. The most common natural substrates are trees and rocks.



2) Mosses are non-flowering plants which produce spores and have stems and leaves, but don't have true roots. So, without roots, some moss suck nutrients up through the rhizoids and others draw in moisture and minerals from rain and the water around them through their highly absorbent surfaces. It often grows from trees, absorbing water and nutrients from the atmosphere, but with proper care it can also grow indoors.



3) Fern is a member of a group of vascular plants (plants with xylem and phloem). They grow in soils. There are four particular types of habitats that ferns are found in: moist, shady forests; crevices in rock faces, especially when sheltered from the full sun; acid wetlands including bogs and swamps; and tropical trees.



4) A mushroom or toadstool is the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground, on soil, or on its food source.



Source: Lichen Habitat ([fs.fed.us](http://fs.fed.us))

do mushrooms require soil - Google Search

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Mushroom - Wikipedia

8 Plants Without Soil You Can Grow at Home - Bob Vila

Subject) Environment

**Q.21)** Which one of the following is used in preparing a natural mosquito repellent?

- a) Congress grass
- b) Elephant grass
- c) Lemongrass
- d) Nut grass

**Why this question)**

- In late 2019, the Uttarakhand government had decided to carry out bio-fencing to reduce man-animal conflict by growing various species of plants (including lemongrass).
- A new variety of lemongrass was reported (in January 2020) to be grown by tribals of Anamalai forests.

**Ans) c**

**Exp) Option c is correct.**

**Option c is correct.** Lemongrass is a tall herb that is abundantly found in tropical and sub-tropical areas of Asia, Africa, and Australia. China and India accounts for the maximum production of Lemongrass.

The Lemongrass plant is known to be **an excellent mosquito repellent**. It contains a compound citronella that helps to mask the scents that mosquitoes rely on to target hosts. According to a study conducted in 2011, around 95% mosquitos from a specific range of species were either killed or completely repelled due to the intense odour of lemongrass oil.

Source: Is Lemongrass Mosquito Repellent? - Conserve Energy Future ([conserve-energy-future.com](https://conserve-energy-future.com))

Subject) Environment

**Q.22)** Consider the following kinds of organisms:

1. Copepods
2. Cyanobacteria
3. Diatoms
4. Foraminifera

Which of the above are primary producers in the food chains of oceans?

- a) 1 and 2
- b) 2 and 3

c) 3 and 4

d) 1 and 4

### Why this question)

- Recently (November 2020), scientists from the Central Marine Fisheries Research Institute (CMFRI), Mangaluru have reported that ‘sea sparkle’ in the Karnataka coast has displaced microscopic algae called diatoms, which form the basis of the marine food chain.
- Also, an important static topic

Ans) b

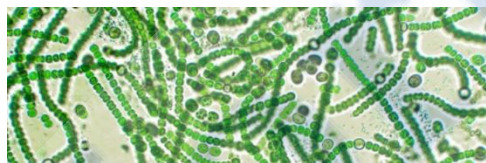
Exp) Option b is correct.

Primary producers are the organisms who synthesis their own food using photosynthesis or chemosynthesis.

**Option 1 is incorrect.** Copepods are a group of small crustaceans found in nearly every freshwater and saltwater habitat. They are major **primary consumers in the World Ocean**. Copepods are generally herbivores, feeding only on plant plankton which they filter from the water.



**Option 2 is correct.** Cyanobacteria, also called **blue-green algae**, are microscopic organisms found naturally in all types of water. These organisms are primary producers who **use sunlight to make their own food**.



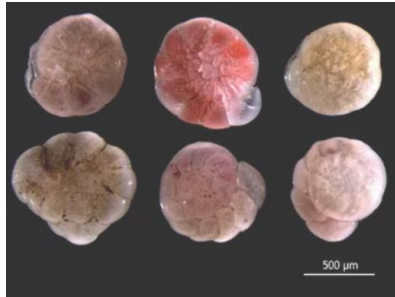
**Option 3 is correct.** Diatoms are **photosynthesising algae**. They are found in almost every aquatic environment including fresh and marine waters. They are primary producer in oceanic food chain.





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**Option 4 is incorrect.** Foraminifera are single-celled organisms that are found in most marine environments. They are characterized by streaming granular ectoplasm for catching food. Foraminifera are **heterotrophic organisms** which consumes smaller organisms and organic matter.



Source: Seasonal changes in the abundance and biomass of copepods in the south-eastern Baltic Sea in 2010 and 2011 - PubMed (nih.gov)

Diatoms (ucl.ac.uk)

[https://www.cdc.gov/habs/pdf/cyanobacteria\\_faq.pdf](https://www.cdc.gov/habs/pdf/cyanobacteria_faq.pdf)

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/foraminifera>

Subject) Environment

**Q.23)** Consider the following animals:

1. Hedgehog
2. Marmot
3. Pangolin

To reduce the chance of being captured by predators, which of the above organisms rolls up/roll up and protects/ protect its/their vulnerable parts?

- a) 1 and 2
- b) 2 only
- c) 3 only
- d) 1 and 3

**Why this question)**

- The Madhya Pradesh Forest department, for the first time, has radio-tagged an Indian Pangolin in Feb 2020.
- A detailed article came in The Hindu in Feb 2021.
- Alert for bubonic plague caused by marmots in China in July 2020.

**Ans) d**



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Exp) Option d is correct.

**Option 1 is correct.** Hedgehogs are small nocturnal spiny mammals. When they are frightened, or annoyed, hedgehogs will roll into a ball so that a predator will feel the full brunt of its sharp spines and will then leave the hedgehog alone.



**Option 2 is incorrect.** Marmots are relatively large ground squirrels with 15 species living in Asia, Europe, and North America. They are the heaviest members of the squirrel family. It does not roll up to protect itself.



**Option 3 is correct.** Pangolins are actually mammals. They are the only mammals wholly-covered in scales and they use those scales to protect themselves from predators in the wild. Under threat, a pangolin will immediately curl into a **tight ball** and will use **their sharp-scaled tails** to defend themselves.



Source: How does a hedgehog roll up? – Dickinson County Conservation Board

<https://www.worldwildlife.org/stories/what-is-a-pangolin>

<https://www.newindianexpress.com/world/2020/jul/05/chinese-city-of-bayannur-sounds-alert-for-bubonic-plague-caused-by-marmots-2165805.html>

Subject) Environment

## UPSC Civil Services Prelims 2021 | Set A | ForumIAS

**Q.24)** With reference to the 'New York Declaration on Forests', which of the following statements are correct?

1. It was first endorsed at the United Nations Climate Summit in 2014.
2. It endorses a global timeline to end the loss of forests.
3. It is a legally binding international declaration.
4. It is endorsed by governments, big companies and indigenous communities.
5. India was one of the signatories at its inception.

Select the correct answer using the code given below.

- a) 1, 2 and 4
- b) 1, 3 and 5
- c) 3 and 4
- d) 2 and 5

### Why this question)

- India raised the targets under the “Bonn Challenge” in September 2019. “Bonn Challenge” was extended by the New York Declaration on Forests.
- Forest conservation is an important topic from environment.

**Ans) a**

**Exp) Option a is correct.**

**Statement 1 is correct.** The New York Declaration on Forests (NYDF) was endorsed at the **United Nations Climate Summit in September 2014**.

**Statement 2 is correct.** New York Declaration on Forests (NYDF) emphasises **ten goals** which includes halting **natural forest loss by 2030**. The targets also include restoring 350 million hectares of degraded landscapes and forestlands, improving governance, increasing forest finance, and reducing emissions from deforestation and forest degradation as part of a post-2020 global climate agreement.

**Statement 3 is incorrect.** The New York Declaration on Forests (NYDF) is a **voluntary and non-binding international declaration** to take action to halt global deforestation.

**Statement 4 is correct.** It has presently over 200 endorsers - including national governments, subnational governments, companies, indigenous groups, financial institutions and NGOs. These endorsers have committed to doing their part to achieve the NYDF goals and follow its accompanying action agenda.

**Statement 5 is incorrect.** Presently, India has not signed the New York Declaration on Forests (NYDF).

Source: About|New York Declaration on Forests | New York Declaration on ForestsForest Declaration

About us | CLIMATE FOCUS

<https://forestdeclaration.org/about/nydf-endorsers>

Subject) Environment

**Q.25)** Magnetite particles, suspected to cause neurodegenerative problems, are generated as environmental pollutants from which of the following?

1. Brakes of motor vehicles
2. Engines of motor vehicles
3. Microwave stoves within homes
4. Power plants
5. Telephone lines

Select the correct answer using the code given below.

- a) 1, 2, 3 and 5 only
- b) 1, 2 and 4 only
- c) 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

**Why this question:**

- Human exposure to electromagnetic fields in the context of 5G technology.
- Important static topic: Pollution and impact on human health

**Ans) d**

**Exp) Option d is correct.**

Magnetite particles can act as pollutants and led to neurodegenerative problems. Magnetic particles can penetrate and damage the blood-brain-barrier and led to the early development of Alzheimer's disease.

Whenever any magnetic component is used in appliances, they generate **magnetic flux which produces magnetic particles**.

**Option 1 is correct.** The automotive industry uses ceramic or ferrite magnets to make vehicles safer. One of the most impressive uses is in the Anti-lock Braking System (ABS) of vehicles. These use of magnets in motor vehicles can generate magnetic particles.

**Option 2 is correct.** Engines of motor vehicles can generate magnetic particles as they use high powered magnets which generate magnetic flux.

**Option 3 is correct.** In Microwave, a magnetic stirrer is used which can generate magnetic particles.

**Option 4 is correct.** Power Plants releases metal content along with ash. Use of coal in power plants is a major source of combustion-associated magnetite fine particles.

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**Option 5 is correct.** Telephone line produces low frequency, low energy electromagnetic field which are the potential source of magnetite particles.

Source) <https://www.thehindu.com/news/national/telangana/telecom-mobile-towers-are-within-prescribed-norms-affirms-dot/article33973886.ece>

<https://pubmed.ncbi.nlm.nih.gov/30216885/>

<https://www.pnas.org/content/113/39/10797>

<https://core.ac.uk/download/pdf/231902539.pdf>

Subject) Environment

**Q.26)** Which one of the following is a filter feeder?

- a) Catfish
- b) Octopus
- c) Oyster
- d) Pelican

**Why this question:**

- Recently, the Trifed inked an agreement with the Jharkhand-based Purty Agrotech for the promotion of pearl farming in tribal areas.
- Important Static topic : pollution abatement

**Ans) c**

**Exp) Option c is correct.**

**Option c is correct. Oysters are natural filters.** They capture the particles of size as small as 4 micrometers on their gills. Their gills act as filter which is self-cleaning.

Generally, water get filtered by something which is static so that water can easily pass through them and get filtered. Pelicans, Catfish and Octopus are large organisms. Oysters are small organisms, found cemented to rocks or other hard substrates.

Source) <https://phys.org/news/2021-03-filter-feeding-bivalves-microplastics.html>

<https://ministryearth.com/2020/02/04/oysters-biological-filters/>

<https://www.downtoearth.org.in/news/world-shrinks-for-oysters-3573>

Subject) Environment

**UPSC Civil Services Prelims 2021 | Set A | ForumIAS**

**Q.27)** In case of which one of the following biogeochemical cycles, the weathering of rocks is the main source of release of nutrient to enter the cycle?

- a) Carbon cycle
- b) Nitrogen cycle
- c) Phosphorus cycle
- d) Sulphur cycle

**Why this question:**

- Important static topic: Biogeochemical cycles
- Recently, the Government has prepared an Action Plan to make India Aatmanirbhar in Rock Phosphate, the key raw material of DAP and NPK Fertilisers

**Ans) c**

**Exp) Option c is correct.**

**Option c is correct.** Carbon and Nitrogen cycle are the gaseous cycles. Here, the main reservoir of nutrient is the atmosphere or the hydrosphere. In sulphur cycle, nutrient is released by weathering of rocks, erosional runoff and decomposition of organic matter. The sulphur cycle is mostly sedimentary but two of its compounds hydrogen sulphide (H<sub>2</sub>S) and sulphur dioxide (SO<sub>2</sub>) add a gaseous component to its normal sedimentary cycle.

**In Phosphorus cycle**, nutrients got released mainly by weathering of rocks since the Phosphorus mainly occurs as a mineral in phosphate rocks. It enters the cycle from erosion and mining activities.

Source) Shankar Ias Book chapter-2 page-19, 20

Subject) Environment

**Q.28)** Which of the following are detritivores?

1. Earthworms
2. Jellyfish
3. Millipedes
4. Seahorses
5. Woodlice

Select the correct answer using the code given below.

- a) 1, 2 and 4 only
- b) 2, 3, 4 and 5 only
- c) 1, 3 and 5 only
- d) 1, 2, 3, 4 and 5



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**Why this question:** Important static topic:

**Ans)** c

**Exp)** Option c is correct.

Detritivores are heterotrophs that obtain their nutrition by feeding on detritus i.e. dead or decaying plants or animals.

**Statements 1, 3 and 5 are correct.**

**Earthworms, Millipedes and Woodlice** are detritivores. Detritivores include microorganisms such as bacteria and fungi; invertebrate insects such as mites, beetles, butterflies and flies; mollusks such as slugs and snails; or soil-dwelling earthworms, millipedes and woodlice.

Jellyfish is carnivorous and Sea horse is also primarily a carnivorous animal.

Source) <https://biologydictionary.net/detritivore/>

Subject) Environment

**Q.29)** The 'Common Carbon Metric', supported by UNEP, has been developed for

- a) Assessing the carbon footprint of building operations around the world
- b) Enabling commercial farming entities around the world to enter carbon emission trading
- c) Enabling governments to assess the overall carbon footprint caused by their countries
- d) Assessing the overall carbon foot print caused by the use of fossil fuels by the world in a unit time

**Why this question)** Asked in the context of a new initiatives in building energy efficiency launched by the Bureau of Energy Efficiency (BEE).

**Ans)** a

**Exp)** Option a is correct.

Carbon footprint of an entity is the total amount of greenhouse gases that are generated by that entity.

**Option a is correct.** The Common Carbon Metric is a protocol developed by United Nations Environment Program's Sustainable Buildings & Climate Initiative (UNEP-SBCI) for **measuring energy use & reporting GHG emissions from Building Operations**.

Its purpose is to support greenhouse gas (GHG) emissions reductions through accurate measurement of energy efficiency improvements in building operations.

Source- [https://unfccc.int/sites/default/files/06\\_unfccc\\_unep\\_ws\\_oxford\\_rajat\\_gupta.pdf](https://unfccc.int/sites/default/files/06_unfccc_unep_ws_oxford_rajat_gupta.pdf)

<https://c2e2.unepdtu.org/wp-content/uploads/sites/3/2016/09/unep-sbci-common-carbon-metric.pdf>

Subject) Environment



## UPSC Civil Services Prelims 2021 | Set A | ForumIAS

**Q.30)** Which of the following have species that can establish symbiotic relationship with other organisms?

1. Cnidarians
2. Fungi
3. Protozoa

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this question)** Important static topic

**Ans) d**

**Exp) Option d is correct.**

Some organisms live together and share both shelter and nutrients. This relationship is called symbiosis.

**Statement 1 is correct.** Cnidaria is an invertebrate phylum which often involves in a symbiotic relation with the unicellular dinoflagellate algae, called zooxanthellae.

**Statement 2 is correct.** Certain fungi live inside the roots of plants. The plants provide nutrients to the fungus and, in return, the fungus provides water and certain nutrients. Fungi also lives in a symbiotic relation with algae as a lichen.

**Statement 3 is correct.** Protozoa also forms symbiotic relations with other organisms. Symbiosis in protozoa mostly represents:

- a close mutualistic association between a protozoan and unicellular symbiont (like bacteria, cyanobacteria or/and unicellular algae) or
- protozoans and a multicellular organism (ruminants, lower termites, wood-eating cockroaches, plants)

Source) NCERT class-7 PAGE-7

<https://www.biology-today.com/general-zoology/symbiotic-relationship-of-protozoans/>

<https://cals.arizona.edu/azaqua/algaeclass/symbios.htm#:~:text=The%20symbiotic%20association%20between%20the%20invertebrate%20phylum%20Cnidaria,is%20between%20zooxanthellae%20and%20hermatypic%20C%20or%20reef-forming%2C%20corals.>

Subject) Environment

## UPSC Civil Services Prelims 2021 | Set A | ForumIAS

**Q.31)** With reference to Chausath Yogini Temple situated near Morena, consider the following statements:

1. It is a circular temple built during the reign of Kachchhapaghata Dynasty.
2. It is the only circular temple built in India.
3. It was meant to promote the Vaishnava cult in the region.
4. Its design has given rise to a popular belief that it was the inspiration behind the Indian Parliament building.

Which of the statements given above are correct?

- a) 1 and 2
- b) 2 and 3 only
- c) 1 and 4
- d) 2, 3 and 4

**Why this Question)** Under central vista project new parliament building is constructed. The existing parliament building is replica of Chausanth Yogini Temple.

**Ans)** c

**Exp)** Option c is correct.



**Statement 1 is correct.** According to an inscription dated to 1323 CE (Vikram Samvat 1383), the temple was built by the Kachchhapaghata king Devapala (r. c. 1055 – 1075). It is said that the temple was the venue of providing education in astrology and mathematics based on the transit of the Sun.

**Statement 2 is incorrect.** This circular temple is one among the very few such temples in India. It is not the only circular temple built in India.

**Statement 3 is incorrect** It is, also known as Ekattarso Mahadeva Temple because of the presence of multitude of shivalingas inside its cells. So it promote **Shaivite cult in the region not vaishnavite culture.**

**Statement 4 is correct** Many of these curious visitors have compared this temple with the Indian parliament building (Sansad Bhawan) as **both are circular in style.** So, many have drawn conclusions that **this temple was the inspiration behind the Parliament building.**

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Source) <https://www.financialexpress.com/lifestyle/travel-tourism/temples-which-inspired-design-of-indian-parliament-madhya-pradeshs-chausath-yogini-mandir/1575446/>  
<https://morena.nic.in/en/tourist-place/mitawali/>

Subject) History

**Q.32)** Which one of the following ancient towns is well-known for its elaborate system of water harvesting and management by building a series of dams and channelizing water into connected reservoirs?

- a) Dholavira
- b) Kalibangan
- c) Rakhigarhi
- d) Ropar

**Why this Question)** Recently Dholavira along with Ramappa temple (Telengana) was declared as World Heritage Site by UNESCO.

**Ans) a**

**Exp) Option a is correct.**

The ancient city of Dholavira is one of the most remarkable and well-preserved urban settlements in South Asia dating from the 3rd to mid-2nd millennium BCE (Before Common Era). Discovered in 1968, the site is set apart by its unique characteristics, such as its **water management system**, multi-layered defensive mechanisms, extensive use of stone in construction and special burial structures. It has a complex system for **collecting and storing rain water within several reservoirs**. Planners in the ancient city of Dholavira had conceptualised an amazing system of **drains, dams and tanks** to manage water.

Source) <https://timesofindia.indiatimes.com/india/harappan-era-city-dholavira-inscribed-on-unesco-world-heritage-list/articleshow/84789197.cms>

<https://www.downtoearth.org.in/indepth/secrets-of-the-water-fort-31932>

<https://portfolio.cept.ac.in/archive/dholavira-decoding-its-water-heritage/>

Subject) History

**Q.33)** In the first quarter of seventeenth century, in which of the following was/were the factory/factories of the English East India Company located?

- 1. Broach
- 2. Chicacole
- 3. Trichinopoly

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Select the correct answer using the code given below.

- a) 1 only
- b) 1 and 2
- c) 3 only
- d) 2 and 3

**Why this Question)** Static topic

**Ans)** a

**Exp)** Option a is correct.

By 1<sup>st</sup> quarter of 17<sup>th</sup> century, English East India Company had established factories at **Surat, Broach, Ahmedabad, Agra, and Masulipatam** and not at Chicacole and Tichonopoly.

**The timelines are**

**1613-** A permanent factory of the east India company is established at Surat

**1616-** 1<sup>st</sup> factory in south at Masulipatnam

**1619-** Sir Thomas Roe set up factories at Agra, Ahmedabad, and Broach.

Source) Spectrum Revised edition chapter-3 page-38, 39

Subject) History

**Q.34)** From the decline of Guptas until the rise of Harshavardhana in the early seventh century, which of the following kingdoms were holding power in Northern India?

- 1. The Guptas of Magadha
- 2. The Paramaras of Malwa
- 3. The Pushyabhutis of Thanesar
- 4. The Maukharis of Kanauj
- 5. The Yadavas of Devagiri
- 6. The Maitrakas of Valabhi

Select the correct answer using the code given below.

- a) 1, 2 and 5
- b) 1, 3, 4 and 6
- c) 2, 3 and 4
- d) 5 and 6

**Why this Question)** Gupta and Post Gupta period are important static topic.

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Ans) b

Exp) Option b is correct.

From the decline of Guptas until the rise of Harshvardhanas, new ruling dynasties emerged in different part of Northern India. The most prominent ones were- The Pushyabhutis of Thaneshwar, Maukharis of Kannauj, Maitrakas of Vallabhi, etc.

The **Maitrakas** were tributary chiefs of the Guptas, who established an independent kingdom in western India. Dhruvasena II was the most important ruler of the Maitrakas. He was a contemporary of Harshavardhana and was married to his daughter.

The **Maukharis** ruled over Kanauj, a city in western Uttar Pradesh, which gradually replaced Pataliputra as a political center of north India. Maukharis were also the subordinate rulers of the Guptas and used the title of samanta. Harshavardhana's sister Rajyashri was married to Grihavarman.

An important ruling family to gain prominence after the fall of the Gupta was that of the **Pushyabhutis** who had their capital at Thanesar (Thanesvara in Kurukshetra). The dynasty became influential with the accession of Prabhakarvardhana, who was able to defeat the Hunas and strengthen his position in the regions of Punjab and Haryana.

**Yadava dynasty** ruled in deccan near Devgiri (Daultabad) between 12th–14th-century AD.

The **Paramara dynasty** ruled Malwa and surrounding areas in west-central India between 9th and 14th centuries AD.

Source) tamil Nadu Higher secondary NCERT chapter-8 page0 104,105

[https://nios.ac.in/media/documents/SrSec315NEW/315\\_History\\_Eng/315\\_History\\_Eng\\_Lesson7.pdf](https://nios.ac.in/media/documents/SrSec315NEW/315_History_Eng/315_History_Eng_Lesson7.pdf)

Subject) History

**Q.35)** According to Portuguese writer Nuniz, the women in Vijayanagara Empire were expert in which of the following areas?

1. Wrestling
2. Astrology
3. Accounting
4. Soothsaying

Select the correct answer using the code given below.

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2 and 4 only
- d) 1, 2, 3 and 4



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**Why this Question)** Foreign traveller's account have become an important topic, similar question asked in previous year.

**Ans) d**

**Exp) Option d is correct**

Women in general occupied a high position in Vijayanagara society and instances of the active part they took in the political, social and literary life of the country are not rare, besides being trained in **wrestling**, handling swords and shields, music and other fine arts, some of them at any rate received a fair amount of literary education. Nuniz writes: "he (the king of Vijaynagar) has also women who **wrestle**, and others who are **astrologers and soothsayers**; and he has woman who write all the **accounts of expenses** that are incurred inside the gates and others whose duty it is to write all the affairs of the kingdom and compare their books with those of the writers outside; he has women also for **music**, who play instruments and sing. Even the wives of the king are well versed in music...it is said that he has judges, as well as **bailiffs** and watchmen who every night guard the palace, and these are women."

Source) <https://ykcollege.ac.in/wp-content/uploads/2020/04/ADMINISTRATION-OF-VIAJANAGAR-converted.pdf>

<https://www.thehindubusinessline.com/news/variety/Alpha-women-of-Hampi/article20396779.ece>

Subject) History

**Q.36)** With reference to Madanapalle of Andhra Pradesh, which one of the following statements is correct?

- a) Pingali Venkayya designed the tricolour Indian National Flag here.
- b) Pattabhi Sitaramaiah led the Quit India Movement of Andhra region from here.
- c) Rabindranath Tagore translated the National Anthem from Bengali to English here.
- d) Madame Blavatsky and Colonel Olcott set up headquarters of Theosophical Society first here.

**Why this Question)** President Ram Nath Kovind visited Madanapalle of Andhra Pradesh (Feb 2021) to inaugurate a yoga hall at a spiritual centre, along with a school.

**Ans) c**

**Exp) Option c is correct.**

The National anthem was first sung **outside the Calcutta by the Rabndranath Tagore** himself during a session at the **Besant Theosophical College in Madanapalle, Andhra Pradesh, on 28th Feb 1919**, when Tagore went to college and sang the song. Then deputy director of the university (also an expert in European music and wife of the Irish poet James Cousins), asked Tagore to create an English translation of the song and establish the



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musical notation. Tagore then translated the Bengali song to English and the tune was composed by Margaret with the girls in the college singing the chorus.

Source) [https://timesofindia.indiatimes.com/articleshow\\_comments/63045339.cms?from=mdr](https://timesofindia.indiatimes.com/articleshow_comments/63045339.cms?from=mdr)

<https://www.jaborejob.com/national-anthem-of-india-jana-gana-mana-written-by-poet-rabindranath-tagore/>

<https://www.deccanchronicle.com/nation/current-affairs/150817/andhra-pradesh-national-anthem-tune-was-composed-in-madanapalle.html>

Subject) History

**Q.37)** Consider the following pairs:

(Historical place)	(Well-known for)
--------------------	------------------

1. Burzahom	: Rock-cut shrines
-------------	--------------------

2. Chandra-Ketugarh	: Terracotta art
---------------------	------------------

3. Ganeshwar	: Copper artefacts
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Which of the pairs given above is/are correctly matched?

- a) 1 only
- b) 1 and 2
- c) 3 only
- d) 2 and 3

**Why this Question)** Ancient sites and their features/Characteristics have become an important topic in recent years.

**Ans) d**

**Exp)** Option d is correct.

**Pair 1 is incorrectly matched.** It can be eliminated as Burzahom site (Jammu and Kashmir) is a Neolithic site. Rock cut shrines were not found in Neolithic period.

**Pair 2 is correctly matched** Chandraketugarh is a site in West Bengal near Kolkata. According to historians, the place dates back to the 3rd century, which is pre-Mauryan era. The place has always generate curiosity among the archaeologists and various excavations have taken place here and a number of **terracotta artworks** has been unearthed.

**Pair 3 is correctly matched.** Ganeshwar is a famous site in Khetri belt in Rajasthan. Ganeshwar complex sites have yielded more than 5000 **copper objects**, with some typical Harappan types like thin blades, arrow-heads etc.

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Source)

<http://kashmirnetwork.com/today/burzahom.html#:~:text=Burzahom%20Burzahom%20was%20the%20first%20Neolithic%20site%20to,km%20from%20the%20famous%20Mughal%20garden%20of%20Shalimar.>

<https://egyankosh.ac.in/bitstream/123456789/41368/1/MAN-002B8E.pdf>

<https://egyankosh.ac.in/bitstream/123456789/64778/1/Unit4.pdf>

<https://www.livehistoryindia.com/story/amazing-india/chandraketugarh-an-enigma-in-bengal/>

Subject) History

**Q.38)** Consider the following statements:

1. It was during the reign of Iltutmish that Chengiz Khan reached the Indus in pursuit of the fugitive Khwarezm prince.
2. It was during the reign of Muhammad bin Tughluq that Taimur occupied Multan and crossed the Indus.
3. It was during the reign of Deva Raya II of Vijayanagara Empire that Vasco da Gama reached the coast of Kerala.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2
- c) 3 only
- d) 2 and 3

**Why this Question)** Sultanate period and vijayanagara Empire are important static topic

**Ans) a**

**Exp)** Option a is correct.

**Statement 1 is correct.** Changez khan attacked India during the reign of **Iltutmish**. Iltutmish saved India by refusing to support Khwarizmi Shah Jalaudin of Central asia against Changez khan.

**Statement 2 is incorrect.** The period of Mahmud bin Tughlaq was 1325 to 1351. During the reign of **Nasrud-din Muhammad Shah (1394-1412)**, The last Tughlaq ruler, Taimur invaded India.

**Statement 3 is incorrect.** **Devaraya –II reign was from 1422 to 1426.** Vascodagama came to India in 1498.

Source) Tamil Nadu Higher Secondary Chapter-10 page-140, 145, 151 Chapter -12 page-180, 181

Subject) History

**Q.39)** Consider the following statements:

1. St. Francis Xavier was one of the founding members of the Jesuit Order.

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2. St. Francis Xavier died in Goa and a church is dedicated to him there.
  3. The Feast of St. Francis Xavier is celebrated in Goa each year. Which of the statements given above are correct?
- a) 1 and 2 only
  - b) 2 and 3 only
  - c) 1 and 3 only
  - d) 1, 2 and 3

**Why this Question)** ASI begin restoration of St Francis Xavier's 400-year-old casket in Goa.

**Ans)** c

**Exp)** Option c is correct

**Statement 1 is correct.** St. Francis Xavier was **one of the founders of the Jesuit order**. He was a Spanish saint.

**Statement 2 is incorrect.** He died on the island of Sancian (now Shang-ch'uan Tao, off the Chinese coast) while trying to gain entrance to China, which was then closed to foreigners.

**Statement 3 is correct.** Every year the **feast of St. Francis Xavier is celebrated in Goa** on 3<sup>rd</sup> of December.

Source) <https://indianexpress.com/article/cities/goa/asi-to-begin-restoration-of-st-francis-xaviers-casket-in-go-7098607/>

Subject) History

**Q.40)** With reference to the history of ancient India, which of the following statements is/are correct?

1. Mitakshara was the civil law for upper castes and Dayabhaga was the civil law for lower castes.
2. In the Mitakshara system, the sons can claim right to the property during the lifetime of the father, whereas in the Dayabhaga system, it is only after the death of the father that the sons can claim right to the property.
3. The Mitakshara system deals with the matters related to the property held by male members only of a family, whereas the Dayabhaga system deals with the matters related to the property held by both male and female members of a family.

Select the correct answer using the code given below.

- a) 1 and 2
- b) 2 only
- c) 1 and 3
- d) 3 only

**Why this Question)** Supreme court's decision giving women equal right to inherit ancestral property.

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Ans) b

Exp) Option b is correct

**Statement 1 is incorrect.** Mitakshara is the oldest schools of Hindu law and is practiced in India except in the state of West Bengal and Assam. Dayabhaga is also important schools of Hindu law mainly practiced in Assam & West Bengal. **Both law deals with upper and lower castes.**

**Statement 2 is correct.** In the Mitakshara school of inheritance, property is inherited by the successors (coparceners) only when they were born in the family of the property holder thus when a son is born, he receives right in the property. **So, he can inherit during the lifetime of a father.** In the case of Dayabhaga school of inheritance, property is inherited by the successors (coparceners) only when **the holder of the property is dead.**

**Statement 3 is incorrect. Both Mitakshara and Dayabhaga deals with male and female property rights. Mitakshara school is orthodox school.** It is biased against women & gave them very less right to inherit property. Dayabhaga is also biased, but it is a **liberal school** and it gives more rights to women to inherit property compared to Mitakshara.

Source) <https://www.thehindu.com/news/national/the-hindu-explains-what-is-coparcenary-property-in-hindu-law/article32364484.ece>

<https://lawtimesjournal.in/inheritance-under-hindu-law/>

<https://legalsarcasm.com/legal-notes/schools-of-hindu-law/>

Subject) History

**Q.41)** With reference to the history of ancient India, Bhavabhuti, Hastimalla and Kshemeshvara were famous

- a) Jain monks
- b) playwrights
- c) temple architects
- d) philosophers

**Why this Question)** List of notable playwrights during ancient times is an important static topic.

Ans) b

Exp) Option b is correct.

**Bhavabhuti** was an 8th-century scholar of India noted for his plays and poetry, written in Sanskrit. The works attributed to poet Bhavabhuti were Mahaviracharita (depicting the early life of Rama), Malatimadhava a play based on the romance of Malati and Madhava and Uttararamacharita (depicts Rama's coronation, the abandonment of Sita and their reunion).

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**Hastimalla** was 13th century Kannada poet and writer in Hoysala Empire. He wrote Purvapurana.

**Kshemeshvara** (990 – c. 1070 CE) was an 11th-century Sanskrit poet from Kashmir in India. One of the important work attributed to him is Dasavatar Charita.

Source) <https://www.britannica.com/biography/Bhavabhuti>

[https://en.wikipedia.org/wiki/Hoysala\\_literature](https://en.wikipedia.org/wiki/Hoysala_literature)

Subject) History

**Q.42)** Consider the following statements:

1. The Montagu-Chelmsford Reforms of 1919 recommended granting voting rights to all the women above the age of 21.
2. The Government of India Act of 1935 gave women reserved seats in legislature.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Important Constitutional experiments during British India and is an important static topic.

**Ans) d**

**Exp) Option d is correct.**

**Statement 1 is incorrect.** The Montague Chelmsford reforms of 1919 did not recommend granting voting rights to all women above the age of 21. Although it recommended the voting rights to women in limited numbers to be extended on the basis of property, tax or education.

**Statement 2 is incorrect.** The Government of India Act 1935 gave women separate electorate (and did not reserved seats for women in legislature). It provided separate electorates to depressed classes and labours also.

Source) Laxmikanth Chapter-1 page-1.8, 1.9

<https://blog.ipleaders.in/government-of-india-act-1935-2/>

Subject) History

**Q.43)** With reference to 8th August, 1942 in Indian history, which one of the following statements is correct?

- a) The Quit India Resolution was adopted by the AICC.
- b) The Viceroy's Executive Council was expanded to include more Indians.



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- c) The Congress ministries resigned in seven provinces.
- d) Cripps proposed an Indian Union with full Dominion Status once the Second World War was over.

**Why this Question)** As part of 'Azadi ka Amrit Mahotsav' to mark 75<sup>th</sup> year of Independence, there was an exhibition to mark the 79<sup>th</sup> anniversary of Quit India Movement.

**Ans) a**

**Exp) Option a is correct.**

**Statement a is correct.** The Quit India resolution was adopted in Bombay in August, 1942, by AICC (All India Congress committee) at Gowalia Tank.

**Statement b is incorrect.** More Indians were added to Viceroy's executive council by Government of India Act 1919. First time, an Indian was added in this council by Government of India act 1909.

**Statement c is incorrect.** Congress resigned from ministries in 7 provinces in 1939 as they decided not to support war as India could not be party to a war for democratic freedom while that freedom was being denied to India.

**Statement d is incorrect.** Yes, Cripps proposed a dominion status to India, but this was not related to 8 August 1942.

Source) Spectrum Revised edition 2019 chapter-23 page-448

Subject) History

**Q.44)** Who among the following is associated with 'Songs from Prison', a translation of ancient Indian religious lyrics in English?

- a) Bal Gangadhar Tilak
- b) Jawaharlal Nehru
- c) Mohandas Karamchand Gandhi
- d) Sarojini Naidu

**Why this Question)** Books and songs associated with Gandhiji is an important static topic.

**Ans) c**

**Exp) Option c is correct.**

**Mahatma Gandhi was associated with "Songs from Prison",** a translation of ancient Indian religious lyrics in English in 1934.

Source) <https://greencardamom.github.io/BooksAndWriters/gandhi.htm>

Subject) History

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**Q.45)** With reference to medieval India, which one of the following is the correct sequence in ascending order in terms of size?

- a) Paragana-Sarkar-Suba
- b) Sarkar-Paragana-Suba
- c) Suba-Sarkar-Paragana
- d) Paragana-Suba-Sarkar

**Why this Question)** How the empire, provinces were divided during medieval period is an important static topic.

**Ans) a**

**Exp) Option a is correct.**

The order according to the size is

Pargana > Sarkar > Suba

The entire Suba was divided into Sarkars (districts), each being looked after by a military officer called the chief Shiqdar. Each Sarkar was divided into smaller units called Parganas. There was a Shiqdar (military officer), Amin or Munsif (Civilian Judge), one Fotahdar (treasurer) and two Karkuns (clerks or writers) in each Pargana.

**Number of villages comprised of Pargana. Above the Pargana was the sarkar . A number of sarkar group into provinces called Suba or Mahal.**

Source) Satish Chandra History of Medieval India page-138

Subject) History

**Q.46)** Who among the following was associated as Secretary with Hindu Female School which later came to be known as Bethune Female School?

- a) Annie Besant
- b) Debendranath Tagore
- c) Ishwar Chandra Vidyasagar
- d) Sarojini Naidu

**Why this question)** Recently busts of Ishwar Chandra Vidya Sagar and Sister Nivedita were unveiled at Bethune school to celebrate 100 years of the alumni association of the institution.

Also, an article was there recently on how Bethune college a revolutionary institution spawned many revolutionary women.

**Ans) c**

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Exp) Option c is correct.

**Ishwar Chandra Vidyasagar** was the secretary of **Bethune school** established in **1849** also known as Hindu female school. He was one of the pioneers of higher education for women in India.

Source) Spectrum Revised edition chapter-9 page-213.

Subject) History

**Q.47)** In the context of Colonial India, **Shah Nawaz Khan**, **Prem Kumar Sehgal** and **Gurbaksh Singh Dhillon** are remembered as:

- a) leaders of Swadeshi and Boycott Movement
- b) members of the Interim Government in 1946
- c) members of the Drafting Committee in the Constituent Assembly
- d) officers of the Indian National Army

**Why this question)** Static and India National Army was in news also.

Ans) d

Exp) Option d is correct.

**Prem Kumar Sehgal**, **Shah Nawaz Khan** and **Gurubaksh Singh Dhillon** were officers of **Indian National Army** whose trial were held in 1945 at the **Red Fort in Delhi**. This was the first trial of INA Prisoners of wars.

Source) Spectrum Revised edition chapter-24 page-465

Subject) History

**Q.48)** With reference to Indian history, which of the following statements is/are correct?

1. The Nizamat of Arcot emerged out of Hyderabad State.
2. The Mysore Kingdom emerged out of Vijayanagara Empire.
3. Rohilkhand Kingdom was formed out of the territories occupied by Ahmad Shah Durrani.

Select the correct answer using the code given below.

- a) 1 and 2
- b) 2 only
- c) 2 and 3
- d) 3 only

**Why this question)** Medieval kingdoms are an important static topic.

Ans) a

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Exp) Option a is correct.

**Statement 1 is correct.** The Nizam of Carnatic (Arcot) was a dependency of Hyderabad Deccan and was under the legal purview of the Nizam of Hyderabad, until its demise. Later it emerged out of Hyderabad.

**Statement 2 is correct.** The Mysore kingdom, which was founded and ruled for most part by the Hindu Wodeyar family, initially served as a vassal state of the Vijayanagara Empire.

**Statement 3 is incorrect.** The Kingdom of Rohilkhand arose under the declining Mughal Empire in 1721 and continued to exist until 1774 when annexation by the British transformed its significantly reduced borders into the Princely State of Rampur.

Source) <https://artsandculture.google.com/entity/carnatic-sultanate/m025yy5r?hl=en>

[https://www.newworldencyclopedia.org/entry/Kingdom\\_of\\_Mysore](https://www.newworldencyclopedia.org/entry/Kingdom_of_Mysore)

[https://www.hmoob.in/wiki/Kingdom\\_of\\_Rohilkhand](https://www.hmoob.in/wiki/Kingdom_of_Rohilkhand)

Subject) History

**Q.49)** Which one of the following statements is correct?

- a) Ajanta Caves lie in the gorge of Waghora river.
- b) Sanchi Stupa lies in the gorge of Chambal river.
- c) Pandu-lena Cave Shrines lie in the gorge of Narmada river.
- d) Amaravati Stupa lies in the gorge of Godavari river.

**Why this Question)** Caves and Stupas of ancient India and their location and other geographical aspects is an important static topic.

**Ans) a**

Exp) Option a is correct.

**Option a is correct.** The rock-cut caves of **Ajanta** lie in **Waghora river valley** near Ajanta village in the Aurangabad district of Maharashtra.

**Option b is incorrect.** **Sanchi** lies in an upland plateau region just west of the **Betwa** River.

**Option c is incorrect.** **Pandu-lena caves** is ancient rock-cut sculptures complex located at **Gomai** River.

Pandu-leni cave is also known as Nasik Caves, Tirthankar Leni, Panch Pandav or Pandav Leni Jain cave.

The "Pandavleni" name sometimes given to the Nasik Caves has nothing to do with the characters Pandavas, characters in the Mahabharata epic.

**Option d is incorrect.** **Amravati** stupa is located in the gorges of **Krishna** river.

Source: [https://govtgirlsekalpur.com/Study\\_Materials/History/AJANTA\\_CAVE\\_PAINTINGS.pdf](https://govtgirlsekalpur.com/Study_Materials/History/AJANTA_CAVE_PAINTINGS.pdf)

<https://www.britannica.com/place/Sanchi-historical-site-India>

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<https://www.incredibleindia.org/content/incredible-india-v2/en/destinations/amaravati.html>

<https://indianculture.gov.in/pandulena-cave-no-6-original-land-being-removed-0>

<https://www.nativeplanet.com/travel-guide/pandavleni-caves-nashik-maharashtra-001671-pgl.html>

Subject) History

**Q.50)** Consider the following statements:

1. 21st February is declared to be the International Mother Language Day by UNICEF.
2. The demand that Bangla has to be one of the national languages was raised in the Constituent Assembly of Pakistan.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Recently International Mother Language Day was celebrated and an associated static statement to it.

**Ans) b.**

**Exp) Option b is correct.**

**Statement 1 is incorrect.** 21 February is declared as **International Mother Language Day** by **UNESCO**. The idea to celebrate International Mother Language Day was **the initiative of Bangladesh**. It was **approved** at the **1999 UNESCO General Conference** and has been observed throughout the world since 2000.

**Statement 2 is correct.** In 1948, the-then Governor-General of Pakistan Muhammad Ali Jinnah declared that “Urdu, and only Urdu” would be the official language.

The contentious nature of the official language question came to the fore during the **first session of the Constituent Assembly of Pakistan**. A member from East Bengal, Dhirendranath Datta, **moved a motion to include Bengali** as one of the languages of the Constituent Assembly along with English and Urdu. The motion was rejected.

Bengali was eventually granted official status under the 1956 Constitution.

Source: <https://en.unesco.org/commemorations/motherlanguageday>

[https://www.constitutionofindia.net/blogs/\\_official\\_languages\\_\\_in\\_indo\\_pak\\_constitutional\\_history\\_](https://www.constitutionofindia.net/blogs/_official_languages__in_indo_pak_constitutional_history_)

Subject) History



## UPSC Civil Services Prelims 2021 | Set A | ForumIAS

**Q.51)** How is permaculture farming different from conventional chemical farming?

1. Permaculture farming discourages monocultural practical but in conventional chemical farming, monoculture practices are pre-dominant.
2. Conventional chemical farming can cause increase in soil salinity but the occurrence of such phenomenon is not observed in permaculture farming.
3. Conventional chemical farming is easily possible in semi-arid regions but permaculture farming is not so easily possible in such regions.
4. Practice of mulching is very important in permaculture farming but not necessarily so in conventional chemical farming.

Select the correct answer using the code given below.

- a) 1 and 3
- b) 1, 2 and 4
- c) 4 only
- d) 2 and 3

**Why this Question)** Has been news as the focus shifted towards a more sustainable agriculture.

<https://timesofindia.indiatimes.com/city/ludhiana/reduce-paddy-save-pb-campaign-propagates-permaculture-to-save-groundwater/articleshow/83620220.cms>

<https://www.hindustantimes.com/ht-insight/climate-change/sustainable-agriculture-what-we-know-and-how-to-scale-up-101626535232859.html>

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is correct.** Permaculture is a totally integrated design system that's modelled on nature. Permaculture farming promotes multicropping and integrated farming systems. Agroforestry is its example. Chemical farming is more suitable for monoculture cropping due to use of crop specific inputs like irrigation, chemical fertiliser and harvesting methods.

**Statement 2 is correct.** Chemical fertilizers will make the soil less fertile over time, which can lead to serious problems like soil salinisation. But such problems are not seen in permaculture farming as it relies on organic fertilizers.

**Statement 3 is incorrect.** Chemical farming is based on intense use of inputs like Chemical fertilizers and irrigation that make the soil less fertile over time, thus restricting its practise in semi-arid region. Thus, conventional farming is not suitable for semi-arid regions.

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The concept of **permaculture** involves well-designed systems don't produce waste and permaculture tries to mimic well-designed systems. Thus, permaculture tries to take into account the **local conditions** like arid climate. This helps in developing a suitable system to **ensure sustainable production**.

**Statement 4 is correct.** **Mulching** is an important component of Permaculture systems for promoting maximum efficiency.

**Chemical farming does not consider it as essential**, so farmers in general do not use mulching.

Knowledge Base:

The philosophy behind permaculture was developed in 1970s in Australia by Bill Mollison and David Holmgren. The land is called Tamera, the name given to these 330 acres in southern Portugal by a community of 30 people who moved here from Germany in 1995. Through simple practices of digging swales (ditches) and creating water retention spaces, Tamera's ecology experts have transformed an area on the brink of desertification.

Source: <https://www.theguardian.com/global-development-professionals-network/2017/mar/07/tamera-portugal-permaculture-water>

[https://grocycle.com/permaculture-farming/#Common\\_Permaculture\\_Practices](https://grocycle.com/permaculture-farming/#Common_Permaculture_Practices)

Subject) Environment

**Q.52)** With reference to 'palm oil' consider the following statements:

1. The palm oil tree is native to Southeast Asia.
2. The palm oil is a raw material for some industries producing lipstick and perfumes.
3. The palm oil can be used to produce biodiesel.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Recently Honorable Prime Minister announced a new national initiative on palm oil production to help increase farm incomes. The mission named as National Edible Oil mission- Oil Palm (NMEO-OP).

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.** **Palm oil** is derived from the oil palm tree which is native to **West Africa (and not Southeast Asia)** and grows best in tropical climates with abundant water.

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**Statement 2 is correct.** It is used in **cosmetics products** like **lipstick** and **perfumes** and cleaning products. Palm oil is one of the best options and most cost-effective cosmetics ingredients. It is versatile. Due to its high fatty acid content, it can be used to make surfactants, emulsifiers and emollients.

**Statement 3 is correct.** The **Palm oil** can be used to produce **biodiesel**. It can be used in compression ignition engines, i.e., diesel engines without any modifications. It refers to methyl esters derived from palm oil through a process known as 'transesterification'.

Source: <https://www.iucn.org/resources/issues-briefs/palm-oil-and-biodiversity>

<http://www.palmoilworld.org/biodiesel.html>

Subject) Environment

**Q.53)** With reference to the Indus River system, of the following four rivers, three of them pour into one of them which joins the Indus direct. Among the following which is one is such river that joins the Indus direct?

- a) Chenab
- b) Jhelum
- c) Ravi
- d) Sutlej

**Why this Question)** Indus water treaty has been in news lately also rivers and their important tributaries is an important static topic.

**Ans) d**

**Exp) Option d is correct.**

**Option a is incorrect.** The **Chenab** joins **Satluj** in Pakistan.

**Option b is incorrect.** The **Jhelum** joins the **Chenab** near Jhang in Pakistan.

**Option c is incorrect.** The **Ravi** joins the **Chenab** near Sarai Sidhu.

**Option d is correct.** **Satluj** is joined by the **Chenab** in Pakistan. Thus, Satluj receives the collective drainage of the Ravi, Chenab and Jhelum rivers. It joins the Indus a few kilometres above **Mithankot**.



Knowledge Base:



Source: <https://ncert.nic.in/ncerts/l/kegy103.pdf>

<https://www.britannica.com/place/Chenab-River>

[https://www.patnauniversity.ac.in/e-content/social\\_sciences/geography/MAGeog1.pdf](https://www.patnauniversity.ac.in/e-content/social_sciences/geography/MAGeog1.pdf)

Subject) Geography

**Q.54)** With reference to India, Didwana Kuchaman, Sargol and Khatu are the names of

- a) glaciers
- b) mangrove areas
- c) Ramsar sites
- d) saline lakes

**Why this Question)** Static part- Saline lakes in India.

**Ans) d**

**Exp)** Option d is correct.

Didwana, Kuchaman, Sargol and Khatu are **saline lakes of Rajasthan**.

Didwana is a town in the Nagaur district of Rajasthan. It has a famous Didwana salt-water lake of Rajasthan.

Kuchaman lake is located in Nagaur district of Rajasthan.

Source: <https://truerajasthan.com/didwana-lake/>

<http://www.palaeontologicalsociety.in/vol35/v14.pdf>

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[https://books.google.co.in/books?id=XaE\\_DAAAQBAJ&printsec=copyright&redir\\_esc=y#v=onepage&q&f=false](https://books.google.co.in/books?id=XaE_DAAAQBAJ&printsec=copyright&redir_esc=y#v=onepage&q&f=false)

Subject) Geography

**Q.55)** Consider the following rivers:

1. Brahmani
2. Nagawali
3. Subarnarekha
4. Vamsadhara

Which of the above rise from the Eastern Ghats?

- a) 1 and 2
- b) 2 and 4
- c) 3 and 4
- d) 1 and 3

**Why this Question)** Vamsadhara Water tribunal dispute order was in news. Also, there was impact of cyclone Gulab on Vamsadhara as well as Nagawali which received huge inflows of water from their rivulets.

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.** The Brahmani, known as South Koel in its upper reaches, rises near Nagri village in Ranchi district of Jharkhand at an elevation of about 600 m.

**Statement 2 is correct.** The Nagawali river originate in the **Eastern Ghats** near Lakhbahal, located at an altitude of 1,300 metres in the Kalahandi district of the Indian state Odisha. Langulya is another name for Nagawali River.

**Statement 3 is incorrect.** Subarnarekha River originate in the **Chhotnagpur Plateau** near Nagri village in the Ranchi District of Jharkhand at an elevation of 600 m.

**Statement 4 is correct.** Vamsadhara river rises in the **Eastern Ghats** of Orissa State and enters Srikakulam District in Bhamini Mandal and finally falls into the Bay of Bengal near Kalingapatnam.

Source: <https://srikakulam.ap.gov.in/history/>

<https://indiaawris.gov.in/wiki/doku.php?id=subarnarekha>

Subject) Geography



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**Q.56)** Consider the following statements:

1. The Global Ocean Commission grants licences for seabed exploration and mining in international waters.
2. India has received licences for seabed mineral exploration in international waters.
3. 'Rare earth minerals' are present on seafloor in the international waters.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** India's Deep Ocean mission was in news.

**Ans)** b

**Exp)** Option b is correct.

**Statement 1 is incorrect.** International Seabed Authority (ISA) considers applications for exploration and exploitation of deep-sea resources from contractors, assesses environmental impact assessments and supervises mining activities.

**Statement 2 is correct.** India was the first country to receive the status of a 'Pioneer Investor' in 1987 and was given an area of about 1.5 lakh sq km in the Central Indian Ocean Basin (CIOB) for nodule exploration. **India's exclusive rights to explore polymetallic nodules from seabed in the Central Indian Ocean Basin (CIOB) have been extended by five years.** These rights are over 75000 sq. km of area in international waters allocated by the International Seabed Authority for developmental activities for polymetallic nodules.

**Statement 3 is correct.** The sea floor of various oceans boasts one of the world's largest untapped collections of rare-earth elements. Example is scientists have discovered a vast reserve of rare earth reserve in the Japan side of the Pacific Ocean.

Source: <https://www.thehindu.com/sci-tech/science/why-is-india-pulled-to-deep-sea-mining/article28809029.ece>

Subject) International Relations

**Q.57)** Among the following which one is the **least** water-efficient crop?

- a) Sugarcane
- b) Sunflower
- c) Pearl millet
- d) Red gram

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**Why this Question)** Sustainable agriculture has been the major aim of the Government. Also, water guzzling crops like sugarcane has been in news.

**Ans) a**

**Exp) Option a is correct.**

**Option a is correct.** Sugarcane is the least water efficient crop. Among the given options, its water requirement is 1800-2200 mm/season which is highest.

**Option b is incorrect.** Sunflower's water requirement was estimated at 672.4 mm/season.

**Option c is incorrect.** Pearl millet is a drought tolerant crop.

Water requirement: 350 mm/season.

**Option d is incorrect.** Red gram uses about 250-400 mm/season of water.

Source: <http://www.ikisan.com/ka-redgram-water-management.html>

<http://eagri.org/eagri50/AGRO103/lec07.pdf>

[https://www.researchgate.net/publication/260793826\\_Water\\_Requirement\\_of\\_Sunflower\\_Helianthus\\_annuus\\_L\\_in\\_a\\_Tropical\\_Humid-Coastal\\_Savanna\\_Zone#:~:text=Water%20requirement%20of%20sunflower%20\(by,season%20or%207.1%20mm%2Fday.&text=It%20was%20concluded%20that%20even,the%20productivity%20of%20the%20cro.](https://www.researchgate.net/publication/260793826_Water_Requirement_of_Sunflower_Helianthus_annuus_L_in_a_Tropical_Humid-Coastal_Savanna_Zone#:~:text=Water%20requirement%20of%20sunflower%20(by,season%20or%207.1%20mm%2Fday.&text=It%20was%20concluded%20that%20even,the%20productivity%20of%20the%20cro.)

Subject) Geography

**Q.58)** Consider the following statements:

1. In the tropical zone, the western sections of the oceans are warmer than the eastern sections, owing to the influence of trade winds.
2. In the temperate zone, westerlies make the eastern sections of oceans warmer than the western sections.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

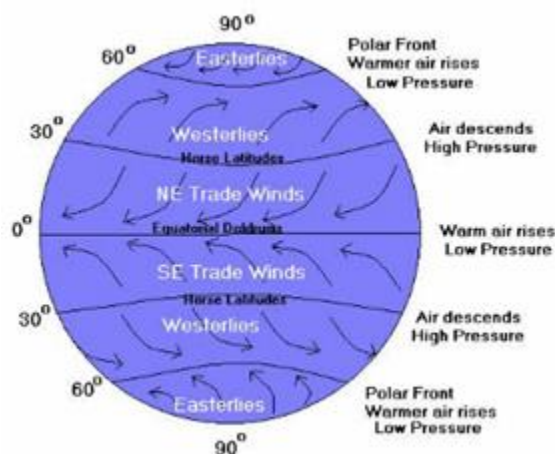
**Why this Question:** Important Static Concept

**Ans) c**

**Exp) Option c is correct.**

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**Statement 1 is correct.** Warmer water is transported westward in the ocean by the Northeast trade winds in the Northern hemisphere of the tropical zone (as the figure given below shows). So, in tropical zones, the western section of ocean is warmer than eastern sections due to trade winds.



**Statement 2 is correct.** Similarly, the **Westerlies** play an important role in carrying the warm, equatorial waters and winds to the western coasts of continents (that is eastern section of the Oceans in temperate zone). Thus, in temperate zones, **westerlies** make the eastern section of the ocean warmer than the western sections.

Source: <http://www.ces.fau.edu/nasa/module-3/why-does-temperature-vary/ocean-currents.php>

[https://www.wfmz.com/weather/what-are-the-prevailing-westerlies/article\\_747a927b-126f-57f1-95fc-566b0ab2f4d3.html](https://www.wfmz.com/weather/what-are-the-prevailing-westerlies/article_747a927b-126f-57f1-95fc-566b0ab2f4d3.html)

Subject) Geography

**Q.59)** In the context of India's preparation for climate-smart agriculture, consider the following statements:

1. The 'Climate-Smart village' approach in India is a part of a project led by the climate change, Agriculture and Food Security (CCAFS), an international research programme.
2. The project of CCAFS is carried out under consultative group on International Agricultural Research (CGIAR) headquartered in France.
3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR's research centres.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

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**Why this Question)** Climate Smart Agriculture has been in news throughout the year and certain initiatives related to it.

**Ans) d**

**Exp)** Option d is correct.

**Statement 1 is correct.** The **Climate-Smart Village project in India** is a program of CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). The CCAFS started piloting the Climate-Smart Village in 2012 in Africa (Burkina Faso, Ghana, Mali, Niger, Senegal, Kenya, Ethiopia, Tanzania, and Uganda) and South Asia (Bangladesh, India, and Nepal).

**Statement 2 is correct.** Climate Change, Agriculture and Food Security (CCFAS) is carried out under CGIAR (formerly the Consultative Group for International Agricultural Research). **Headquarter** of CGIAR is in Montpellier, **France**. CGIAR is a global partnership that unites international organizations engaged in research about food security.

**Statement 3 is correct.** International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a **CGIAR Research Center**. ICRISAT is a non-profit, non-political public international research organization that conducts agricultural research for development in Asia and sub-Saharan Africa with a wide array of partners throughout the world.

Source: <https://ccafs.cgiar.org/news/what-are-climate-smart-villages>

<https://www.icrisat.org/>

Subject) Agriculture

**Q.60)** "Leaf litter decomposes faster than in any other biome and as a result the soil surface is often almost bare. Apart from trees, the vegetation is largely composed of plant forms that reach up into the canopy vicariously, by climbing the trees or growing as epiphytes, rooted on the upper branches of trees," This is the most likely description of

- a) coniferous forest
- b) dry deciduous forest
- c) mangrove forest
- d) tropical rain forest

**Why this Question)** Important static concept.

**Ans) d**

**Exp)** Option d is correct.

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**Option d is correct.** In **tropical rainforest biome**, hot, moist atmosphere and all the dead plant material create the perfect conditions in which bacteria and other microorganisms can thrive. This leads to rapid decomposition of leaf litter material. The tropical rainforest is known for its **dense canopies of vegetation** that form three different layers. The top layer or canopy contains giant trees that grow to heights of 75 m (about 250 ft) or more. Thick, woody **vines are also found in the canopy**. They **climb trees** in the canopy to reach for sunlight.

Source: <https://earthobservatory.nasa.gov/biome/biorainforest.php>

Subject) Geography

**Q.61)** The Vegetation of savannah consists of grassland with scattered small trees, but extensive areas have no trees. The forest development in such areas is generally kept in check by one or more or a combination of some conditions.

Which of the following are such conditions?

1. Burrowing animals and termites
2. Fire
3. Grazing herbivores
4. Seasonal rainfall
5. Soil properties

Select the correct answer using the code given below.

- a) 1 and 2
- b) 4 and 5
- c) 2, 3 and 4
- d) 1, 3 and 5

**Why this Question)** Important static geography topic from GC Leong book and AFR100 initiative in news.

**Ans)** c

**Exp)** Option c is correct.

**Statement 1 is incorrect.** Burrowing animals and termites have not checked the extensive forest cover in savannah.

A burrow is a tunnel or hole that an animal digs for habitation (a place to live) or as a temporary refuge (a place of protection). Burrows provide shelter from predators and extreme temperatures. For these reasons, animals have used burrowing behavior for a very long time.



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In savannah, an unusually large proportion of dead organic matter—approximately 30 percent—is decomposed through the feeding activities of termites. In savannas, soil fertility can be markedly improved by mechanically breaking up termite mounds and spreading the material across the soil surface.

**Statement 2 is correct.** Fire has a large effect on structure in the densely wooded granitic landscapes in Savannah. Although proportionally, the woody vegetation was more reduced in the drier than in the wetter landscapes. **Frequent fires reduced woody vegetation** and dry-season fires have reduced woody vegetation more than wet-season fires.

**Statement 3 is correct.** Grazing herbivores like giraffe and elephant rely on foliage or fruit from the thorny trees. Thus, their population has impact on tree growth. For example, a steady rise in the elephant population between 1934 and 1959 in Virunga National Park, Congo (Kinshasa), led to an increase in the destruction of woody plants and transformed a heavily wooded savanna into a grass savanna with very few trees.

**Statement 4 is correct.** Seasonal rainfall has affected the extensive forest areas of savannah. Savannah experience frequent dry periods. The dry season is typically longer than the wet season, but it varies considerably, from 2 to 11 months.

**Statement 5 is incorrect.** The Savannah consists of very deep, moderately well drained, moderately slowly permeable soils on uplands and terraces in the Southern Coastal Plain. They formed in loamy marine or fluvial terrace deposits. They are beneficial for trees and do not check their growth. The forested areas are dominated by shortleaf, longleaf, slash, and loblolly pines; white, post, and red oaks; hickory, and sweetgum.

Source) <https://www.nationalgeographic.org/encyclopedia/burrow/>

<https://www.britannica.com/science/savanna/Population-and-community-development-and-structure>

[https://soilseries.sc.egov.usda.gov/OSD\\_Docs/S/SAVANNAH.html](https://soilseries.sc.egov.usda.gov/OSD_Docs/S/SAVANNAH.html)

Subject) Geography

**Q.62)** With reference to the water on the planet Earth, consider the following statements:

1. The amount of water in the rivers and lakes is more than the amount of groundwater.
2. The amount of water in polar ice caps and glaciers is more than the amount of groundwater.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Important static geography data from NCERT class XI.

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Ans) b

Exp) Option b is correct.

**Statement 1 is incorrect.** Of the total freshwater, 69% resides in glaciers, 30% underground, and less than 1% is located in lakes, rivers, and swamps. Thus, the amount of water in rivers and lakes is less than amount of groundwater.

**Statement 2 is correct.** Of the total freshwater, 69% resides in glaciers and 30% underground. Polar ice caps and glaciers has more water than groundwater.

Source: <https://ncert.nic.in/ncerts/l/kegy213.pdf>

Subject) Geography

**Q.63)** Consider the following statements:

1. Moringa (drumstick tree) is a leguminous evergreen tree.
2. Tamarind tree is endemic to South Asia.
3. In India, most of the tamarind is collected as minor forest produce.
4. India exports tamarind and seeds of moringa.
5. Seeds of moringa and tamarind can be used in the production of biofuels.

Which of the statements given above are correct?

- a) 1, 2, 4 and 5
- b) 3, 4 and 5
- c) 1, 3 and 4
- d) 1, 2, 3 and 5

**Why this Question)** India starts export of Moringa powder (December 2020). Health benefits of Moringa and tamarind.

Ans) b

Exp) Option b is correct.

**Statement 1 is incorrect.** Moringa is a green leafy fast-growing deciduous plant, native to the Indian subcontinent. It is a non-leguminous tree.

**Statement 2 is incorrect.** Tamarind is a leguminous tree bearing edible fruit that is indigenous to tropical Africa (and not endemic to South Asia).

**Statement 3 is correct.** Tamarind is collected mostly as the minor forest produce in India.

**Statement 4 is correct.** India exports tamarind and moringa seeds to the US, Germany, China, Canada, South Korea, and other European countries.

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**Statement 5 is correct.** Seeds of moringa and tamarind can be used for biofuel. The oil from the Moringa tree is considered to be a more sustainable biodiesel feedstock than jatropha oil.

Source: <https://www.tpci.in/indiabusinesstrade/blogs/moringa-on-track-for-an-export-surge/>

<https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/t/Tamarind.html>

<https://www.britannica.com/plant/tamarind>

<https://www.rroij.com/open-access/many-uses-of-moringa-moringa-oleifera-in-human-and-animal-nutrition.php?aid=86864>

<https://www.ijsr.net/archive/v3i7/MDIwMTU0OA==.pdf>

<http://moringaceae.org/imgc-moringa-blog/does-moringa-fix-nitrogen>

Subject) Agriculture

**Q.64)** The black cotton soil of India has been formed due to the weathering of

- a) brown forest soil
- b) fissure volcanic rock
- c) granite and schist
- d) shale and limestone

**Why this Question)** Important Static geography concept from NCERT class XI.

**Ans) b**

**Exp) Option b is correct.**

**Black soil** in India is formed by the weathering of **fissure volcanic rock**.

Climatic condition along with the parent rock material is the important factors for the formation of black soil.

Black soils are spread mostly across interior Gujarat, Maharashtra, Karnataka, and Madhya Pradesh on the Deccan lava plateau and the Malwa Plateau, where there is both moderate rainfall and underlying **basaltic rock**.

Source: <https://ncert.nic.in/textbook/pdf/jess101.pdf>

<https://www.britannica.com/place/India/Black-soils>

Subject) Geography

**Q.65)** With reference to recent developments regarding 'Recombinant Vector Vaccines', consider the following statements:

1. Genetic engineering is applied in the development of these vaccines.
2. Bacteria and viruses are used as vectors.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question) COVID-19 recombinant vector vaccines in news recently.**

**Ans) c**

**Exp) Option c is correct.**

**Statement 1 is correct.** Genetic engineering is applied in the development of Recombinant vector vaccines.

Genetic engineering involves techniques to alter the chemistry of genetic material (DNA and RNA), to introduce these into host organisms and thus change the phenotype of the host organism. The techniques of genetic engineering include creation of recombinant DNA, use of gene cloning and gene transfer.

**Statement 2 is correct.** Recombinant vaccines are made of a viral or bacterial vector. They are used as channels for entry into host organisms.

**Knowledge Base:**

Viral vector-based vaccines use the body's own cells to produce them. They do this by using a modified virus (the vector) to deliver genetic code for antigen, in the case of COVID-19 spike proteins found on the surface of the virus, into human cells. Gene engineering is applied in the development of recombinant vector vaccines. The use of recombinant proteins allows the targeting of immune responses focused against few protective antigens.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3854212/>

<https://www.gavi.org/vaccineswork/what-are-viral-vector-based-vaccines-and-how-could-they-be-used-against-covid-19>

<https://www.sciencedirect.com/topics/medicine-and-dentistry/recombinant-vaccine>

<https://ncert.nic.in/ncerts/l/lebo111.pdf>

Subject) Science

**Q.66) In the context of hereditary diseases, consider the following statements:**

1. Passing on mitochondrial diseases from parent to child can be prevented by mitochondrial replacement therapy either before or after in vitro fertilization of egg.
2. A child inherits mitochondrial diseases entirely from mother and not from father.

Which of the statements given above is/are correct?

- a) 1 only

- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Scientists at Kyoto University in Japan report a new approach where mutant DNA sequences inside cellular mitochondria can be eliminated using a bespoke chemical compound. (July 2021).

**Ans)** c

**Exp)** Option c is correct.

**Statement 1 is correct.** Mitochondrial replacement therapy (MRT) is a form of reproductive invitro fertilization (IVF) which works on the principle of replacing a women's mitochondrial DNA (mt-DNA) with the donor's healthy one. MRT include different techniques like spindles transfer (ST), pronuclear transfer (PNT) or polar body transfer (PBT).

Pronuclear transfer technique is a significant approach of MRT administered after fertilization, in which two zygotes are raised in vitro.

Maternal spindle transfer (MST) technique is executed before fertilization is a form of selective reproduction similar to prenatal diagnosis and pre-implantation genetic diagnosis (PGD)

**Statement 2 is correct.** Mitochondria are the organelle which contain DNA in circular form, and in animals it is the only organelle in addition to nucleus which contain DNA and gene. The sperm contains very low number of mitochondria and mitochondrial gene. So, in the offspring the mitochondrial genes are inherited from the mother. Thus, a father with mitochondrial gene defect cannot transmit the disease to his offspring.

**Knowledge Base:**

In pronuclear transfer, the mother's egg is first fertilized with the sperm which produces a zygote. The pronuclei of the egg and sperm are then removed from the zygote and inserted into a donor egg that has been fertilized and has had its own nucleus removed. The zygote derived from the donor egg is then implanted into the mother's uterus. So, it works before invitro fertilization of women.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7492815/>

<https://ncert.nic.in/textbook/pdf/kebt108.pdf>

Subject) Science

**Q.67)** Bollgard I and Bollgard II technologies are mentioned in the context of

- a) clonal propagation of crop plants
- b) developing genetically modified crop plants
- c) production of plant growth substances



d) production of biofertilizers

**Why this Question)** The Centre considered writing off trait value charged from farmers for Bollgard-II variety of Bt cotton to ensure the seeds are available to farmers at affordable prices. (March 2020).

**Ans) b**

**Exp) Option b is correct.**

Bollgard1 and Bollgard 2 help in developing genetically modified crop plants. Bollgard cotton provides in-built protection for cotton against destructive Bollworm infestations, and contains an insecticidal protein from a naturally occurring soil microorganism, *Bacillus thuringiensis* (Bt).

Bollgard Bt cotton (single-gene technology) is India's first biotech crop technology approved for commercialization in India in 2002.

Bollgard II technology contains a superior double-gene technology - Cry1Ac and Cry 2Ab which provides protection against bollworms and *Spodoptera* caterpillar.

Source: <https://www.cropsscience.bayer.in/en/Products-H/Brands/Seeds-and-Traits/Traits-Bollgard.aspx>

Subject) Science

**Q.68)** In a pressure cooker, the temperature at which the food is cooked depends mainly upon which of the following?

1. Area of the hole in the lid
2. Temperature of the flame
3. Weight of the lid

Select the correct answer using the code given below.

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Applied science from day-to-day life.

**Ans) c**

**Exp) Option c is correct.**

**Statement 1 is correct.** Area of the hole in the lid will affect pressure inside the pressure cooker that affects the temperature at which liquid boils in the cooker.

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**Statement 2 is incorrect.** Temperature of the flame is not a factor because it will not impact the temperature at which the food cooks, that will remain the same whether the flame is low or high. Temperature of the flame will decide the pace of cooking.

**Statement 3 is correct.** Internal pressure depends upon the weight of the lid plus the external atmospheric pressure. As the temperature at which the food cooks is the boiling point of the internal water, which goes up with the internal pressure, the cooking time will depend on weight of the lid.

Subject) Science

**Q.69)** Consider the following:

1. Bacteria
2. Fungi
3. Virus

Which of the above can be cultured in artificial/synthetic medium?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Commercial use of Bacteria and Fungi, also viruses in news.

**Ans) a**

**Exp) Option a is correct.**

**Statement 1 is correct.** Bacteria can be grown in synthetic culture media. Researchers have had rewritten the DNA of the bacteria *Escherichia coli*, fashioning a synthetic genome four times larger and far more complex than any previously created.

**Statement 2 is correct.** Fungi can be grown in synthetic culture media. Four allergologically important fungi, viz. *Aspergillus fumigatus*, *Alternaria Penicillium notatum*, and *Cladosporium herbarum*, were cultured in a pure synthetic medium.

**Statement 3 is incorrect.** Viruses lack metabolic machinery of their own and are totally dependent on their host cell for replication, they cannot be grown in synthetic culture media.

Source: <https://www.nytimes.com/2019/05/15/science/synthetic-genome-bacteria.html>

<https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1007019>

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[https://bio.libretexts.org/Bookshelves/Microbiology/Book%3A\\_Microbiology\\_\(Kaiser\)/Unit\\_4%3A\\_Eukaryotic\\_Microorganisms\\_and\\_Viruses/10%3A\\_Viruses/10.01%3A\\_General\\_Characteristics\\_of\\_Viruses#:~:text=Viruses%20can%20infect%20animals%2C%20plants,grown%20in%20synthetic%20culture%20media.](https://bio.libretexts.org/Bookshelves/Microbiology/Book%3A_Microbiology_(Kaiser)/Unit_4%3A_Eukaryotic_Microorganisms_and_Viruses/10%3A_Viruses/10.01%3A_General_Characteristics_of_Viruses#:~:text=Viruses%20can%20infect%20animals%2C%20plants,grown%20in%20synthetic%20culture%20media.)

<https://pubmed.ncbi.nlm.nih.gov/4091234/>

Subject) Science

**Q.70)** Consider the following statements:

1. Adenoviruses have single-stranded DNA genomes whereas retroviruses have double-stranded DNA genomes.
2. Common cold is sometime caused by an adenovirus whereas AIDS is caused by a retrovirus.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Viruses and health issues in news in last one year.

**Ans) b**

**Exp) Option b is correct.**

Adenoviruses are a group of common viruses that infect the lining of your eyes, airways and lungs, intestines, urinary tract, and nervous system. They're common causes of fever, coughs, sore throats, diarrhoea, and pink eye. Infections happen in children more often than in adults, but anyone can get them.

**Statement 1 is incorrect.** The adenovirus genome is a single linear molecule of double-stranded DNA while retroviruses are single-stranded DNA.

**Statement 2 is correct.** Common cold is caused by adenoviruses. HIV is caused by retrovirus. HIV is classified as a retrovirus because it contains reverse transcriptase. It is a D-type virus in the Lentivirus family.

Source: <https://www.sciencedirect.com/topics/neuroscience/adenovirus-genome>

<https://www.healthline.com/health/what-is-a-retrovirus#virus-vs-retrovirus>

Subject) Science

**Q.71)** Water can dissolve more substances than any other liquid because

- a) It is dipolar in nature
- b) It is a good conductor of heat
- c) It has high value of specific heat

d) It is an oxide of hydrogen

**Why this Question)** Important static science concept.

**Ans)** a

**Exp)** Option a is correct.

Water is called the "universal solvent" because it is capable of dissolving more substances than any other liquid. This is important to every living thing on earth. It means that wherever water goes, either through the air, the ground, or through our bodies, it takes along valuable chemicals, minerals, and nutrients.

It is water's chemical composition and physical attributes that make it such an excellent solvent. Water molecules have a **polar arrangement of oxygen and hydrogen atoms**—one side (hydrogen) has a positive electrical charge and the other side (oxygen) had a negative charge. This allows the water molecule to become attracted to many other different types of molecules.

Water can become so heavily attracted to a different compound, like salt (NaCl), that it can disrupt the attractive forces that hold the sodium and chloride in the salt compound together and, thus, dissolve it.

Source) [https://www.usgs.gov/special-topic/water-science-school/science/water-universal-solvent?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/water-universal-solvent?qt-science_center_objects=0#qt-science_center_objects)

Subject) Science

**Q.72)** With reference to street-lighting, how do sodium lamps differ from led lamps?

1. Sodium lamps produce light in 360 degrees but it is not so in the case of LED lamps.
2. As street-lights, sodium lamps have longer life span than LED lamps.
3. The spectrum of visible light from sodium lamps is almost monochromatic while LED lamps offer significant colour advantages in street-lighting.

Select the correct answer using the code given below.

- a) 3 only
- b) 2 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this Question)** Government focus on LED lights (Ujala Yojana); environment friendly.

**Ans)** c

**Exp)** Option c is correct.

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**Statement 1 is correct.** Sodium lamps produce light in 360 degrees but it is not so in the case of LED lamps.

**LED lamps have 180-degree bulb angle** to preserve light efficiency and allow for target lighting over areas.

**Statement 2 is incorrect.** As street lights, sodium lamps have on an average shorter lifespan than LED lamps.

High Pressure Sodium lamps tend to have a lifespan averaging 24,000 hours. Whereas, LED lamps lifespan ranges from 25,000 to 200,000 hours.

**Statement 3 is correct.** The spectrum of visible light from sodium lamps is almost **monochromatic** as they are known for their warm yellow glow. On the other hand, LED lamps offer significant colour advantages in street-lighting. LEDs offer variety of colour options providing better lighting solutions than High Pressure Sodium counterpart.

Source) <https://www.homeelectrical.com/advantages-led-vs-high-pressure-sodium-area-lights.6.html>

Subject) Science

**Q.73)** The term 'ACE2' is talked about in the context of

- a) Genes introduced in the genetically modified plants
- b) Development of India's own satellite.
- c) Radio collars for wildlife tracking
- d) Spread of viral diseases

**Why this Question)** COVID-19 pandemic, research related to it.

**Ans) d**

**Exp) Option d is correct.**

ACE2 (angiotensin-converting enzyme 2) is a protein on the surface of many cell types. It is an enzyme that generates small proteins – by cutting up the larger protein angiotensinogen – that then go on to regulate functions in the cell. Using the spike-like protein on its surface, **the SARS-CoV-2 virus binds to ACE2** – like a key being inserted into a lock – prior to entry and infection of cells. Hence, ACE2 acts as a cellular doorway – a receptor – for the virus that causes COVID-19.

In the search for treatments for COVID-19, many researchers are focusing their attention on a specific protein that allows the virus to infect human cells.

Source) <https://theconversation.com/what-is-the-ace2-receptor-how-is-it-connected-to-coronavirus-and-why-might-it-be-key-to-treating-covid-19-the-experts-explain-136928>

Subject) Science



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**Q.74)** Bisphenol a (BPA), a cause of concern, is a structural/key component in the manufacture of which of the following kinds of plastics?

- a) Low-density polyethylene
- b) Polycarbonate
- c) Polyethylene terephthalate
- d) Polyvinyl chloride

**Why this Question)** Health safety concerns, plastic ban in India.

**Ans) b**

**Exp) Option b is correct.**

Bisphenol A (BPA) is a chemical used to make **polycarbonate plastic**. Polycarbonate plastic is used to make hard plastic items, such as baby bottles, re-useable water bottles, food containers, pitchers, tableware and other storage containers.

BPA is also used to make epoxy resins. Epoxy resin linings coat the inside of metal products such as food cans, bottle tops and water supply pipes. The purpose of epoxy linings is to keep the can material from corroding or reacting with the food.

Small amounts of BPA may remain in polycarbonate products and epoxy linings after curing, and be released into food and beverages. Canned foods and liquids stored or heated in polycarbonate containers and epoxy-lined cans appear to be the main source of exposure to BPA.

Scientists and government agencies have differing opinions about whether the levels of BPA found in contents from polycarbonate containers or epoxy-lined cans may harm human health. Scientists have recently looked for associations between BPA exposure and health effects in the general population. Some studies have reported associations between elevated BPA exposure and health effects such as diabetes or heart disease, while other studies have not.

Source) [https://www.health.ny.gov/environmental/chemicals/bisphenol\\_a/](https://www.health.ny.gov/environmental/chemicals/bisphenol_a/)

Subject) Environment

**Q.75)** 'Triclosan', considered harmful when exposed to high levels for a long time, is most likely present in which of the following?

- a) Food preservatives
- b) Fruit-ripening substances
- c) Reused plastic containers
- d) Toiletries

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**Why this Question)** Focus given on sanitization and disinfection during the pandemic. Harmful effects of triclosan highlighted by IIT study.

**Ans)** d

**Exp)** Option d is correct.

**Triclosan** is an ingredient added to many consumer products intended to reduce or prevent bacterial contamination. It is added to some antibacterial soaps and body washes, toothpastes, and some cosmetics.

Some short-term animal studies have shown that exposure to high doses of triclosan is associated with a decrease in the levels of some thyroid hormones. Other studies have raised the possibility that exposure to triclosan contributes to making bacteria resistant to antibiotics. At this time, we don't have enough information available to assess the level of risk that triclosan poses for the development of antibiotic resistance.

Source) <https://www.fda.gov/consumers/consumer-updates/5-things-know-about-triclosan>

Subject) Environment

**Q.76)** Which one of the following is a reason why astronomical distances are measured in light-years?

- a) Distances among stellar bodies do not change.
- b) Gravity of stellar bodies does not change.
- c) Light always travels in straight line.
- d) Speed of light is always same.

**Why this Question)** Important basic concept, Indian Space Missions, Gaganyaan and others.

**Ans)** d

**Exp)** Option d is correct.

A light-year is a measurement of distance in space. The astronomical distances are measured in light-years because, **the speed of light is constant throughout the universe and is known to high precision**. In a vacuum, light travels at 670,616,629 mph (1,079,252,849 km/h). To find the distance of a light-year, you multiply this speed by the number of hours in a year (8,766). The result: One light-year equals 5,878,625,370,000 miles (9.5 trillion km). At first glance, this may seem like an extreme distance, but the enormous scale of the universe dwarfs this length.

Measuring in light-years also allows astronomers to determine how far back in time they are viewing. Because light takes time to travel to our eyes, everything we view in the night sky has already happened. In other words, when you observe something 1 light-year away, you see it as it appeared exactly one year ago.

Source) <https://www.space.com/light-year.html>

Subject) Science

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Q.77) We adopted parliamentary democracy based on the British model, but how does our model differ from that model?

1. As regards legislation, the British Parliament is supreme or sovereign but in India, the power of the Parliament to legislate is limited.
2. In India, matters related to the Amendment of an Act of the Parliament are referred to the Constitution Bench by the Supreme Court.

Select the correct answer using the code given below.

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question) Important static concept about Indian democracy, Judicial review used by the Supreme Court in various cases like 97<sup>th</sup> Constitutional Amendment Act case (partially struck down by the court).**

**Ans) c**

**Exp) Option c is correct.**

**Statement 1 is correct.** Parliamentary sovereignty is a principle of the UK constitution. It makes Parliament the supreme legal authority in the UK, which can create or end any law. Generally, the courts cannot overrule its legislation and no Parliament can pass laws that future Parliaments cannot change.

**Indian Parliament is not a sovereign body** like the British Parliament. The Indian Parliament may, in exercise of its constituent power, amend by way of addition, variation or repeal any provision of the Constitution in accordance with the procedure laid down for the purpose. However, the Parliament cannot amend those provisions which form the 'basic structure' of the Constitution. This was ruled by the Supreme Court in the Kesavananda Bharati case (1973).

**Statement 2 is correct.** In India, matters related to the **constitutionality of an amendment of an act** of the Parliament are referred to the **Constitution Bench by the Supreme Court**. A Constitution Bench is a bench of the Supreme Court having five or more judges on it. These benches are not a routine phenomenon. A vast majority of cases before the Supreme Court are heard and decided by a bench of two judges (called a Division Bench), and sometimes of three. Constitution Benches are set up when the case involves a substantial question of law pertaining to the interpretation of the Constitution (Article 145(3) of the Constitution, which mandates that such matters be heard by a bench of not less than five judges).

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Presently, Constitution Benches are set up on an ad hoc basis as and when the need arises. The idea behind a Constitution Bench is clear: it is constituted in rare cases to decide important questions of fact or legal and/or constitutional interpretation.

Source) M Laxmikanth, 6<sup>th</sup> edition, Chapter 3 Salient features of the Constitution\

<https://www.barandbench.com/columns/constituting-constitution-benches-of-the-supreme-court-an-analysis>

Subject) Polity

**Q.78)** With reference to the Union Government, consider the following statements:

1. N. Gopalaswamy Iyengar Committee suggested that a minister and a secretary be designated solely for pursuing the subject of administrative reform and promoting it.
2. In 1970, the Department of Personnel was constituted on the recommendation of the Administrative Reforms Commission, 1966, and this was placed under the Prime Minister's charge.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this Question)** Mission Karmayogi for civil service capacity building was launched in 2020.

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.** Sh. N. Gopalaswamy Ayyangar, in his Report namely 'Reorganization of the Machinery of Central Government' in 1950 recommended for the grouping of ministries, improvement in the capabilities of the personnel, and also in the working of the O&M Division. It nowhere mentions that a minister and a secretary be designated solely for pursuing the subject of administrative reform and promoting it.

**Statement 2 is correct.** In 1970, on the basis of the recommendations of the **Administrative Reforms Commission**, the Department of Personnel was set up in the Cabinet Secretariat. It was placed under the Prime Minister's Office.

Source) <https://egyankosh.ac.in/bitstream/123456789/70425/1/Unit-10F.pdf>

Subject) Polity

## UPSC Civil Services Prelims 2021 | Set A | ForumIAS

**Q.79)** 'Right to Privacy' is protected under which Article of the Constitution of India?

- a) Article 15
- b) Article 19
- c) Article 21
- a) Article 29

**Why this Question)** Puttaswamy case, Aadhaar debate, New IT Guidelines etc.

**Ans)** c

**Exp)** Option c is correct.

The nine –judge Constitutional Bench of the Supreme Court in Justice K. S. Puttaswamy (Retd.) and Anr. vs Union of India And Ors (2017) has ruled that individual privacy is intrinsic to life and liberty and an inherent part of the fundamental rights enshrined in the Article 21 of the Constitution.

What are the various features of Right to Privacy?

- Privacy is a constitutionally protected right emerging primarily from the guarantee of life and liberty in Article 21 of the Constitution.
- It includes the preservation of personal intimacies, sanctity of family life, marriage, procreation, the home and sexual orientation.
- Privacy connotes a right to be left alone. It safeguards individual autonomy and recognizes one's ability to control vital aspects of his/her life.
- Privacy is not an absolute right, but any invasion must be based on legality, need and proportionality.
- Informational privacy is a facet of this right. Dangers to this can originate from both state and non-state actors.

Source) <https://blog.forumias.com/right-to-privacy-is-a-fundamental-right-now/>

Subject) Polity

**Q.80)** Consider the following statements:

1. In India, there is no law restricting the candidates from contesting in one Lok Sabha election from three constituencies.
2. In 1991 Lok Sabha Election, Shri Devi Lal contested from three Lok Sabha constituencies.
3. As per the existing rules, if a candidate contests in one Lok Sabha election from many constituencies, his/her party should bear the cost of bye-elections to the constituencies vacated by him/her in the event of his/her winning in all the constituencies.

Which of the statements given above is/are correct?



- a) 1 only
- b) 2 only
- c) 1 and 3
- d) 2 and 3

**Why this question)** Important static concept from polity. Assembly elections held in states in 2021 where candidates contested from two seats and some won in bye-elections.

**Ans) b**

**Exp)** Option b is correct.

**Statement 1 is incorrect.** In 1996, the Representation of the People Act, 1951, was amended which restricted the number of seats one candidate could contest in one election to two constituencies. And whenever they have won more than one, the candidates have retained only one, forcing bypolls in the rest.

**Statement 2 is correct.** In 1991 Lok Sabha Election, Shri Devi Lal contested from three Lok Sabha constituencies. (Although such information need not be remembered by students, it can be validated by eliminating other statements).

**Statement 3 is incorrect.** There is no such provision that if a candidate contests in one Lok Sabha elections from many constituencies, then his/her party should bear the cost of bye-elections to the constituencies vacated by him/her in the event of him/her winning in all the constituencies. In every case, the Election Commission of India (ECI) bears the cost of elections/bye-elections in all the constituencies in Lok Sabha and assembly elections as well.

Source) <https://economictimes.indiatimes.com/news/politics-and-nation/bar-people-from-contesting-from-two-seats-election-commission/articleshow/55960421.cms>

Subject) Polity

**Q.81)** Consider the following statements:

1. Right to the city' is an agreed human right and the UN-Habitat monitors the Commitments made by each country in this regard.
2. "Right to the City" gives every occupant of the city the right to reclaim public spaces and public participation in the city.
3. "Right to the City" means that the State cannot deny any public service or facility to the unauthorized colonies in the city.

Which of the statements given above is/are correct?

- a) 1 only

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- b) 3 only
- c) 1 and 2
- d) 2 and 3

### Why this question)

- In *Ajay Maken & Ors. vs Union of India & Ors.* (2019), the Delhi High Court invoked the idea of the “Right to the City” to uphold the housing rights of slum dwellers.
- right to the city was seen in news in the context of Delhi's Draft Master Plan 2041

Ans) c

Exp) Option c is correct.

Right to the city is a holistic approach to improving the quality of everyday life in cities.

**Statement 1 is correct.** The right to the city is at the heart of the **New Urban Agenda agreed at Habitat III**. UN-Habitat partners with national and local governments, academia, civil society and the private sector in the implementation and monitoring of the commitment made under the New Urban Agenda and SDG 11.

The **Universal Declaration of Human Rights** commits to social justice through the promotion, defense and fulfillment of all human rights related to habitat, including the Human Right to Adequate Housing, Land and **the Right to the City** in every region of the world.

There is also a “World Charter for the Right to the City” which provides a progressive framework to rethink cities and urbanization.

**Statement 2 is correct.** The Right to the City is the **right of all inhabitants** (present and future, permanent and temporary) to **inhabit, use, occupy, produce, transform, govern and enjoy cities**, towns and human settlements that are just, inclusive, safe, sustainable and democratic, defined as common goods **for enjoying life with dignity and peace**. The right to the city further implies responsibilities on governments and people to claim, defend, and promote this right.

This right claims for:

- the social function of the city;
- **quality public spaces;**
- sustainable and inclusive rural-urban linkages;
- inclusive economies;
- **inclusive citizenship;**
- **enhanced political participation;**
- non-discrimination;
- gender equality; and

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- cultural diversity

**Statement 3 is incorrect.** The 'Right to the City' does not mean the guarantee of **any** public service or facility to the unauthorized colonies in a city. It guarantees the common goods and services which are essential for the quality of life.

Source) <https://www.right2city.org/news/declaration-on-human-rights-day-and-the-right-to-the-city/>

[https://www.hlrn.org.in/documents/World\\_Charter\\_on\\_the\\_Right\\_to\\_the\\_City.htm](https://www.hlrn.org.in/documents/World_Charter_on_the_Right_to_the_City.htm)

<https://uploads.habitat3.org/hb3/Habitat%20III%20Policy%20Paper%201.pdf>

Subject) Polity + Environment

**Q.82)** With reference to India, consider the following statements:

1. Judicial custody means and accused is in the custody of the concerned magistrate and such accused is locked up in police station, not in jail.
2. During judicial custody, the police officer in charge of the case is not allowed to interrogate the suspect without the approval of the court.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this question)** The concept of Police and judicial custody appeared in news in the context of Rhea Chakraborty case. An article explaining the difference between the two came in the Indian Express in September 2020.

**Ans) b**

**Exp) Option b is correct.**

The provisions for custody in India are governed by Section 167 of the Code of Criminal Procedure. A person may be held in the custody of the police or in judicial custody. The first thing that happens to a suspect on arrest is that he is taken into police custody, following which he is taken before a magistrate. From there, he may either be remanded to judicial custody or be sent back into police custody.

**Statement 1 is incorrect.** Police Custody means that police has the physical custody of the accused while **Judicial Custody means an accused is in the custody of the concerned Magistrate.** In Police custody, the accused is lodged in police station lockup while in **Judicial Custody, he is locked up in the jail.**

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**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.

Source) <https://districts.ecourts.gov.in/sites/default/files/fct.pdf>

Subject) Polity

**Q.83)** With reference to India, consider the following statements:

1. When a prisoner makes out a sufficient case, parole cannot be denied to such prisoner because it becomes a matter of his/her right.
2. State Governments have their own Prisoner Release on Parole Rules.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this question)**

- Recently, the Union Ministry of Home Affairs (MHA) has revised the Model Prison Manual, 2016 guidelines related to parole and furlough.
- Recently, the Supreme Court expressed concern over convicts languishing in jail despite being entitled to remission of sentences while hearing a case of a murder convict jumping furlough.

**Ans) b**

**Exp)** Option b is correct.

**Statement 1 is incorrect.** Parole is a system of releasing a prisoner with suspension of the sentence. **Parole cannot be claimed as a matter of right.** Parole may be denied to a prisoner even when he makes out sufficient cause for release on parole.

Parole is to be granted only on a sufficient cause such as cases of severe illness or death of any member of the prisoner's family. The granting authority for parole is the deputy home secretary of the state government.

On the other hand, **Furlough is seen as a matter of right for a prisoner**, to be granted periodically irrespective of any reason. It is granted merely to enable the prisoner to retain family and social ties, and to counter the ill-effects of prolonged time spent in prison.

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Both Parole and Furlough can be denied if the competent authority is of the opinion that releasing the inmate would not be in the interest of society.

**Statement 2 is correct.** State governments have their own Prisoner Release on Parole Rules. 'Prisons' is a State subject under the State List of the Seventh Schedule of the Constitution.

The management and administration of prisons fall exclusively in the domain of state governments and are governed by the Prisons Act, 1894, and the Prison Manuals of the respective state governments.

The Prisons Act further says that only states can make rules regarding the release of prisoners on furlough, parole and remission, as part of the correctional process in jail reforms.

**Source)** <https://indianexpress.com/article/explained/explained-what-are-parole-and-furlough-how-are-they-different-6090508/>

<https://theprint.in/judiciary/parole-furlough-remission-all-give-relief-to-convicts-but-this-is-how-theyre-different/708417/>

<https://indiankanoon.org/doc/1463889/>

Subject) Polity

**Q.84)** At the national level, which ministry is the nodal agency to ensure effective implementation of the scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006?

- a) Ministry of Environment, Forest and Climate Change
- b) Ministry of Panchayati Raj
- c) Ministry of Rural Development
- d) Ministry of Tribal Affairs

**Why this question)**

- Recently, review petitions of approximately 1200 tribals for recognition of their claims over forest land under the Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act, 2006 was rejected by the local authorities in Mysuru (Karnataka)
- Recently, the Jammu and Kashmir government has decided to implement the Forest Rights Act, 2006

**Ans) d**

**Exp) Option d is correct.**

**The Union Ministry of Tribal Affairs (MoTA)** is the nodal agency for the implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. The ministry deals with forest and livelihood objectives at the national level.



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Source) <https://www.downtoearth.org.in/blog/forests/how-can-india-overcome-policy-and-institutional-gaps-in-forest-management-70718>

Subject) Environment

**Q.85)** A legislation which confers on the executive or administrative authority an unguided and uncontrolled discretionary power in the matter of application of law violates which one of the following Articles of the Constitution of India?

- a) Article 14
- b) Article 28
- c) Article 32
- d) Article 44

**Why this question)**

- Important static topic
- In the context of the Government of National Capital Territory (GNCT) of Delhi (Amendment) Act, 2021

**Ans) a**

**Exp) Option a is correct.**

Article 14 of Indian Constitution says that the State shall not deny to any person **equality before the law** or the equal protection of the laws within the territory of India. The concept of 'equality before law' is an element of the concept of 'Rule of Law'. This concept has the following three elements or aspects:

- Absence of arbitrary power
- Equality before the law, that is, equal subjection of all citizens to the ordinary law of the land
- The constitution is the result of the rights of the individual

The first and the second elements are applicable to India. This means 'equality before law' under Article 14 connotes the absence of arbitrary power with the authorities. Thus, when a legislation confers uncontrolled discretionary powers on any authority, it tends to violate the article 14 of the constitution.

**Option b is incorrect.** Article 28 is related to the **right to freedom of religion**. It provides that no religious instruction shall be provided in any educational institution wholly maintained out of State funds. Further, no person attending any educational institution recognised by the State or receiving aid out of State funds shall be required to attend any religious instruction or worship in that institution without his consent.

**Option c is incorrect.** Article 32 confers the right to remedies for the enforcement of the fundamental rights of an aggrieved citizen. Article 32 affirms the **right to move the Supreme Court if a fundamental right is**

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**violated.** Under this article, the Supreme Court can issue writs for the enforcement of any of the fundamental rights of the citizens.

**Option d is incorrect.** Article 44 provides for one of the Directive Principles of State Policy. Article 44 says that the "State shall endeavour to secure for the citizens a **uniform civil code** throughout the territory of India".

Source) Laxmikant Chapter 7

Subject) Polity

**Q.86)** Which one of the following in Indian polity is an essential feature that indicates that it is federal in character?

- a) The independence of judiciary is safeguarded.
- b) The Union Legislature has elected representatives from constituent units.
- c) The Union Cabinet can have elected representatives from regional parties.
- d) The Fundamental Rights are enforceable by Courts of Law.

**Why this question)**

- Important static topic
- The Supreme court recently said that the independence of district judiciary is cardinal

**Ans) a**

**Exp) Option a is correct.**

The establishment of an independent judiciary necessarily indicates the federal character of Indian polity. The Constitution establishes an independent judiciary headed by the Supreme Court to settle the disputes between the Centre and the states or between the states.

Following are the federal features of Indian Constitution:

- Dual polity consisting of the Union at the Centre and the states at the periphery.
- Written Constitution
- Division of powers between the Centre and the states (by Schedule seven)
- Supremacy of the Constitution
- Rigidity of the constitution
- Bicameral legislature consisting of Rajya Sabha and Lok Sabha
- Independency of judiciary

Source) Laxmikant Chapter 13 (6<sup>th</sup> edition)

Subject) Polity

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**Q.87)** Which one of the following best defines the term 'State'?

- a) A community of persons permanently occupying a definite territory independent of external control and possessing an organized government
- b) A politically organized people of a definite territory and possessing an authority to govern them, maintain law and order, protect their natural rights and safeguard their means of sustenance
- c) A number of persons who have been living in a definite territory for a very long time with their own culture, tradition and government
- d) A society permanently living in a definite territory with a central authority, an executive responsible to the central authority and an independent judiciary

**Why this question)** Important static concept related to polity

**Ans)** a

**Exp)** Option a is correct.

State is "a community of persons permanently occupying a definite portion of territory, independent of external control, and possessing an organized government"

According to Max Weber, a State is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory.

The state possesses a government which has the authority to enforce a system of rules over the people living inside it. That system of rules is commonly composed of a constitution, statutes, regulations, and common law.

Its main functions can be maintaining law, order and stability, resolving various kinds of disputes through the legal system, providing common defence, and looking out for the welfare of the population in ways that are beyond the means of the individual, such as implementing public health measures, providing mass education and underwriting expensive medical research.

Source) <https://nios.ac.in/media/documents/srsec317newE/317EL2.pdf>

[https://jyotinivas.org/pdf/e\\_content/sociology/1st%20year%20unit-05%20\(on%20state%20\).pdf](https://jyotinivas.org/pdf/e_content/sociology/1st%20year%20unit-05%20(on%20state%20).pdf)

Subject) Polity

**Q.88)** With reference to Indian Judiciary, consider the following statements:

1. Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with prior permission of the president of India.
2. A High Court in India has the power to review its own judgement as the Supreme Court does.

Which of the statements given above is/are correct?

- a) 1 only

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- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

### Why this question)

- Recently, the Kerala High Court said that High Courts as Courts of Record could review their own orders
- Recently, nine new Supreme Court judges take oath
- Important static topic: Indian Judiciary

Ans) c

Exp) Option c is correct.

**Statement 1 is correct.** The Chief Justice of India can request a retired judge of the Supreme Court or a retired judge of a high court (duly qualified for appointment as a Supreme Court judge) to act as a judge of the Supreme Court for a temporary period. He can do so only with the **previous consent of the President** and also of the person to be so appointed. Such a judge is entitled to such allowances as the president may determine. He will also enjoy all the jurisdiction, powers and privileges of a judge of Supreme Court.

**Statement 2 is correct.** The Supreme Court of India has power to review its own judgement or order. Thus, it is not bound by its previous decision and can depart from it in the interest of justice or community welfare. **As a court of record, a high court also has the power to review and correct its own judgement or order.**

Source) Laxmikant Chapter 26 and 34 (6<sup>th</sup> edition)

Subject) Polity

**Q.89)** With reference to India, consider the following statements:

1. There is only one citizenship and one domicile.
2. A Citizen by birth only can become the Head of State.
3. A foreigner once granted the citizenship cannot be deprived of it under any circumstance.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) 1 and 3
- d) 2 and 3

### Why this question)

- New domicile rules for J&K

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- Recently, the Home Ministry empowered 13 more District Collectors in five States to grant citizenship certificates to applicants belonging to six minority communities from Pakistan, Bangladesh and Afghanistan
- Citizenship (Amendment) Act (CAA) 2019
- Important static topic: Citizenship

Ans) a

Exp) Option a is correct.

**Statement 1 is correct.** The Indian Constitution provides for only a single citizenship, that is, the Indian citizenship. The citizens in India owe allegiance only to the Union. There is no separate state citizenship. Also, when an Indian citizen voluntarily acquires the citizenship of another country, his Indian citizenship automatically terminates.

There is only one domicile allowed in India. Domicile Certificate can be made only in one State/UT. In 2010, the Uttarakhand High Court declared that there is no separate domicile for each State and there is only one domicile for the entire country.

**Statement 2 is incorrect.** The President is the Head of the Indian State. In India, both a citizen by birth as well as a naturalised citizen are eligible for the office of President. Thus, a naturalized citizen can become the Head of the State in India.

This is different from USA, where only a citizen by birth (and not a naturalised citizen) is eligible for the office of President.

**Statement 3 is incorrect.** A foreigner, who has been earlier granted Indian citizenship, can be deprived of his citizenship.

His Indian citizenship can be terminated by the Central government, if:

- he has obtained the citizenship by fraud;
- he has shown disloyalty to the Constitution of India;
- he has unlawfully traded or communicated with the enemy during a war;
- he has, within five years after registration or naturalisation, been imprisoned in any country for two years; and
- he has been ordinarily resident out of India for seven years continuously.

Source) Laxmikant 6<sup>th</sup> edition: Chapter 6

<https://www.thehindu.com/news/national/other-states/domicile-rules-for-jk/article31660363.ece>

Subject) Polity



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**Q.90)** Which one of the following factors constitutes the best safeguard of liberty in a liberal democracy?

- a) A committed judiciary
- b) Centralization of powers
- c) Elected government
- d) Separation of powers

**Why this question)**

- Important static concept
- Recently Allahabad HC said that individual liberty cannot be taken away without proper application of mind
- Recently, Prime Minister lauded the judiciary for safeguarding people's rights and personal liberty

**Ans) d**

**Exp) Option d is correct.**

**Option d is correct.** The **Separation of powers** between the legislature, the executive and the judiciary constitute an important safeguard of liberty in a liberal democracy. The doctrine of Separation of powers entails the division of the legislative, executive, and judicial functions of government among different organs. This separation **minimises the possibility of arbitrary excesses by the government**, since all the three organs acts as check and balance on the powers of each other. Therefore, none of the three organs can usurp the essential functions of other organs.

This demarcation prevents the concentration of excessive power by any branch of the Government. It thus helps to safeguard the liberty and rights of the people in a democracy.

Source) Laxmikant Chapter 7 and 11

[https://www.cusb.ac.in/images/cusb-files/2020/el/law/w2/Separation\\_of\\_PowersI\\_iv\\_semester.pdf](https://www.cusb.ac.in/images/cusb-files/2020/el/law/w2/Separation_of_PowersI_iv_semester.pdf)

Subject) Polity

**Q.91)** Under the Indian constitution, concentration of wealth violates

- a) The Right to equality
- b) The Directive principles of state policy
- c) The right to freedom
- d) The concept of welfare

**Why this question)** Oxfam Report on Inequality

**Ans) b**

**Exp) Option b is correct.**

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The concentration of wealth violates the Directive principles of state policy. Under Article 39 of the Constitution of India, the State shall direct its policy towards securing that the **operation of the economic system does not result in the concentration of wealth** and means of production to the common detriment.

Other principles of policy to be followed by the State under the Article 39 are:

- The citizens, men and women equally, have the right to an adequate means to livelihood;
- The ownership and control of the material resources of the community are so distributed as best to subserve the common good;
- There is equal pay for equal work for both men and women;
- The health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength;
- Children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment

Source) <https://www.mea.gov.in/Images/pdf1/Part4.pdf>

Subject) Polity

**Q.92)** What is the position of the right to property in India?

- a) Legal right available to citizens only
- b) Legal right available to any person
- c) Fundamental Right available to citizens only
- d) Neither Fundamental Right nor legal right

**Ans) b**

**Exp)** Option b is correct.

**Why this question:** The Supreme Court has recently held that a citizen's right to own private property is a human right.

The Right to Property is a **legal right available to any person**. Article 300-A provides that **no person shall be deprived of his property save by authority of law**.

Right to Property was a Fundamental Right in the original constitution under Article 31, which provided that the Constitution not only guarantees the right of private ownership but also the right to enjoy and dispose of property free from restrictions other than reasonable restriction. It is also mentioned that compensation would be paid to a person whose property has been taken for public purposes.

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The Constitution (Forty-fourth Amendment) Act, 1978 deleted the right to property from the Fundamental Rights. The Amendment omitted Article 31 and Article 19 (1) (f) and inserted in their place Article 300-A.

Source) <https://blog.ipleaders.in/right-to-property-in-india/>

Subject) Polity

**Q.93)** What was the exact constitutional status of India on 26<sup>th</sup> January, 1950

- a) A Democratic Republic
- b) A Sovereign Democratic Republic
- c) A sovereign Secular Democratic
- d) A sovereign Socialist secular Democratic Republic

**Ans) b**

**Exp) Option b is correct.**

**Why this question: Debate over the word 'secular' in the Preamble of the Constitution by fringe elements.**

The original Preamble, adopted by the Constituent Assembly on 26<sup>th</sup> November, 1949 and came into force on 26<sup>th</sup> January, 1950, declared India as a “**Sovereign Democratic Republic**”.

By the 42<sup>nd</sup> Amendment of 1976, enacted during the Emergency, the words “Socialist” and “Secular” were inserted. The Preamble now reads “Sovereign Socialist Secular Democratic Republic”.

Source) <https://indianexpress.com/article/explained/indian-constitution-preamble-citizenship-amendment-act-caa-protests-br-ambedkar-6190828/>

Subject) Polity

**Q.94)** Constitutional government means

- a) A representative government of a nation with federal structure
- b) A government whose head enjoys nominal powers
- c) A government whose Head enjoys real powers
- d) A government limited by the terms of the constitution

**Why this question: static**

**Ans) d**

**Exp) Option d is correct.**

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Constitutional government seeks to **limit and regulate the exercise of political power by the government**. Constitutional government is by definition limited government. It means government conducted according to rules and principles, which are binding on all political actors.

Therefore, constitutional government help to constrain the unfettered exercise of power by separating or dividing it. Constitutional government provides a framework in which the government can be **both responsible and representative** - managing conflicts, Protecting the rights, promoting participation and maintaining security of the citizens.

Source) <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1070-3535.2006.00447.x>

Subject) Polity

**Q.95)** With reference to India, the terms ‘Halbi, ho and Kui’ pertain to

- a) Dance forms of Northwest India
- b) Musical instruments
- c) Pre-historic cave paintings
- d) Tribal languages

**Why this question: Inclusion of ‘Ho’ dialect in 8th Schedule sought**

**Ans) d**

**Exp) Option d is correct.**

Halbi, also known as Bastari, is an **Eastern Indo-Aryan language and is spoken by tribes across the central part of India**.

It is written in Devanagari and Odia script, however it is used mainly as an oral language, particularly for trade, and few Halbi speakers can read and write their language.

Ho is **tribal language, which is written in Warang Chiti script**. It is the mother tongue of nearly 10 lakh tribal people living in Odisha and Jharkhand.

Kui is a **South-Eastern Dravidian language spoken by the Kandhas**. It is mostly spoken in Odisha, and written in the Odia script. The Kui language was also referred to as the Kuinga language during the historical period. It is closely related to the Gondi and Kuvi languages.

Subject) History

**Q.96)** Consider the following statements in respect of Bharat Ratna and Padma Awards:

1. Bharat Ratna and Padma awards are titles under the Article 18 (1) of the Constitution of India.
2. Padma Awards, which were instituted in the year 1954, were suspended only once.

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3. The number of Bharat Ratna Awards is restricted to a maximum of five in a particular year.

Which of the above statements are not correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

**Why this question: Government said that it will Take Away Bharat Ratna, Padma Awards If Misused.**

**Ans) d**

**Exp) Option d is correct.**

**Statement 1 is incorrect.**

National awards such as Bharat Ratna, Padma Vibhushan, Padma Bhushan and Padma Shri **do not amount to titles within the meaning of Article 18(1)** of the Constitution and thus are not to be used as prefixes or suffixes to the name of the recipient in any manner.

Article 18(1) abolishes all titles. It prohibits the State to confer titles on anybody whether a citizen or a non-citizen. Military and academic distinctions are, however, exempted from the prohibition. Thus, a university can give title or honor on a man of merit.

**Statement 2 is incorrect.**

Padma Awards **were instituted in 1954** to be awarded to citizens of India in recognition of their distinguished contribution in various spheres of activity.

The government suspended the practice of granting the Padma awards for **two years in 1977**. It was **again suspended during mid-1992** when 2 PILs were filed in the High Courts of India

They are given in three categories: Padma Vibhushan (for exceptional and distinguished service), Padma Bhushan (distinguished service of higher-order) and Padma Shri (distinguished service).

**Statement 3 is incorrect.**

**A maximum of 3 people can be awarded the Bharat Ratna.**

The total number of Padma awards to be **conferred each year is limited to 120**. But the count excludes posthumous awards and any non-resident Indian or Overseas Citizen of India or foreign-based winners.

Source) <https://theprint.in/india/governance/bharat-ratna-padma-awards-cannot-be-used-as-titles-government/191472/>

Subject) Polity



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**Q.97)** Consider the following statements:

Statement 1: The United Nations Capital Development Fund (UNCDF) and the Arbor Day Foundation have recently recognized Hyderabad as 2020 Tree City of the World.

Statement 2: Hyderabad was selected for the recognition for a year following its commitment to grow and maintain the urban forests.

Which one of the following is correct in respect of the above statements?

- a) Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for statement 1
- b) Both statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation for Statement 1
- c) Statement 1 is correct But Statement 2 is not correct
- d) Statement 1 is not correct but Statement 2 is correct

**Ans) d**

**Exp) Option d is correct.**

**Why this question:** 2020 Tree City of the World.

**Statement 1 is incorrect.**

**Hyderabad have been recognised as a 2020 Tree City of the World** by the Arbor Day Foundation and the **Food and Agriculture Organization (FAO)**, [not United Nations Capital Development Fund (UNCDF)].

**Statement 2 is correct.**

It was given for **its commitment to growing and maintaining urban forests.**

Hyderabad earned recognition in the Foundation's second year of the programme along with 51 other cities globally (120 cities from 63 countries assessed) and **the only city in India to get this recognition so far.**

Source) <https://indianexpress.com/article/cities/hyderabad/hyderabad-recognised-as-a-tree-city-of-the-world-7196815/>

Subject) Environment

**Q.98)** Consider the following statements in respect of the laureus World Sports Award which was instituted in the year 2000:

1. American golfer Tiger Woods was the first winner of this award
2. The award was received mostly by 'Formula one' players so far.
3. Roger Federer received this award maximum number of times compared to others.

Which of the above statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only

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c) 1 and 3 only

d) 1, 2 and 3

**Why this question) Naomi Osaka wins top title at 2021 Laureus World Sports awards.**

**Ans) c**

**Exp) Option c is correct.**

**Statement 1 is correct.**

The Laureus World Sports Awards is an annual award ceremony honouring individuals and teams from the world of sports along with sporting achievements throughout the year.

**The inaugural winner of the award in 2000 was the American golfer Tiger Woods.**

First held in 2000, the annual event was established by Laureus Sport for Good Foundation founding patrons Daimler and Richemont.

The award is given for **six categories** (Sportswoman, Sportsman, Team, Breakthrough, Comeback and Action) and discretionary awards also. The shortlist for World Athlete of the Year with a Disability is provided by the International Paralympic Committee.

**Statement 2 is incorrect.**

The Laureus World Sports Awards are **not won mostly by Formula One players.**

List of formula One players who won the Laureus World Sports Awards in the Sportsman category **three times** are:

- 2020 Lewis Hamilton
- 2004 Michael Schumacher
- 2002 Michael Schumacher

**Statement 3 is correct.**

Swiss tennis player Roger Federer holds the record for the most awards with **six**, five for Sportsman of the Year and one for Comeback of the Year.

Source) <https://www.laureus.com/world-sports-awards>

Subject) Sports Current Affairs

**Q.99) Consider the following statements in respect of the 32<sup>nd</sup> Summer Olympics:**

1. The official motto for this Olympics is “A New World”.
2. Sport Climbing, Surfing, Skateboarding, Karate and Baseball are included in this Olympics.

Which of the above statements is/are correct?

A) 1 only

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- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this question)** Olympic and Paralympic Games held in Tokyo 2020 (The Games were postponed to 2021 because of Covid)

**Ans) b**

**Exp) Option b is correct.**

**Statement 1 is incorrect.**

The 32nd Summer Olympics was held in Tokyo in 2021. The Tokyo 2020 official Games motto was “United by Emotion”.

The Rio Olympics 2016 official slogan was “A New World.”

**Statement 2 is correct.**

The Tokyo Olympics has 339 events across 41 different sports. Six new sports will be contested at the Tokyo Olympics - baseball, softball, karate, skateboarding, sport climbing, and surfing.

Source) <https://olympics.com/en/news/united-by-emotion-to-be-the-tokyo-2020-games-motto>

Subject) Sports Current Affairs

**Q.100)** Consider the following statements in respect of the ICC World Test Championship:

1. The finalists were decided by the number of matches they won.
2. New Zealand was ranked ahead of England because it won more matches than England.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Why this question)** New Zealand became ICC World Test Champions after beating India.

**Ans) d**

**Exp) Option d is correct.**

**Statement 1 is incorrect.**

Finalists of ICC World Test Championship are to be decided by percentage of points earned, not by the number of matches won by them.

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Statement 2 is incorrect.

New Zealand won less matches than England but won more points, thus entering the final.

Source) [https://www.icc-](https://www.icc-cricket.com/news/2177618#:~:text=New%20Zealand%20are%20ICC%20World,a%20boundary%20from%20Ross%20Taylor.)

[cricket.com/news/2177618#:~:text=New%20Zealand%20are%20ICC%20World,a%20boundary%20from%20Ross%20Taylor.](https://www.icc-cricket.com/news/2177618#:~:text=New%20Zealand%20are%20ICC%20World,a%20boundary%20from%20Ross%20Taylor.)

Subject) Sports Current Affairs