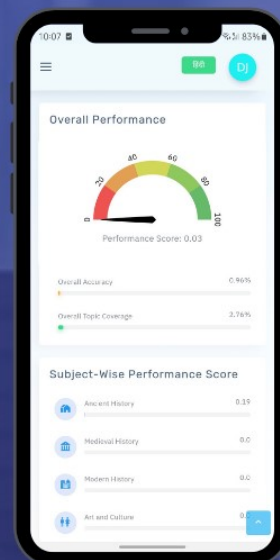


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UPSC PRELIMS IN ENGLISH AND HINDI



UPSC CIVIL SERVICES PRELIMS 2021 ANSWER KEY



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Key Takeaways



Conceptual clarity is a must



Thorough understanding of books and topics makes the difference



Practicing questions daily is the best way to improve actual performance in exam as it exponentially increases your ability to think conceptually



Concise notes do not work



Shortcuts do not work

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

Answer Option C

Explanation: The Governor draws his powers from the RBI Act and not from the Board of Directors. He is appointed by the Prime Minister in consultation with the Finance Minister.

The 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. There is no such provision in the constitution of India. So statement 2 is incorrect.

Learning:

The RBI operates today with its 27 regional offices, most of them situated in state capitals and its affairs are governed by a *central board* of directors. The Government constitutes the board by appointing or nominating the directors for a period of four years in the following way—

- (i) *Official Directors*: Governor and not more than four Deputy Governors.
- (ii) *Non-Official Directors*: 10 nominated from various fields and 2 government officials.

It also includes 4 Directors coming 1 each from the four local boards of RBI (also known as sub-offices, they are situated at Chennai, Kolkata, Mumbai and N. Delhi).

Ref: <https://www.thehindu.com/opinion/lead/balance-of-power-in-the-balance/article25532604.ece>

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 by a notification specify that an establishment or industry shall pay wages only through its bank account.

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

Ans: Option D

Explanation - Holding that an employer cannot differentiate between contractual and permanent employees, the Supreme Court in a 2020 ruling directed 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. So statement 1 is correct.

A worker cannot be employed for more than 48 hours in a week. [Section 51]. Weekly holiday is compulsory. If he is asked to work on weekly holiday, he should have full holiday on one of three days immediately or after the normal day of holiday. [Section 52(1)]. He cannot be employed for more than 9 hours in a day. [Section 54]. Overtime Wages - If a worker works beyond 9 hours a day or 48 hours a week, overtime wages are double the rate of wages are payable. [Section 59(1)]. A workman cannot work in two factories. There is restriction on double employment. [Section 60]. However, overtime wages are not payable when the worker is on tour.

Under the Constitution of India, Labour is a subject in the concurrent list where both the Central and State Governments are competent to enact legislations. As a result , a large number of labour laws have been enacted catering to different aspects of labour namely, occupational health, safety, employment, training of apprentices, fixation, review and revision of minimum wages, mode of payment of wages, payment of compensation to workmen who suffer injuries as a result of accidents or causing death or disablement,

bonded labour, contract labour, women labour and child labour, resolution and adjudication of industrial disputes, provision of social security such as provident fund, employees' state insurance, gratuity, provision for payment of bonus, regulating the working conditions of certain specific categories of workmen such as plantation labour, beedi workers etc.

Ref: https://ncib.in/pdf/ncib_pdf/Labour%20Act.pdf

<https://timesofindia.indiatimes.com/india/contractual-workers-also-entitled-to-pf-benefits-sc/articleshow/73364925.cms>

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Q. 3

Which among the following steps is most likely to be taken at the time of economic recession?

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

Answer - Option B

Explanation: The World Bank and IMF define recession technically also. Any economy seeing fall in its GDP for two consecutive quarters is said to be hit with *technical recession*. Though, to declare global recession the agencies go into data related to employment, demand of oil, etc., it is defined with the help of global economic growth rate also—global growth rate falling below 2.5 per cent is considered technical recession (2.5 per cent is the *threshold* growth rate for technical global recession).

Major traits of recession are

- (i) there is a general fall in demand as economic activities takes a downturn;
- (ii) inflation remains lower or/and shows further signs of falling down;
- (iii) employment rate falls/unemployment rate grows;
- (iv) Industries resort to 'price cuts' to sustain their business.

The usual remedies are given below:

- (i) **Direct and indirect taxes should be cut down**, so that the consumers have higher disposable incomes (income after paying direct tax, i.e., income tax) on the one hand and the goods should become cheaper on the other hand, thus there is hope that the demand might pick up.
- (ii) The burden of direct taxes, especially the income tax, dividend tax, interest tax are slashed to enhance the disposable income (*i.e., income after direct tax payment*)—
- (iii) **Salaries and wages should be revised by the government to encourage general spending by the consumers** (as the Government of India implemented the recommendations of the fifth pay commission without much deliberation in 1996–97).

(iv) Indirect taxes such as custom duty, excise duty (cenvat), sales tax, etc., should be cut down so that produced goods reach the market at cheaper prices.

(v) **The government usually goes on to follow a cheap money supply policy by slashing down interest rates** across the board and the lending procedure is also liberalised.

(vi) **Tax breaks are announced for new investments in the productive areas, etc .**

Ref: Ramesh Singh – Ch 7 Inflation - RECESSION- P 205

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**
- (c) 1 and 4 only**
- (d) 1, 2 and 3**

Answer - Option A

Explanation: This question can be solved by negation method. Let's say we are talking about product 'A'

Demand of a good might increase when

1. Prices of A's substitutes increases, people will buy more of good A, as it is cheaper than its competitors.
2. With the increase of A's complement products increases, A's demand will not increase but may eventually fall. For example: With the increasing cost of Fuel prices, diesel and Petrol Cars demand might fall instead Electric Car/CNG cars demand may rise. Here A is diesel or Petrol car. This way statement 2 is incorrect.
3. If A is an inferior good and income of its consumers are increasing, then they will look for Superior good even if it is costly as their income has also increase. So this will definitely not increase A's demand. This way statement 3 is incorrect.
4. If A's prices falls, people are likely to buy is more.

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 statements given above is/are correct?

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

Answer - Option B

Explanation: Primary credit societies (PCSS) in urban areas that meet certain specified criteria can apply to RBI for a banking license to operate as urban co-operative banks (UCBs). They are **registered and governed under the co-operative societies acts of the respective states** and are covered by the Banking Regulation Act, 1949 through an Amendment in 1966—thus are under dual regulatory control. The *managerial aspects* of these banks—registration, management, administration, recruitment, amalgamation, liquidation, etc. are controlled by the state governments, while the matters related to *banking* are regulated by RBI. 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). While overseeing the activities of 1926 primary (urban) cooperative banks, the Urban Banks Department performs three main functions : regulatory, supervisory and developmental.

Banking Regulation (Amendment) Bill, 2020 - Section 12 of the Bill allows cooperative banks to issue equity shares or preference shares or special shares or unsecured debentures or bonds or other like securities with initial or original maturity of not less than ten years with The Banking Regulation (Amendment) Bill, 2020[i] was passed by Lok Sabha on September 16, 2020 and by Rajya Sabha on September 22, 2020. The Bill replaces Banking Regulation (Amendment) Ordinance, 2020[ii] which was promulgated in June, 2020. The Bill seeks to amend Banking Regulation Act, 1949[iii] and bring cooperative banks under the supervision of the Reserve Bank of India (RBI)prior approval of RBI and such conditions as may be specified by RBI.

Ref: Ramesh Singh – Ch 12 Banking – CO-OPERATIVE BANKS - P 363
<https://www.lexology.com/library/detail.aspx?g=9b238da9-14ce-4156-9507-fc2b9a575d16>

<https://www.rbi.org.in/commonman/English/scripts/urbanbankdept.aspx>

Q 6 Indian Government Bond Yields are influenced by which of the following?

1. Actions of the United States Federal Reserve

2. Actions 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

Answer : Option D

Explanation: At present, the RBI manages the government debt, including market borrowing (RBI has been reluctant to part with this function).

■ There is a case of clear conflict of interest in this arrangement—at one hand RBI decides the key interest rates (i.e., policy rates under monetary policy mechanism) on the other hand it trades in the government bonds (treasury bills, cash management bill and G-Secs) also.

■ Lack of alignment between India's domestic bond market (which is controlled by RBI's policy rates) and the external bond market/external commercial borrowings (which is linked to the global variables).

US bond yields : Apart from being the benchmark domestically, the US bond yields are very influential globally as well. That's because they attract funds from investors across the world. Investing in US treasuries is one of the safest bets and if such bond yields are rising then they become an even more attractive proposition. Higher yields in the US also signal the US central bank — the Fed — might raise interest rates to contain inflation, which will rise as economic growth takes off in that country. As a result, many global investors pull out money from emerging economies such as India, where economic recovery is still a tad iffy, and either invest in US bonds or the broader economy. This reverse flow explains why India's domestic stock markets suffered in the last few days.

In fact, yields of Indian G-secs have also risen in line with US bond yields.

Learning: Government bond (called Treasuries in the US, Gilts in Britain and G-Secs or government securities in India)

Ref: Eco class 12 – Ch 3 - Demand and Supply for Money- P 61

Ramesh Singh – Ch 18 PUBLIC FINANCE IN INDIA - INDEPENDENT DEBT MANAGEMENT- P 542

<https://indianexpress.com/article/explained/explainspeaking-the-link-between-us-bond-yields-indian-stock-markets-gdp-and-gva-growth-rates-7209035/>

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**

Answer – Option A

Explanation - Foreign Currency Convertible Bond' (FCCB) means a bond issued by an Indian company, expressed in foreign currency, the principal and interest of which is payable in foreign currency and convertible into ordinary shares of the issuing company in any manner, either in whole, or in part.

Depository Receipt (DR) means a negotiable security issued outside India by a Depository Bank, on behalf of an Indian company, which represent the local Rupee denominated equity shares of the company held as deposit by a custodian bank in India. There are two forms of depository receipts.

- 1. American Depository Receipt (ADR)**

Depository Receipt listed and traded on exchanges based in the United States are called the American Depository Receipt.

- 2. Global Depository Receipt (GDR)**

Depository Receipt listed and traded on Stock exchanges based in non-U.S. markets such as London and Singapore are called Global Depository Receipt. Foreign investment is recognized as FDI only if the investment is made in equity shares, fully and mandatorily convertible preference shares and fully and mandatorily convertible debentures only. FDI policy does not permit issuance of any optionally convertible security.

Depository Receipts are basically foreign investment in the form of equity shares issued outside India by a Depository Bank, on behalf of an Indian company which is covered under the FDI policy. **Similarly Foreign Currency Convertible Bond** are foreign currency convertible Bonds invested in Indian company. Since these bonds are convertible in to equity shares over a period of time as provided in the instrument, therefore they are covered under FDI policy. Therefore, inward remittances received by the Indian company vide issuance of DRs and FCCBs are treated as FDI and counted towards FDI.

According to IMF and OECD definitions, the acquisition of at least ten percent of the ordinary shares or voting power in a public or private enterprise by non-resident investors makes it eligible to be categorized as foreign direct investment (FDI). (see OECD benchmark definition) In India, a particular FII is allowed to invest upto 10% of the paid up capital of a company, which implies that any investment above 10% will be construed as FDI, though

officially such a definition did not exist. It may be noted that there is no minimum amount of capital to be brought in by the foreign direct investor to get the same categorised as FDI. Given this backdrop, in the Union Budget 2013-14, announced on 28 February 2013, vide para 95, Honourable FM announced his intention to go by the internationally accepted definition for FIIs and FDIs, as stated below:

"In order to remove the ambiguity that prevails on what is Foreign Direct Investment (FDI) and what is Foreign Institutional Investment (FII), it is proposed to follow the international practice and lay down a broad principle that, where an investor has a stake of 10 percent or less in a company, it will be treated as FII and, where an investor has a stake of more than 10 percent, it will be treated as FDI. A committee will be constituted to examine the application of the principle and to work out the details expeditiously."
So, FII with certain condition will be considered as FDI

Ref: [http://www.arthapedia.in/index.php?title=Foreign Institutional Investor \(FII\)](http://www.arthapedia.in/index.php?title=Foreign_Institutional_Investor_(FII))
<https://blog.ipleaders.in/can-funds-received-drs-fccbs-treated-fdi/>

Q 8. Consider the following statements:

The effect of devaluation of a currency is that it necessarily

- 1. Improves the competitiveness of the domestic exports in the foreign markets**
- 2. increases the foreign domestic currency value**
- 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**

Answer : Option A

Explanation:

Devaluation in currencies are discouraged and negated with excessive pressure coming from the trading partners of the country, it ultimately makes goods of the country cheaper in the world market— the economy earns profit from exports. The increase in profit of export takes place due to increase in 'volume' of the exports (but in reality, exporters forego more goods to earn the same amount of foreign currency). As foreign currency becomes costlier the country sees decrease in its imports (provided its imports are non-compulsive in nature) due to import substitution. Trade balance may or may not improve, so statement 3 is not correct.

Ref: Ramesh Singh – Ch 15 EXTERNAL SECTOR IN INDIA- P 446/675

Q 9. Which one of the following effects of the creation of black money in India has been the 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

Answer : Option D

Explanation - Black money has been a big issue in India for many decades. Time and again almost after every 10 to 15 years the Income Disclosure Scheme was announced. The last Demonetisation was done on 8th November 2016 and also on an earlier occasion in the Seventies when Rs. 1000 Notes were banned. However, the problem of black money is difficult to tackle fully in one go but can be controlled gradually. Black money eats up a part of the tax and, thus, the government's deficit increases. The government has to balance this deficit by increasing taxes, decreasing subsidies and increasing borrowings. Borrowing leads to a further increase in the government's debt due to interest burden. If the government is unable to balance the deficit, it has to decrease spending, which affects development.

Ref: <https://timesofindia.indiatimes.com/readersblog/santhosh-pens-down/black-money-a-serious-menace-to-be-tackled-24487/>

(Times of India News - August 2020)

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 a budget deficit**
- (c) Borrowing from the banks to finance a budget deficit**
- (d) Creation of new money to finance a budget deficit**

Answer – Option D

Explanation - For the monetarists, a particular level of money supply for a particular level of production is healthy for an economy. Extra creation of money over the same level of production causes inflation. They suggested proper monetary policy (money supply, interest rates, printing of currencies, public borrowing etc.), to check situations of inflationary pressure on the economy.

Creation of new money means it will infuse more money in the market that means money will be available at cheaper rates that means it will increase the purchasing power of people and eventually will lead to inflation.

Ref: Ramesh Singh – Ch 7 WHY DOES INFLATION OCCUR- P 183

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**

Answer – Option C

Explanation - 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.

When looking at a national economy overall, the multiplier would be the change in real GDP divided by the change in investments, government spending, changes in income brought about by changes in disposable income through tax policy, or changes in investment spending resulting from monetary policy via changes in interest rates.

Some economists also like to factor in estimates for savings and consumption. This involves a slightly different type of multiplier. When looking at savings and consumption, economists might measure how much of the added income consumers are saving versus spending.

Ref: <https://www.investopedia.com/terms/m/multipliereffect.asp>

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**

Answer – Option A

Explanation:

Demand-Pull Inflation For the monetarists, a demand-pull inflation is creation of extra purchasing power to the consumer over the same level of production (which happens due to wage revisions at the micro level and deficit financing at the macro level). This is the typical case of creating extra money (either by printing or public borrowing) without equivalent creation in production/supply, i.e., ‘too much money chasing too little output’—the ultimate source of demand-pull inflation.

Inflation-indexing wages is a calculation of wages that takes inflation into consideration when determining wages. Inflation is the rate at which prices increase within an economy over a period of time. Statement 3 is incorrect

The government may tighten flow of money in the system (known as *monetary measure*)—central bank making money costlier (by increasing repo rate, increasing CRR, etc. in case of India). Statement 5 is incorrect.

Ref: Ramesh Singh - Chapter 7 - Inflation and Business Cycle - 182

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**

Answer : Option B

Explanation:

Statement 1 is correct: Retail investors will now be able to directly bid for government securities (G-Secs) in Reserve Bank of India auctions, a move that may also help fund the government's massive borrowing plan for the next fiscal.

<https://www.hindustantimes.com/business/retail-investors-can-now-buy-g-securities-directly-101612552002706.html>

Statement 2 is correct: Till 2002, the Government securities market was mainly a telephone market. Buyers and sellers traded over telephone and submitted physical Subsidiary General Ledger (SGL) transfer forms for transfer of the Government securities and cheques for settlement of the funds to the Reserve Bank of India. These manual operations were inefficient and often resulted in delays. In order to improve efficiency in the market, the Reserve Bank of India took steps to automate the process of trading and settlement of Government securities transactions and the Negotiated Dealing System (NDS) was introduced in February 2002. The Negotiated Dealing System (NDS) has two modules – one for the primary market and the other for the secondary market.

<https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/NDSOM290410.pdf>

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.

<https://web.cdslindia.com/myeasi/Resource/AboutUs.html>

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**

Answer – Option C

Explanation:

“Water.org is a global nonprofit organization working to bring water and sanitation to the world. We want to make it safe, accessible, and cost-effective. We help people get access to safe water and sanitation through affordable financing, such as small loans. We give our everything every day to empower people in need with these life-changing resources – giving women hope, children health and families a bright future. One of the major barriers to safe water and sanitation is affordable financing. We created the WaterCredit Initiative® loan program to address this barrier head-on. 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.”

It is not run under WHO and World bank.

Ref : <https://water.org/about-us/>

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**
- 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**

Answer: Option B

Explanation:

Banker of the Governments and Banks (known also as the Related Functions): It includes three category of functions— firstly, performing the Merchant Banking functions for the central and state governments; secondly, acting as their Bankers; and thirdly, maintaining banking accounts of the SCBs (scheduled commercial banks)— domestic, foreign, public and private— operating in the country. The broad objectives are enabling governments and the banks mobilise enough liquidity for their functioning under which it lends or manages borrowing plans of the governments and provides short-term and long-term loans to the banks (as *Lender of Last Resort*).

Ref: Ramesh Singh - CHAPTER 12 - BANKING IN INDIA – RBI - 350

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

(a) Environmentally responsible practices in electronics industry

(b) Ecological Wetlands management of International Importance' under the Ramsar Convention

(c) Sustainable practice in the cultivation of agricultural crops in degraded lands

(d) "Environmental Impact Assessment' the exploitation of natural resources

Answer – Option A

Explanation:

R2 stands for Responsible Recycling

EPA encourages all electronics recyclers to become certified by demonstrating to an accredited, independent third-party auditor that they meet specific standards to safely recycle and manage electronics. Currently two accredited certification standards exist: the Responsible Recycling ("R2") Standard for Electronics Recyclers and the e-Stewards® Standard for Responsible Recycling and Reuse of Electronic Equipment ("e-Stewards®"). Both programs provide the following benefits:

- Advance best management practices
- Offer a way to assess the environmental, worker health, and security practices of entities managing used electronics
- Are based on strong environmental standards that maximize reuse and recycling, minimize exposure to human health or the environment, ensure safe management of materials by downstream handlers, and require destruction of all data on used electronics

Ref: <https://sustainableelectronics.org/wp-content/uploads/2020/12/R2-2013-Code-of-Practices-ENGLISH.pdf>

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

- 1. They release quantities of carbon monoxide may lethal 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**

Answer - Option B

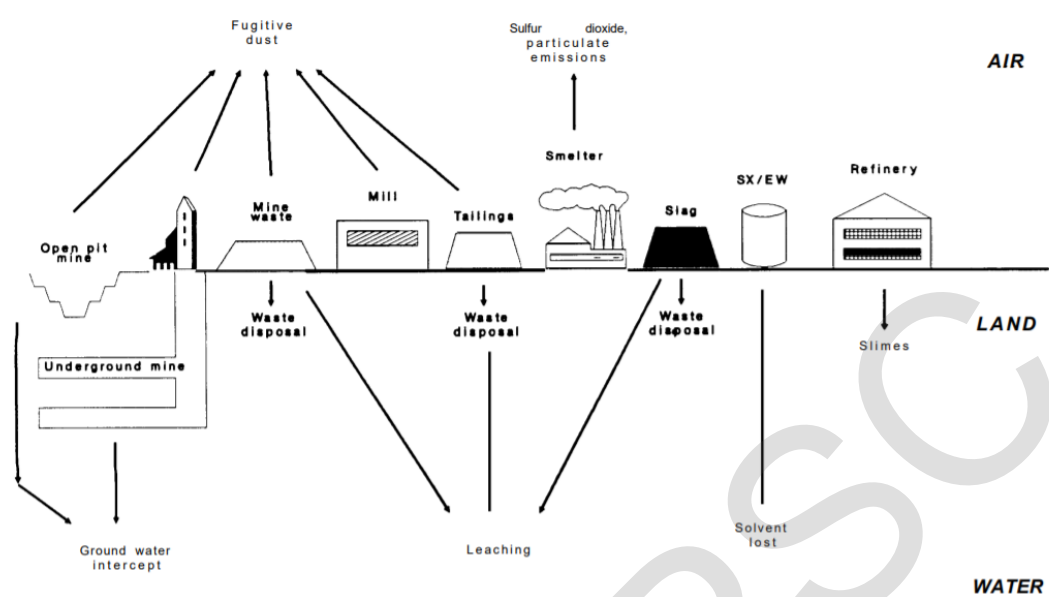
Explanation:

The copper slag can cause the leaching of some heavy metals into environment. Some industrial processes, such as production of paper and smelting of metals, produce sulphur dioxide.

Roasters, smelting furnaces, and converters are sources of both particulate matter and SO_x. Copper and iron oxides are the primary constituents of the particulate matter, but other oxides, such as arsenic, antimony, cadmium, lead, mercury, and zinc, may also be present, along with metallic sulfates and sulfuric acid mist. Fuel combustion products also contribute to the particulate emissions from multiple hearth roasters and reverberatory furnaces.

Ref: <https://www3.epa.gov/ttnchie1/ap42/ch12/final/c12s03.pdf>

Figure 8-1.-Environmental Impacts of Copper Production



SOURCE: Office of Technology Assessment

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**

Answer- Option D

Explanation:

Furnace oil is a dark viscous residual fuel obtained by blending mainly heavier components from crude distillation unit, short residue and clarified oil from fluidized catalytic cracker unit. Though Fuel oil is a general term applied to any oil used for generation of power or heat, Fuel oil can include distillates and blends of distillates and residue such as Light Diesel Oil.

Sulphur determination includes burning of known quantity of oil, treating the sulphur oxidation products formed during combustion and weighing of sulphur in the form of sulphate. The sulphur di-oxide may come in direct contact with the product during the combustion process and may create adverse quality effects in the product.

Ref: <http://stallionenergy.in/UserFiles/Furnace%20Oil-All.pdf>

Q 19. What is blue carbon?

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

Answer - Option A

Explanation:

Blue Carbon refers to coastal, aquatic and marine carbon sinks held by the indicative vegetation, marine organism and sediments. In particular, coastal ecosystems such as tidal marshes, mangroves, and seagrasses remove carbon from the atmosphere and ocean, storing it in plants and depositing it in the sediment below them by natural processes.

- These coastal ecosystems are very efficient at sequestering and storing carbon - each square mile of these systems can remove carbon from the atmosphere and oceans at rates higher than each square mile of mature tropical forests.

Ref: Shankar IAS – Ch 21 MITIGATION STRATEGIES - CARBON SINK- 228

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 only
(d) 1, 3 and 4 only

Answer - Option C

Explanation -

Ferns require indirect sunlight, moist soil, and a humid atmosphere. Lichens occur from sea level to high alpine elevations, in many environmental conditions, and can grow on almost any surface.

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. **BRYOPHYTA** - These are called the amphibians of the plant kingdom. The plant body is commonly differentiated to form stem and leaf-like structures. However, there is no specialized tissue for the conduction of water and other substances from one part of the plant body to another. Examples are moss (*Funaria*) and *Marchantia*. Some fungal species live in permanent mutually dependent relationships with Bluegreen algae (or cyanobacteria). Such relationships are called symbiotic. These symbiotic life forms are called lichens. We have all seen lichens as the slow-growing large colored patches on the bark of trees. **Mosses** along with **lichens** are the first organisms to colonize rocks and hence, are of great ecological importance. They decompose rocks making the substrate suitable for the growth of higher plants. Since mosses form dense mats on the soil, they reduce the impact of falling rain and prevent soil erosion. The bryophytes are divided into liverworts and mosses.

Ref: NCERT Biology Class 11, Chapter 3 - Plant Kingdom, Page No 37
NCERT Science Class 9 , Chapter 7 - DIVERSITY IN LIVING ORGANISMS, Page No 84

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**

Answer – Option C

Explanation:

Cymbopogon, or lemongrass, is a genus in the grass family. The species lemongrass, *Cymbopogon citratus*, is native to India and Sri Lanka. Lemongrass repels mosquitoes and other insects. It can be toxic to some predatory beneficial insects, however, so use it with caution. Because it deters mosquitoes, it also helps to prevent diseases transmitted by mosquitoes, including malaria.

Lemongrass is widely used in medicine due to its antibacterial, antifungal, anti-inflammatory, and antimicrobial qualities. It can help lower cholesterol, potentially preventing cardiac issues and diseases.

Lemongrass has been shown to destroy many kinds of cancer cells, without harming healthy cells. This provides a potential non-toxic alternative to chemotherapy. It is further used to treat stomach-aches and gastric ulcers. Lemongrass can even help reduce anxiety and relieve insomnia. Despite these health benefits, more research is needed before lemongrass extracts can become part of the medicinal mainstream.

Ref: <https://insectcop.net/mosquito-repellent-plants/>

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**

Answer – Option B

Explanation: In Aquatic ecosystem phytoplanktons (primary producers) is eaten by zoo planktons which is eaten by fishes and fishes are eaten by pelicans. And Cyanobacteria and diatoms are phytoplanktons.

Ref: Environment , Shankar IAS Chapter-2 Functions of an Ecosystem, Food Chain, Pg 12.

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**

Answer – Option D

Explanation-

Both Hedgehog and Pangolin roll themselves up so as to protect themselves.

Ref: <https://www.wwf.org.uk/learn/fascinating-facts/pangolins>
<https://www.thehindu.com/sci-tech/energy-and-environment/meet-the-madras-hedgehog/article33942839.ece>.

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 only**
- (d) 2 and 5 only**

Answer – Option A

Explanation - The New York Declaration on Forests (NYDF) is a political declaration calling for global action to protect and restore forests. It offers a common, multi-stakeholder framework for forest action, consolidating various initiatives and objectives that drive forest protection, restoration, and sustainable use. Adopted in 2014, the NYDF is the major reference point for global forest action.

Its ten goals include halting natural forest loss by 2030, 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.

There are currently over 200 endorsers: national governments, sub-national governments, multi-national companies, Indigenous Peoples and local community organizations, non-government organizations, and financial institutions. These endorsers have committed to doing their part to achieve the NYDF goals and follow its accompanying action agenda.

The New York Declaration on Forests is a non-legally binding political declaration that grew out of dialogue among governments, companies and civil society, spurred by the Secretary-General's Climate Summit.

India was not its signatory.

Ref: <https://www.thehindubusinessline.com/opinion/how-india-inc-can-help-save-our-forests/article21437241.ece1>

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 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**

Answer – Option D

Explanation - The magnetite nanospheres that are abundant in the airborne pollution found in urban settings, especially next to busy roads, are formed by combustion or frictional heating from vehicle engines or brakes. Other sources of magnetite nanoparticles include open fires and poorly sealed stoves within homes.

Ref: <https://www.livemint.com/Science/8aRW2q4dnnFKwCDQiHqleM/Scientists-find-toxic-air-pollution-particles-in-human-brain.html>

<https://www.indiatoday.in/education-today/gk-current-affairs/story/air-pollution-kills-600-000-children-per-year-who-reports-1378569-2018-10-30>

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

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

Answer – Option C

Explanation: Oysters are filter feeders that **feed upon suspended particles in the water column**, pumping such a high rate of water flow that they are considered an important biofilter that helps maintain system functioning.

Filter feeders are a sub-group of suspension feeding animals that feed by straining suspended matter and food particles from water, typically by passing the water over a specialized filtering structure. Some animals that use this method of feeding are clams, krill, sponges, baleen whales, and many fish (including some sharks). Some birds, such as flamingos and certain species of duck, are also filter feeders. Filter feeders can play an important role in clarifying water, and are therefore considered ecosystem engineers. They are also important in bioaccumulation and, as a result, as indicator organisms.

Ref: <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/filter-feeder>

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**

Answer – Option C

Explanation - Phosphorus plays a central role in aquatic ecosystems and water quality. Unlike carbon and nitrogen, which come primarily from the atmosphere, phosphorus occurs in large amounts as a mineral in phosphate rocks and enters the cycle from erosion and mining activities. This is the nutrient considered to be the main cause of excessive growth of rooted and free-floating microscopic plants in lakes.

Ref: Environment - Shankar - Chapter-2 Functions of an Ecosystem, BIO-GEO-CHEMICAL CYCLE - Pg 19.

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**

Answer – Option C

Explanation -

Detritivores are heterotrophs that obtain nutrients by consuming detritus (decomposing organic matter). By doing so, they contribute to decomposition and the nutrient cycles. They should be distinguished from other decomposers, such as many species of bacteria, fungi and protists, unable to ingest discrete lumps of matter, instead live by absorbing and metabolising on a molecular scale. However, the terms detritivore and decomposer are often used interchangeably.

Detritivores are often invertebrate insects such as mites, beetles, butterflies and flies; mollusks such as slugs and snails; or soil-dwelling earthworms, millipedes and woodlice. Examples of detritivores in marine environments are crustaceans such as crabs and lobsters, echinoderms such as sea stars or sea cucumbers.

Ref: Environment - Shankar IAS Academy Book Publications, - Glossary, pg 348
<https://biologydictionary.net/detritivore/>

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

Answer - Option A

Explanation - COMMON CARBON METRIC is FOR MEASURING ENERGY USE AND REPORTING GREENHOUSE GAS EMISSIONS FROM BUILDING OPERATIONS

United Nations Environment Programme (2009)

Leading experts from around the world have, through extensive international cooperation, developed a universal method of measuring a building's carbon footprint. Supported by the United Nations Environment Programme, this new 'Common Carbon Metric' will allow emissions from buildings around the world to be consistently assessed and compared, and improvements measured.

Ref : <https://wedocs.unep.org/handle/20.500.11822/7922>

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**

Answer – Option D

Explanation - The relationship between cnidarians and dinoflagellate algae is termed as "symbiotic", because both the animal host and the algae are benefiting from the association. It is a mutualistic interaction.

Symbiosis in lichens is the mutually helpful symbiotic relationship of green algae and/or blue-green algae (cyanobacteria) living among filaments of a fungus, forming lichen

Termites have a mutualistic relationship with protozoa that live in the insect's gut. The termite benefits from the ability of bacterial symbionts within the protozoa to digest cellulose.

Ref:

<https://cals.arizona.edu/azaqua/algaeclass/symbios.htm#:~:text=The%20relationship%20between%20cnidarians%20and,survive%20without%20the%20dinoflagellate%20algae.>

https://en.wikipedia.org/wiki/Symbiosis_in_lichens

<https://courses.lumenlearning.com/wm-biology2/chapter/symbiosis/#:~:text=Mutualism&text=For%20example%2C%20termites%20have%20a,the%20protozoa%20to%20digest%20cellulose.>

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 promote the Vaishnava Cult in the region.
4. Its design has 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 only
- (d) 2, 3 and 4

Answer – Option C

Explanation - Chausath Yogini Temple situated near Morena is a circular temple built during the reign of Kachchhapaghata Dynasty. It is not the only circular temple built in India. This temple is dedicated to Lord Shiva. Its design has a popular belief that it was the inspiration behind the Indian Parliament building.

Ref: <https://www.financialexpress.com/lifestyle/travel-tourism/temples-which-inspired-design-of-indian-parliament-madhya-pradeshs-chausath-yogini-mandir/1575446/>

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**

Answer – Option A

Explanation: There are a few wells at Dholavira, which is noted more for its impressive water reservoirs lined with stone. so Dholavira is the correct answer.
A HISTORY OF ANCIENT AND EARLY MEDIEVAL INDIA FROM THE STONE AGE TO THE 12TH CENTURY-

Ref : Upinder Singh, Chapter Four -The Harappan Civilization, c. 2600–1900 BCE,

Topic- The General Features of Mature Harappan Settlements, Pg 356

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**

Select the correct answer using the code given below.

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

Answer – Option A

Explanation: In 1615, Sir Thomas Roe came as an accredited ambassador of James I to the court of Jahangir, staying on there till February 1619. Though he was unsuccessful in concluding a commercial treaty with the Mughal emperor, he was able to secure a number of privileges, including permission to set up factories at Agra, Ahmedabad and Broach.

Ref: A Brief History of Modern India- Spectrum - Chapter- 3, Advent of the Europeans in India, , Progress of the English Company, pg 38

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**

Answer – Option B

Explanation - Statement 1 is correct - The Later Gupta dynasty ruled the Magadha region in eastern India between the 6th and 7th centuries CE. The Later Guptas succeeded the imperial Guptas as the rulers of Magadha.

Statement 2 is correct - The Paramaras of Malwa rose on the ruins of the Pratihara empire of Kanauj in 11 the Century. Statement 3 is correct - The Maukharis (554 CE – 606 CE) rose as a power after the downfall of the Gupta Empire (3rd to 6th century CE) in the 6th century CE in northern India.

Statements 4 and 6 are correct - The prominent principalities which arose in the post-Gupta period were the Maitrakas, Kalachuris, Gurjaras, Maukharis, and Later Guptas; and the kingdoms of Nepal, Bengal, Assam, and Odisha. Outside the Gupta empire, the kingdoms of Kashmir and Thaneswar and southern Kalinga were prominent. It was not until the beginning of the seventh century C.E. that the ruler of Thaneswar succeeded in establishing a powerful empire in northern India, though for a short period.

Statement 5 is incorrect - Yadava of Deogiri belonged to the Medieval Era.

Ref: <https://egyankosh.ac.in/bitstream/123456789/67711/1/Block-2.pdf>

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**

Answer – Option D

Explanation - During Vijayanagar, Women worked in different occupations. According to Nuniz, "The king of Vijayanagara has also women who wrestle, and others who are astrologers and soothsayers; and has women who write all the accounts of expenses that are incurred inside the gates of the palace and others whose duty is to write all the affairs of the kingdom and compare their books with those of writers outside; he has women also for music, who play instruments and sing. Even the wives of the kings are well-versed in music... He has judges as well as a watchman who every night guards the palace, and these are women."

Ref: <https://pragyata.com/hampi-poetry-in-stone/>

NCERT Book Theme Seven An Imperial Capital Vijayanagar, Page No 176

Q 36. With reference to Madanapalle of Andhra Pradesh, which one of the reference to 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.**

Answer – Option C

Explanation - It is common knowledge that Rabindranath Tagore authored the national anthem 'Jana Gana Mana' in 1911. But, not many know that it was translated into English as 'Morning Song of India' and given a tune on February 28, 1919 during Tagore's brief stay at Madanapalle.

Then a nondescript town, Madanapalle got a coveted place in history as Tagore chose to stay with Irish poet James H. Cousins, then principal of Besant Theosophical College. Till then, 'Jana Gana Mana' was just a lyric. It became a song after the principal's wife Margaret Cousins gave it a tune. She had carefully studied the meaning of each line and composed the musical notes, which Tagore had happily approved.

Ref ; <https://www.thehindu.com/news/national/andhra-pradesh/when-jana-gana-mana-got-its-tune/article33945758.ece>

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 |

Which of the pairs given above is/are correctly matched?

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

Answer – Option D

Explanation - A distinguishing feature at Burzahom is the presence of mudplastered pit dwellings.

The site is best known for its large number of remarkable terracotta objects, most of which can be assigned to c. 200 BCE–300 CE. Chandraketugarh was obviously a major centre of terracotta craft.

The Ganeshwar–Jodhpura culture was located in the north-eastern part of Rajasthan. Over 80 sites of this culture have so far been identified. The largest concentration is in Sikar district, but sites also occur in neighbouring Jaipur and Jhunjhunu districts. The site concentration can be connected with the copper ore resources of the Baleshwar and Khetri areas, where traces of ancient copper working have been found.

Ref: A HISTORY OF ANCIENT AND EARLY MEDIEVAL INDIA FROM THE STONE AGE TO THE 12TH CENTURY- Upinder Singh, Chapter Three- The Transition to Food Production: Neolithic, Neolithic–Chalcolithic, and Chalcolithic Villages, c. 7000–2000 BCE

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 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**

Answer – Option A

Explanation -

1. Statement 1 is correct: Temujin popularly known as Chengiz Khan, the leader of the Mongols, started invading Central Asia. He defeated Jalaluddin Mangabarni, the ruler of Kwarizam. Mangabarni crossed the river Indus and sought asylum from Iltutmish. Iltutmish refused to give him shelter in order to save his empire from the onslaught of the Mongols. Fortunately for Iltutmish, Chengiz Khan returned home without entering into India. In fact, the Mongol policy of Iltutmish saved India from the wrath of Chengiz Khan.
2. Statement 2 is incorrect: The governors of Oudh, Multan and Sind revolted against the authority of Muhammad bin Tughlaq. Muhammad bin Tughlaq's health became worse and he died in 1351. When Firoz died in 1388 the struggle for power between the Sultan and the nobles started once again. The invasion of Timur in 1398 had worsened the situation for Tughlaq dynasty. When Timur entered Delhi there was no opposition and he sacked Delhi for three days murdering thousands of people and looting enormous wealth. He withdrew from India in 1399 and his invasion in fact delivered a death blow to the Tughlaq dynasty. Before his departure from India, Timur appointed Khizr Khan as governor of Multan.
3. Statement 3 is incorrect: The Portuguese traveler Vasco da Gama reached the port of Calicut on 17 May 1498 and he was warmly received by Zamorin, the ruler of Calicut. He returned to Portugal in the next year.

Ref: Tamil Nadu History Class 11 – Ch 16 – Delhi Sultanate – 174, 184

Tamil Nadu History Class 11 – Ch 23 -THE COMING OF EUROPEANS, 258

Q 39. Consider the following statements:

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

Answer - Option C

Explanation: Basilica of Bom Jesus (Holy Jesus), Goa. It is a World Heritage Site built in Baroque style and was completed in 1604 AD. It has the body of revered St Francis Xavier. He died in China but body was later brought back to India.

Ref: INDIAN ART and CULTURE, Nitin Singhania, Chapter 1- INDIAN ARCHITECTURE, SCULPTURE AND POTTERY, Topic- Modern Architecture, Sub topic- Portuguese Influence, pg 166

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

Answer – Option B

Explanation: Both are the Hindu laws not related to caste system...Yes Dayabhaga is more popular in Bengal.

Hindu Succession Act, 1956:

The Mitakshara school of Hindu law codified as the Hindu Succession Act, 1956 governed succession and inheritance of property but only recognised males as legal heirs.

It applied to everyone who is not a Muslim, Christian, Parsi or Jew by religion. Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahmo Samaj, are also considered Hindus for this law. In the Dayabhaga system, the same right does not exist for the women because the sons cannot demand partition as the father is the absolute owner.

Ref: [https://www.thehindu.com/news/national/the-hindu-explains-what-is-coparcenary-property-in-hindu-](https://www.thehindu.com/news/national/the-hindu-explains-what-is-coparcenary-property-in-hindu-law/article32364484.ece#:~:text=A%20coparcenary%20consists%20of%20a,possession%20C%20title%20and%20interest%E2%80%9D)

[law/article32364484.ece#:~:text=A%20coparcenary%20consists%20of%20a,possession%20C%20title%20and%20interest%E2%80%9D](https://www.thehindu.com/news/national/the-hindu-explains-what-is-coparcenary-property-in-hindu-law/article32364484.ece#:~:text=A%20coparcenary%20consists%20of%20a,possession%20C%20title%20and%20interest%E2%80%9D).

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**

Answer - Option B

Explanation - Bhavabhuti was an 8th century scholar noted for his plays and poetry written in Sanskrit. Famous play: Malatimadhava. Information regarding other play writers in the option is limited on net.

Ref: <https://en.wikipedia.org/wiki/Bhavabhuti>

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**

Answer – Option B

Explanation - In Montford Reforms 1919, Women were given the right to vote but the right was not given to all the women.

As per The Government of India Act, 1935 Franchise was extended; women got the right on the same basis as men. The women were given reserved seats in the legislature.

Ref: <https://www.dnaindia.com/analysis/column-let-s-talk-women-s-reservation-2805945>

A Brief History of Modern India -Spectrum, Chapter- 15 Emergence of Gandhi

Topic- Montagu-Chelmsford Reforms and Government of India Act, 1919 -

Introduction of Dyarchy, Legislature Pg 309

A Brief History of Modern India - Spectrum, Chapter 20 Debates on the Future Strategy after Civil Disobedience Movement Topic- Government of India Act 1935 -Provincial autonomy- Legislature, Pg 406

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.**
- (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.**

Answer – Option A

Explanation - The Quit India Resolution was ratified at the Congress meeting at Gowalia Tank, Bombay, on August 8, 1942.

Ref: A brief history of Modern India- spectrum, Chapter 23, Quit India Movement, Demand for Pakistan, and the INA Topic- The 'Quit India' Resolution, pg 448

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**

Answer – Option C

Explanation - The book 'Songs From Prison: Translations Of Indian Lyrics Made In Jail' is written By Mahatma Gandhi, John S. Hoyland (Editor)

Ref: <https://www.goodreads.com/book/show/30192851-songs-from-prison>

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**

Answer – Option A

Explanation - The division of functions established at the centre was replicated in the provinces (subas) where the ministers had their corresponding subordinates (diwan, bakhshi and sadr). The head of the provincial administration was the governor (subadar) who reported directly to the emperor. The sarkars, into which each suba was divided, often overlapped with the jurisdiction of faujdars (commandants) who were deployed with contingents of heavy cavalry and musketeers in districts. The local administration was looked after at the level of the pargana (sub-district) by three semi-hereditary officers, the qanungo (keeper of revenue records), the chaudhuri (in charge of revenue collection) and the qazi.

Ref: Theme -2 NCERT book, Kings and Chronicles, The Mughal Courts (c. sixteenth-seventeenth centuries), Topic - 8. The Imperial Officials Sub topic- 8.3- Beyond the centre: provincial administration, Pg 247

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**

Answer – Option C

Explanation - Education of Women The Christian missionaries were the first to set up the Calcutta Female Juvenile Society in 1819. The Bethune School, founded by J.E.D. Bethune, president of the Council of Education in Calcutta in 1849 was the first fruit of the powerful movement for women's education that arose in the 1840s and 1850s. Pandit Ishwar Chandra Vidyasagar was associated with no less than 35 girls' schools in Bengal and is considered one of the pioneers of women's education.

Ref: Spectrum - Socio-Religious Reform Movements - 197
<http://www.bethunecollege.ac.in/BethuneCollege.htm>

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

Answer – Option D

Explanation - Mass pressure against the trial of INA POWs, sometimes described as “an edge of a volcano”, brought about a decisive shift in the government’s policy. The British had initially decided to hold public trials of several hundreds of INA prisoners besides dismissing them from service and detaining without trial around 7,000 of them. They compounded the folly by holding the first trial at the Red Fort in Delhi in November 1945 and putting on dock together a Hindu, Prem Kumar Sehgal, a Muslim, Shah Nawaz Khan, and a Sikh, Gurbaksh Singh Dhillon.

Ref: A Brief History of Modern India – Spectrum Chapter- 24 , Post-War National Scenario, topic- Congress Election Campaign and INA Trials, pg 464

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**

Answer – Option B

Explanation - Statement 1 is incorrect - Nizamat of Arcot was established by Mughal Emperor Aurangzeb and was the legal dependency of the Nizam of Hyderabad, it did not emerge from the Hyderabad state.

Statement 2 is correct - The Mysore kingdom, which was founded and ruled for the most part by the Hindu Wodeyar family, initially served as a vassal state of the Vijayanagara Empire. After the decline of the Vijayanagar Empire, Mysore became an independent state under the Hindu Wodeyar Dynasty in AD 1565.

Statement 3 is incorrect - Nawab Ali Mohammed Khan, a scion of the ancient Barha Dynasty became the first Nawab of Rohilkhand, having been previously elected as overlord by various Afghan Chiefs at the age of fourteen. He would carve out the future kingdom from the collapsing Mughal Empire and go on to found the Rohilla Dynasty. The crown would go on being held by the Rohillas until the kingdom came to an end in 1774, and thereafter the same dynasty would rule over Rampur. Most of Rohilkhand's borders were established by Ali Mohammed Khan and largely came into existence as a check to the power of the Oudh State.

Ahmad Shah Durrani was the founder of the Durrani Empire and is regarded as the founder of the modern state of Afghanistan. Within a few years, he extended his control from Khorasan in the west to Kashmir and North India in the east, and from the Amu Darya in the north to the Arabian Sea in the south.

Ref: <https://www.thehindu.com/society/history-and-culture/bussys-charminar-home/article23342015.ece>

Tamil Nadu new History, Chapter 8;

Spectrum, Chapter 3 Source for statement 1: <https://studenttheses.universiteitleiden.nl/access/item%3A2608781/view> Page no. 25

NCERT Book, Theme Seven, An Imperial Capital Vijayanagara (<https://ncert.nic.in/textbook/pdf/lehs203.pdf>)

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.

Answer- Option A

Explanation – Ajanta groups of caves, a World Heritage Site which overlooks a narrow sinuous gorge, through which flows the stream of Waghora. The river is descended from the head of the Cave 28 from a waterfall of seven leaps. Waghore means Tiger River in Marathi.

- Sanchi stupa lies near Betwa river
- Pandu leni is on Trirashmi hills
- Amravati is situated on Krishna river

Ref: <https://www.indiavideo.org/maharashtra/travel/waghora-river-ajanta-2260.php>

<https://www.downtoearth.org.in/coverage/the-forgotten-waters-of-sanchi-28034>

<https://www.britannica.com/place/Amaravati>

<https://en.wikipedia.org/wiki/Pandavleni>

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.**

Which of the above statements is/are correct?

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

Answer – Option B

Explanation - 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. It is celebrated on 21 Feb each year.

So, **statement 1 is incorrect.**

In Bangladesh, 21 February is the anniversary of the day when the people of Bangladesh (then East Pakistan) fought for recognition for the Bangla language.

In 1948, the then Government of Pakistan declared Urdu to be the sole national language of Pakistan, even though Bengali or Bangla was spoken by the majority of people combining East Pakistan and West Pakistan. The East Pakistan people protested and demanded that Bangla to be at least one of the national languages, in addition to Urdu.

The demand was raised first by Dhirendranath Datta from East Pakistan on 23 February 1948, in the constituent Assembly of Pakistan. So, **Statement 2 is also correct.**

To demolish the protest, the government of Pakistan outlawed public meetings and rallies.

The students of the University of Dhaka, with the support of the general public, arranged massive rallies and meetings. On 21 February 1952, police opened fire on rallies. Abdus Salam, Abul Barkat, Rafiq Uddin Ahmed, Abdul Jabbar, and Shafiur Rahman died, with hundreds of others injured. This was a rare incident in history, where people sacrificed their lives for their mother tongue.

Since then, Bangladeshis have celebrated International Mother Language Day as one of their tragic days.

Ref: <https://indianexpress.com/article/opinion/columns/urdu-bengali-language-bangla-international-mother-language-day-mother-tongue-unesco-7196213/>

(Indian Express Feb 2021)

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

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

- 1. Permaculture farming discourages monocultural practices 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 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**

Answer – Option B

Explanation: Bill Mollison, an Australian ecologist, and one of his students, David Holmgren, coined the word “permaculture” in 1978. It is a contraction of “permanent agriculture” or “permanent culture.” A central theme in Permaculture is the design of ecological landscapes that produce food. Emphasis is **placed on multi-use plants**, cultural practices such as sheet **mulching and trellising**, and the integration of animals to recycle nutrients and graze weeds. Whereas in conventional chemical farming, monoculture practices are pre dominant. Like two crop cycle is prominent in North India.

Conventional chemical farming demands more irrigation which leads to increase in soil salinity but same is not the case in permaculture farming.

Conventional chemical farming is not easily possible in semi - arid regions as it is dependent on irrigation which is less in semi-arid regions but permaculture farming is easily possible in such regions.

Ref: Env: Shankar – CH 24 – PERMACULTURE - 318

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**

Answer – Option B

Explanation: The oil palm tree (*Elaeis guineensis*) is a native to West Africa and was imported into SE Asia in the mid 19th century. Oil palm flourishes in the humid tropics and produces high yield when grown 10 degrees north and south of the equator.

Indonesia and Malaysia contribute almost 87% of production of palm oil, whereas China and India constitute 34% of imports.

Applications of Palm Oil

1) Food based applications

Cooking oil, substitute for butter, vanaspati/vegetable ghee, margarine, confectionary and bakery fats, ice cream, coffee creamers, emulsifiers, vitamin E supplements among others.

2) Non-food applications

Cosmetics, toiletries, soaps and detergents. Oleo chemical industry, as a base material for laundry detergents, household cleaners and cosmetics.

According to USDA estimates, 75% of the global palm oil consumption is for food purposes, while 22% is for industrial/ non-food purposes. The remaining, though currently, of marginal quantity, is used for biodiesel.

According to CRODA, one of the largest manufacturers and suppliers of ingredients to the beauty and personal care industry, palm derivatives are used in 70% of the world's personal care (PC) products. In fact, they state that it would "not be possible to go palm free with the 1000 or so derivatives used in personal care as they are major building blocks in most personal care products."

Ref: Env: Shankar – CH 7 – PALM OIL- 133

<https://www.palmoilinvestigations.org/about-palm-oil.html>

<https://www.biome.com.au/blog/palm-oil-hidden-in-the-worlds-most-glamorous-lipsticks/>

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 one is such river that joins the Indus direct ?

(a) Chenab

(b) Jhelum

(c) Ravi

(d) Sutlej

Answer – Option A

Explanation - The Indus receives a number of Himalayan Tributaries. The river flows southward and receives 'Panjnad' a little above Mithankot. The Panjnad is the name given to the five rivers of Punjab, namely the Satluj, the Beas, the Ravi, the Chenab and the Jhelum.

The Jhelum, an important tributary of the Indus, rises from a spring at Verinag situated at the foot of the Pir Panjal in the south-eastern part of the valley of Kashmir. It joins the Chenab near Jhang in Pakistan.

The Chenab is the largest tributary of the Indus. It is formed by two streams, the Chandra and the Bhaga, which join at Tandi near Keylong in Himachal Pradesh. Hence, it is also known as Chandrabhaga. The river flows for 1,180 km before entering into Pakistan. At the beginning, River Jhelum joins in and then further downstream Ravi and Sutlej also fall into River Chenab, before meeting River Indus, which eventually completes its journey by flowing into the Arabian Sea.

The Ravi is another important tributary of the Indus. It rises west of the Rohtang pass in the Kullu hills of Himachal Pradesh and flows through the Chamba valley of the state. Before entering Pakistan and joining the Chenab near Sarai Sidhu.

The Beas is another important tributary of the Indus, originating from the Beas Kund near the Rohtang Pass at an elevation of 4,000 m above the mean sea level. It enters the Punjab plains where it meets the Satluj near Harike.

The Satluj originates in the Rakas lake near Mansarovar at an altitude of 4,555 m in Tibet where it is known as Langchen Khambab. About 17 kilometres north of Uch Sharif, the Sutlej unites with the Chenab River.

Ref: NCERT Ch 3 – Drainage System - The Indus System - 24(Image)



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**

Answer – Option D

Explanation:

Sambhar, Didwana, Kuchwana, Sargol and Khatu are main lakes in the Rajasthan.

Didwana has been a major trading center in the medieval Mughal Empire due to the famous salt lake here, from which salt has been prepared and sent all over India. A number of battles were fought between the emperors of Gujarat and the rulers of Jodhpur, Bikaner, Jaipur, over the rights to this lake. Maharana Kumbha of Chittorgarh levied a tax on salt, which is mentioned in the inscription of the Kirti Pillar, it is the second important and big lake after Sambhar Lake in Rajasthan which covers an area of ten square kilometers.

Kuchaman – is in Nagaur district in the Indian state of Rajasthan

Khatu is a village of religious importance in Sikar District of Rajasthan in India. It is home to a famous temple of Khatushyam. It is one of the most sacred temples in India.

Ref: <https://en.wikipedia.org/wiki/Didwana>

Q 55. Consider the following rivers:

- 1. Brahmani**
- 2. Nagavali**
- 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**

Answer – Option B

Explanation - The Brahmani is a major seasonal river in the Odisha state of eastern India. The Brahmani is formed by the confluence of the Sankh and South Koel rivers, and flows through the districts of Sundargarh, Deogarh, Angul, Dhenkanal, Cuttack, Jajapur and Kendrapara. Together with the river Baitarani, it forms a large delta before emptying into the Bay of Bengal at Dhamra. Not in Eastern Ghats.

The River Nagavali also known as Langulya is one of the main rivers of Southern Odisha and Northern Andhra Pradesh States in India, between Rushikulya and Godavari basins. Nagavali River originates from a hill near Lakhbahal village in Thuamul Rampur block of Kalahandi District. It touches Nakrundi, Kerpai areas of Kalahandi, Kalyansinghpur and Rayagada of Rayagada district of Odisha

River Vamsadhara or River Banshadhara is an important east flowing river between Rushikulya and Godavari, in Odisha and Andhra Pradesh states in India. The river originates in the border of Thuamul Rampur in the Kalahandi district and Kalyansinghpur in Rayagada district of Odisha and runs for a distance of about 254 kilometers, where it joins the Bay of Bengal at Kalingapatnam, Andhra Pradesh.

The Subarnarekha River flows through the Indian states of Jharkhand, West Bengal and Odisha. After originating near piska/nagri, near Ranchi, the capital of Jharkhand, the Subarnarekha traverses a long distance through Ranchi. Not in Eastern Ghats.

Ref: https://en.wikipedia.org/wiki/Brahmani_River

https://en.wikipedia.org/wiki/Nagavali_River

https://en.wikipedia.org/wiki/Vamsadhara_River

https://en.wikipedia.org/wiki/Subarnarekha_River

India Map

Legend:

- Fresh Water Body (Blue)
- River (Blue line)
- Salt Water Body (Light Blue)
- Coastline (Black line)
- NATIONAL CAPITAL (Star in a circle)
- State Capital (Star in a circle)
- Union Territory Capital (Star in a circle)

Major Cities and Capitals:

- National Capital:** New Delhi
- State Capitals:** Srinagar, Jammu, Shimla, Dehradun, Lucknow, Patna, Bhopal, Raipur, Bhubaneswar, Hyderabad, Chennai, Bengaluru, Thiruvananthapuram, Port Blair.
- Union Territory Capitals:** Chandigarh, Daman & Diu, Dadra & Nagar Haveli, Pondicherry.

States and Union Territories: Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Goa, Karnataka, Kerala, Andhra Pradesh, Odisha, West Bengal, Jharkhand, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, Ladakh, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Sikkim.

Water Bodies: Arabian Sea, Bay of Bengal, Indian Ocean, Gulf of Kutch, Gulf of Khambhat, Gulf of Mannar, Andaman Sea, Ten Degree Channel, Great Channel.

Islands: Lakshadweep, Andaman & Nicobar Islands.

Other Features: The map shows a network of rivers including the Ganga, Yamuna, Brahmaputra, and others. It also includes a scale bar and a compass rose.



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 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**

Answer – Option B

Explanation:

The International Seabed Authority (ISA) is an intergovernmental body based in Kingston, Jamaica, that was established to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction (referred to as "the Area"), an area underlying most of the world's oceans. It is an organization established by the United Nations Convention on the Law of the Sea.

Over one million square miles of abyssal plain 12,000 to 18,000 feet deep is peppered with polymetallic nodules—vast fields of lumpy, black, potato-shaped mineral deposits. Nodules range in size from a pea to a soccer ball and are rich in manganese, iron, copper, nickel, cobalt, and rare-earth elements, though they can take millions of years to grow a few millimeters.

Both state-owned and government-sponsored companies from India, France, Russia, Germany, China, Singapore and the UK had sought permission for minerals prospecting in the high seas. With the new licence India will start looking for polymetallic sulphides that are rich in copper, zinc, gold and silver in the Indian Ocean Basin.

Ref: <https://www.downtoearth.org.in/coverage/mining/mining-at-deep-sea-46049>

<https://www.nationalgeographic.com/environment/article/news-race-to-mine-deep-sea-drones-seafloor-environmental-impact>

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

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

Answer - Option A

Explanation:

Sugarcane is a crop of tropical areas. Under rainfed conditions, it is cultivated in sub-humid and humid climates. But it is largely an irrigated crop in India.

Pearl Millet - (Bajra) grows well on sandy soils and shallow black soil. It is water-efficient crop. Bajra is sown in hot and dry climatic conditions in northwestern and western parts of the country. It is a hardy crop which resists frequent dry spells and drought in this region.

Tur is the second important pulse crop in the country. It is also known as *red gram* or *pigeon pea*. It is cultivated over marginal lands and under rainfed conditions in the dry areas of central and southern states of the country.

Soyabean and sunflower are other important oilseeds grown in India. Soyabean is mostly grown in Madhya Pradesh and Maharashtra. Sunflower cultivation is concentrated in Karnataka, Andhra Pradesh, Telangana and adjoining areas of Maharashtra. It is a minor crop in northern parts of the country where its yield is high due to irrigation.

Ref: NCERT: *India : People and Economy – CH 5 Land Resources and Agriculture – 49, 51*

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**

Answer – Option C

Explanation: Between the equator and the tropics blow the trade winds which move equatorial water polewards and westwards and warm the eastern coasts of continents or western sections of the oceans.

In the temperate latitudes blow the westerlies. Though they are less reliable than the trade winds, they result in north-easterly flow of water in the northern hemisphere, so that the warm Gulf stream is driven to the western coast of Europe or eastern sections of oceans warmer. In the similar manner Westerlies of Southern hemisphere impacts the oceanic temperature of eastern sections of oceans.

Ref: GC Leong – Ch 12 Oceans – P 88

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 project led by the Climate Change, Agriculture 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**

Answer – Option D

Explanation:

The overall purpose of Climate Change, Agriculture Security (CCAFS) is to marshal the science and expertise of CGIAR and partners to catalyse positive change towards climate-smart agriculture (CSA), food systems and landscapes, and position CGIAR to play a major role in bringing to scale practices, technologies and institutions that enable agriculture to meet triple goals of food security, adaptation and mitigation.

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a non-profit, non-political organization that conducts agricultural research for development in the drylands of Asia and sub-Saharan Africa. ICRISAT is headquartered in Hyderabad, Telangana State, in India, with two regional hubs (Nairobi, Kenya and Bamako, Mali) and country offices in Niger, Nigeria, Zimbabwe, Malawi, Ethiopia and Mozambique. ICRISAT conducts research on five highly nutritious drought-tolerant crops: chickpea, pigeonpea, pearl millet, sorghum, and groundnut.

Ref: <https://ccafs.cgiar.org/about-us>

<https://www.cgiar.org/research/center/icrisat/>

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**

Answer - Option D

Explanation:

Extensive grass lands interspersed with densely forested gorges of evergreen vegetation known as sholas occur in the Nilgiris (an offshoot of Western ghats). Sholas also occur in Aanaimalai and Palani hills. The rain forests of the Western ghats have dense and lofty trees with much species diversity. Mosses, ferns, epiphytes, orchids, lianas and vines, herbs, shrubs make diverse habitat. Ebony trees predominate in these forests. A variety of tropical orchids are found. Stratification in rain forests is very distinct three horizontal layers are distinguished.

Ref: Env't – SHANKAR IAS – Chapter 10 INDIAN BIODIVERSITY DIVERSE LANDSCAPE - WILDLIFE OF INDIA - 136

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**

Answer – Option C

Explanation - Name of Biome: Savannah

Flora and Fauna: Grasses with scattered trees and fire resisting thorny shrubs. The fauna includes a great diversity of grazers and browsers such as antelopes, buffaloes, zebras, elephants and rhinoceros; the carnivores include lion, cheetah, hyena; and mongoose, and many rodents.

Even though savannas around the world appear similar, the predominant species of grasses and trees are unique to regional climates and conditions, particularly average temperature and annual rainfall

Ref: Shankar- CH 1 – Biome – 8

<https://education.seattlepi.com/types-vegetation-dominate-savanna-biome-6243.html>

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**

Answer – Option B

Explanation -

- Ocean water: 97.2 percent
- Glaciers and other ice: 2.15 percent
- Groundwater,; 0.61 percent
- Fresh water lakes: 0.009 percent
- Inland seas: 0.008 percent
- Soil Moisture: 0.005 percent
- Atmosphere: 0.001 percent
- Rivers: 0.0001 percent.

Ref: <https://www.ngwa.org/what-is-groundwater/About-groundwater/information-on-earths-water>

Q 63. Consider the following statements:

- 1. Moringa (drumstick _tree) is 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**

Answer – Option B

Explanation -

Statement 1 is incorrect: Moringa (botanical name *Moringa oleifera*) is a fast-growing, drought-resistant tree of the family Moringaceae, native to the Indian subcontinent.

Statement 2 is incorrect: Tamarind, (*Tamarindus indica*), evergreen tree of the pea family (Fabaceae), native to tropical Africa.

Statement 3 is correct: The Forest Rights Act confers ownership rights on minor forest produce like tamarind on tribal populations and residents of the particular forests. Today, about 90 per cent of the tamarind produced in the country comes from the forests.

Statement 4: India is the largest producer of moringa. So we can assume the option is correct.

Statement 5 is correct

Ref: <https://www.downtoearth.org.in/coverage/agriculture/sweet-n-sour-55668>

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**

Answer - Option B

Explanation - Black soil is ideal for growing cotton and is also known as *black cotton soil*. It is believed that climatic condition along with the parent rock material are the important factors for the formation of black soil. This type of soil is typical of the Deccan trap (*Basalt*) region spread over northwest Deccan plateau and is made up of lava flows. They cover the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extend in the south east direction along the Godavari and the Krishna valleys.

Ref: NCERT 10 - RESOURCES AND DEVELOPMENT- Classification of Soils – 7

Q 65 With reference to recent developments regarding 'Recombinant 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**

Answer – Option C

Explanation –

Statement 1 is correct – Genetic engineering is broad term that refers to the process that is used to manipulate the genetic structure of an organism. Recombinant technology is one of the methods of Genetic Engineering.

Statement 2 is correct - Recombinant vector vaccines are live replicating viruses that are engineered to carry extra genes derived from a pathogen—and these extra genes produce proteins against which we want to generate immunity. A recombinant vaccine is a vaccine produced through recombinant DNA technology. This involves inserting the DNA encoding an antigen (such as a bacterial surface protein) that stimulates an immune response into bacterial or mammalian cells, expressing the antigen in these cells and then purifying it from them. Bacteria and Viruses are used as vectors. Live recombinant bacteria or viral vectors effectively stimulate the immune system as in natural infections and have intrinsic adjuvant properties.

Ref: NCERT Book Biotechnology, Chapter 1 – Introduction to Biotechnology

<https://indianexpress.com/article/explained/corbevax-vaccine-biological-e-india-7344928/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6668849/>

<https://www.nature.com/subjects/recombinant-vaccine>

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 diseases entirely from mother and not from father. Inherits mitochondrial**
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

Answer – Option C

Explanation -

Statement 1 is correct – **Mitochondrial replacement therapy (MRT)**, sometimes called **mitochondrial donation**, is the replacement of mitochondria in one or more cells to prevent or ameliorate disease. MRT originated as a special form of in vitro fertilisation in which some or all of the future baby's mitochondrial DNA (mtDNA) comes from a third party. This technique is used in cases when mothers carry genes for mitochondrial diseases.

Statement 2 is correct - Mitochondria are organelle present in the cytoplasm of the cells which are primarily responsible for energy production for all cellular activities. Mitochondria produce energy by ATP (adenosine triphosphate). The ATP production depends on a series of well-regulated chemical reaction under specific interaction of different enzymes. There are genes in the mitochondria which contain information or codes for these critical enzymes. Any defect or mutation in these genes can affect the ATP production and cellular function. There are variable number of mitochondria in different cell types. Cells in organs like brain, heart, kidneys, muscle and liver which are metabolically very active needs continuous high energy supply. These cells have a large number of mitochondria. In a defect with mitochondrial gene if all mitochondria are affected then it will not be possible for the person to survive. So, in human disease due to mitochondrial gene defect the symptoms and disease severity depends on the ratio of normal and abnormal mitochondria in cells. 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.

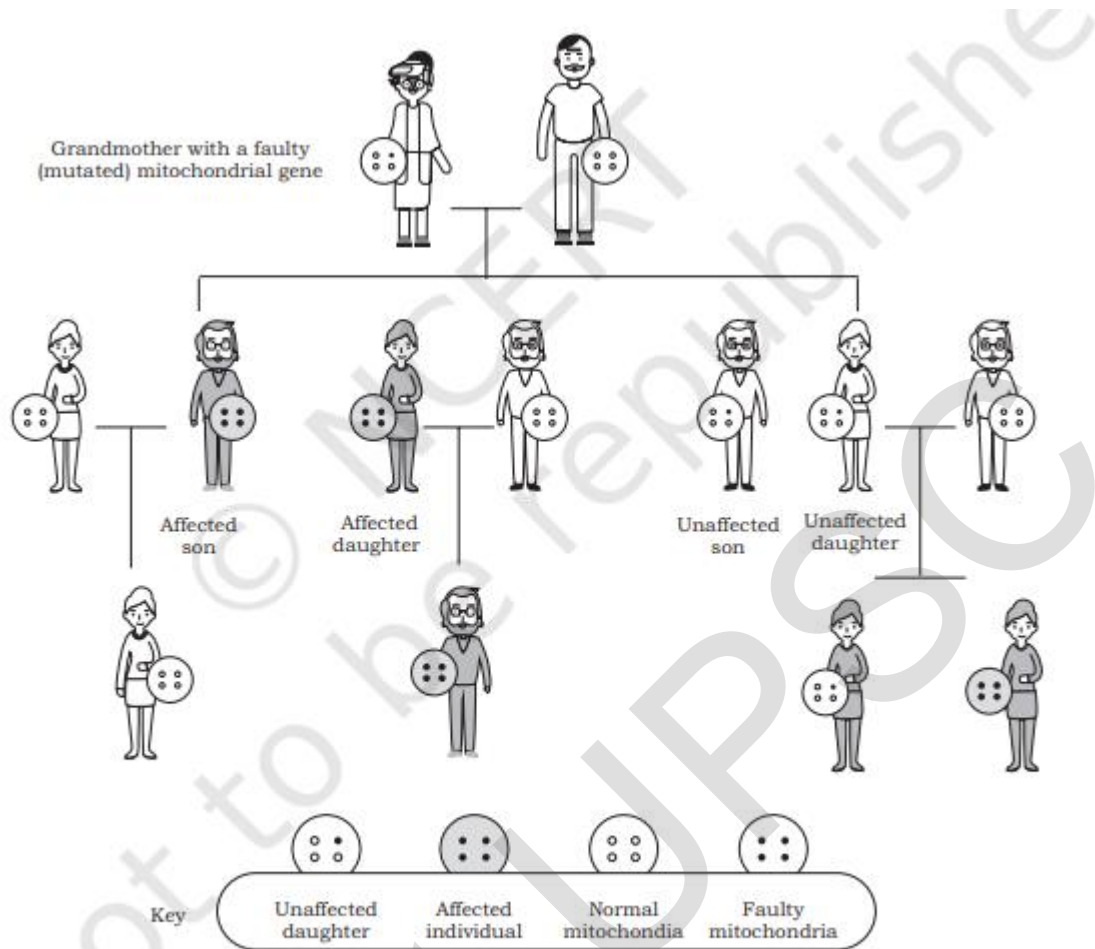


Fig. 8.12: Diagram showing Mitochondrial inheritance in a family with a faulty (mutated) mitochondrial gene

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

- (a) Clonal propagation of crop plants**
- (b) Developing genetically crop plants modified**
- (c) Production substances of plant growth**
- (d) Production Biofertilizers**

Answer – Option B

Explanation - Bollgard Bt cotton (single-gene technology) is India's first biotech crop technology approved for commercialization in India in 2002, followed by Bollgard II – double-gene technology in mid-2006, by the Genetic Engineering Approval Committee (GEAC), the Indian regulatory body for biotech crops.

Bollgard cotton provides in-built protection for cotton against destructive American Bollworm *Heliothis Armigera* infestations, and contains an insecticidal protein from a naturally occurring soil microorganism, *Bacillus thuringiensis* (Bt).

Bollgard II technology contains a superior double-gene technology - Cry1Ac and Cry 2Ab which provides protection against bollworms and *Spodoptera* caterpillar, leading to better boll retention, maximum yield, lower pesticides costs, and protection against insect resistance.

Ref: <https://indianexpress.com/article/business/farmers-union-protest-government-decision-to-waive-off-trait-fee-on-bt-cotton/>

(Indian Express – May 2020)

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

Answer – Option C

Explanation – Whenever there is an increase in pressure in a closed system, it leads to an increase in temperature. This increased temperature leads to the quick cooking of the food inside a pressure cooker.

In a pressure cooker, we cook in a sealed vessel which does not permit steam or liquids to escape unlike in an open vessel. Boiling takes place when the atmospheric pressure just above the surface of the food is equal to the pressure on the surface of the food, so that easy exchange of energy at constant temperature takes place. In an open vessel, to equate these two pressures, a lot of heat energy is required; whereas in a pressure cooker, it is very easy to reach a state of equilibrium with the two above mentioned pressures becoming equal soon due to close nature of the system and thus boiling starts very early.

Increased pressure inside the pressure cooker, increases the boiling point of water in it and thus quick cooking takes place. Therefore, the temperature at which food is cooked is affected by the pressure and not temperature of the flame.

At higher altitudes, where atmospheric pressure is low, the boiling temperature of liquids also gets lower as pressure is directly proportional to temperature.

The temperature at which the food is cooked depends mainly area of the hole of lid and weight of lid.

Ref: NCERT Physics Class 11, Chapter 11 – Thermal Properties of Matter

Q 69 Consider the following:

1. Bacteria Fungi

2. 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

Answer – Option A/D

Explanation - An artificial culture medium is a liquid or gel growth medium designed for the growth of different types of microorganisms. Depending upon the microorganism, the growth medium is selected suitable for their growth. Only bacteria and fungi can be grown artificially.

The artificial culture medium also known as the growth medium is an environment used for the growth of different types of microorganisms. The culture medium contains agarose and nutrients required for the growth of the microorganism. This medium is first sterilized so that there is no contamination in it, i.e. there is no growth of unwanted microbes and contains only the microbes of interest. Bacteria, yeast, protozoans, fungi, and algae are grown in the medium. A specialized culture medium containing the extract of plant and animal tissues is used for the growth of viruses. Viruses are non-living organisms that get active when they are in contact with the host cell. No virus can be grown on an artificial culture medium as there is no living cell present.

Viruses can be grown **in vivo** (within a whole living organism, plant, or animal) or **in vitro** (outside a living organism in cells in an artificial environment, such as a test tube, cell culture flask, or agar plate). **However, after COVID, there is ongoing debate that virus can be cultured in artificial or synthetic medium.**

Ref: NCERT Class 8 – Science, Chapter – MICROORGANISMS : Friend or Foe

<https://www.livemint.com/science/health/coronavirus-could-have-been-created-in-wuhan-lab-escaped-from-there-report-11621497728628.html>

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

Answer – Option B

Explanation

Statement 1 is incorrect - The virus, having DNA as its genetic material. There are two different types of DNA virus.

Single-stranded (ss) DNA virus: e.g. Picornaviruses, Parvovirus, etc.

Double-stranded (ds) DNA virus: e.g. Adenovirus, Herpes virus, etc.

Statement 2 is correct - Adenoviruses are a group of viruses that typically cause respiratory illnesses, such as a common cold, conjunctivitis (an infection in the eye that is sometimes called pink eye), croup, bronchitis, or pneumonia. In children, adenoviruses usually cause infections in the respiratory tract and intestinal tract.

Retroviruses are viruses with RNA as genetic material. They belong to the family Retroviridae of Retroviruses. Once it has infected a cell, it converts its RNA into DNA by reverse transcription. This viral DNA is then inserted into the DNA of the host cell where it starts replicating. For eg., Human Immunodeficiency Virus (HIV).

Ref: NCERT Biology Class XII, Chapter – Microbes in Human Welfare, Page No 180

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**

Answer – Option A

Explanation - 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.

Ref: NCERT Class 7 Science, Chapter 16

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

Answer – Option C

Explanation - Statement 1 is correct - LEDs are extremely energy efficient relative to every other commercially available lighting technology. There are several reasons for this to include the fact they waste very little energy in the form of infrared radiation (much different than most conventional lights to include fluorescent lights), and they emit light directionally (over 180 degrees versus 360 degrees which means there are far fewer losses from the need to redirect or reflect light).

All High Intensity Discharge lights (Sodium Lamps) emit light omnidirectionally. This means they emit light for 360 degrees, requiring fixture housings or reflectors to direct a large portion of the emissions to the desired target area.

Statement 2 is incorrect - LEDs last longer than any light source commercially available on the market. Lifespans are variable but typical values range from 25,000 hours to 200,000 hours or more before a lamp or fixture requires replacement.

High Pressure Sodium lights have excellent lifespan as well (although not as good as LED) which is why they have traditionally been used for outdoor street lighting in municipalities where energy efficiency is at a premium. Typical lifespan values for an HPS bulb are around 24,000 hours. According to American Electric Lighting, "HPS lamps still generate 90% of their initial light output at the midpoint of their life span. Lumen maintenance at the end of life still is excellent at around 80%." LPS lights last slightly shorter periods of time (typically failing around 18,000 hours of operation).

Statement 3 is correct - LEDs are available in a wide range of color temperatures that generally span from 2200K-6000K (ranging from "warm" yellow to light or "cool" blue).

Low and High Pressure Sodium lights are well-known for their warm yellow glow (CCT values

around 2200K). Although High Pressure Sodium lamps emit visible light across a slightly more broad spectrum than Low Pressure Sodium lamps, they are still very limited.

Learning - LED stands for light emitting diode. A diode is an electrical device or component with two electrodes (an anode and a cathode) through which electricity flows - characteristically in only one direction (in through the anode and out through the cathode). Diodes are generally made from semi-conductive materials such as silicon or selenium - solid state substances that conduct electricity in some circumstances and not in others (e.g. at certain voltages, current levels, or light intensities). When current passes through the semiconductor material the device emits visible light. **It is very much the opposite of a photovoltaic cell** (a device that converts visible light into electrical current).

Ref: <https://www.stouchlighting.com/blog/led-vs-hps-lps-high-and-low-pressure-sodium>
<https://www.ndtv.com/india-news/leds-to-replace-54-000-sodium-based-street-lights-in-greater-noida-save-rs-15-crore-per-year-in-bills-2534553>

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 navigation system**
- (c) Radio collars for wildlife tracking**
- (d) Spread of viral diseases**

Answer – Option D

Explanation – ACE2 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 new study, the researchers created a “pseudovirus” that was surrounded by SARS-CoV-2 classic crown of spike proteins, but did not contain any actual virus. Exposure to this pseudovirus resulted in damage to the lungs and arteries of an animal model—proving that the spike protein alone was enough to cause disease. Tissue samples showed inflammation in endothelial cells lining the pulmonary artery walls.

The team then replicated this process in the lab, exposing healthy endothelial cells (which line arteries) to the spike protein. They showed that the spike protein damaged the cells by binding ACE2 (a human protein). This binding disrupted ACE2’s molecular signalling to mitochondria (organelles that generate energy for cells), causing the mitochondria to become damaged and fragmented.

Ref: <https://indianexpress.com/article/explained/covid-infection-coronavirus-spike-protein-7297338/>

(April 2021 Indian Express)

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**

Answer – Option B

Explanation – Bisphenol A (BPA) is a chemical used in the manufacturing of polycarbonate plastics. It's also used in epoxy resins that coat the insides of canned goods and water supply pipes.

Ref: <https://indianexpress.com/article/india/study-shows-use-of-banned-synthetic-in-feeding-bottles-5741631/>

(Indian Express May 2019)

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

Answer – Option D

Explanation - Triclosan is a common ingredient found in many grooming products, including facial washes, toothpaste and deodorants. However, it is mainly found in antibacterial hand washes, soaps, gels, and household cleaners. Commonly used to kill bacteria, the FDA advisory committee has found that using products that contain this ingredient does not help as much as plain soap and water. Triclosan does not provide any additional health benefits to the consumer, but it surely poses risks to human health. It is a known endocrine disruptor; it especially causes thyroid and reproductive hormones to fluctuate. Moreover, it is a skin irritant. Studies have raised that exposure to triclosan over time contributes to making bacteria unaffected by antibiotics.

Ref: <https://indianexpress.com/article/lifestyle/fashion/triclosan-health-effect-handwash-toothpaste-deodorant-antibacterial-6080898/>
(Indian Express October 2019)

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.

Answer – Option D

Explanation – Astronomical distances are measured in light-years as the speed of light is constant. A light-year is how astronomers measure distance in space. It's defined by how far a beam of light travels in one year – a distance of six trillion miles.

Ref: NCERT Class 8 Science – Chapter 17 Stars and Solar System

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 constitutionality of 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

Answer – Option C

Explanation - Statement 1 is correct - The British system is based on the doctrine of the sovereignty of Parliament, while the Parliament is not supreme in India and enjoys limited and restricted powers due to a written Constitution, federal system, judicial review and fundamental rights.

Even though the Indian parliamentary system is largely based on the British pattern, there are some fundamental differences between the two. For example, the Indian Parliament is not a sovereign body like the British Parliament. Further, the Indian State has an elected head (republic) while the British State has hereditary head (monarchy).

Statement 2 is correct - The provision for a Constitution bench has been provided in the Constitution of India under Article 143 and Article 145(3). It is the Chief Justice of India who is constitutionally authorized to constitute a constitution bench and refer cases to it. A constitution bench consists of at least five or more judges of the court which is set up to decide substantial questions of law with regard to the interpretation of the constitution in a case

Learning - The framers of the Constitution were neither in favour of the traditional theory of federalism, which entrusts the task of constitutional amendment to a body other than the Legislature, nor did they favour a rigid special procedure for such amendments. They also never wanted to have a British-style system where Parliament is supreme. The framers, instead, adopted a combination of the "theory of fundamental law", which underlies the written Constitution of the United States with the "theory of parliamentary sovereignty" as existing in the United Kingdom. The Constitution of India vests constituent power upon the Parliament subject to the special procedure laid down therein.

In India it is the Constitution that is supreme and that a statute law to be valid, must be in conformity with the constitutional requirements and it is for the judiciary to decide whether any enactment is constitutional or not.

Q78. 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**

Answer – Option D

Explanation

Statement 1 is incorrect - In 1949, the Gopalaswami Ayyangar Committee while recommending restructuring of the Central Secretariat, suggested that a Department should be identified with a Secretary's charge and a Ministry should be identified with a Minister's charge. It also recommended the abolition of the separate grade of Additional Secretary. For better coordination of policy and planning, **the Committee suggested grouping of the Departments** dealing with economic and social services into four bureaus. It also recommended the creation of an Organization and Methods machinery.

Statement 2 is correct - In 1970, the Department of Personnel was constituted on the recommendation of the Administrative Reforms Commission, 1966, and this was placed under the charge of Cabinet Secretariat. In 1985, it was placed under the overall charge of the Prime Minister assisted by a Minister of State. The first ARC specifically recommended that the Department of Personnel should not administer any service cadre, and that the administrative control of different service should vest with the individual ministries. It also recommended that the administration of the IAS, IPS and the Central Services should be done by the Ministry of Home Affairs while management of the Indian Economic Service and the Indian statistical Service should be transferred to the Department of Economic Affairs. **While noting that the Department of Personnel should be placed directly under the Prime Minister, the first ARC recommended the creation of an advisory council on personnel administration to act as a feeder line of new thinking on personnel administration.** The ARC recommended that the advisory council should consist of official and non-official experts in different aspects of personnel management drawn from all over the country.

However, In March 1954, an Organisation and Method (O & M) Division was set up in Cabinet Secretariat as a follow up on one of the recommendations made by Paul H. Appleby.

In March 1964, a Department of Administrative Reforms was set up within the Ministry of Home Affairs and Organisation and Method (O & M) Division was transferred to its charge from the Cabinet Secretariat.

On 07th February 1973, the work relating to Department of Administrative Reforms was transferred to Department of Personnel created under Cabinet Secretariat on 01st August 1970 and was re-designated as Department of Personnel and Administrative Reforms.

In April 1977, Department of Personnel and Administrative Reforms was shifted from Cabinet Secretariat to the Ministry of Home Affairs. In March 1985, the Department of Personnel and Administrative Reforms was elevated to a full-fledged Ministry of Personnel and Training, Administrative Reforms, Public Grievances and Pensions. On December 10, 1985, Ministry of Personnel and Training, Administrative Reforms, Public Grievances and Pensions was re-designated as the Ministry of Personnel, Public Grievances and Pensions with three departments namely, Department of Personnel and Training (DOPT), Department of Administrative Reforms and Public Grievances and Department of Pension and Pensioners Welfare. This Ministry was placed under the overall charge of the Prime Minister assisted by a Minister of State.

Ref – ARC Report 10 – Personnel Administration - Page No 18

ARC Report 13 – Organisation Structure - Page No 23

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

(a) Article 15

(b) Article 19

(c) Article 21

(d) Article 29

Answer – Option C

Explanation - The Supreme Court has reaffirmed its judgement in the *Menaka* case in the subsequent cases. It has declared the following rights as part of Article 21:

- (1) Right to live with human dignity.
- (2) Right to decent environment including pollution free water and air and protection against hazardous industries.
- (3) Right to livelihood.
- (4) **Right to privacy.**
- (5) Right to shelter.
- (6) Right to health.
- (7) Right to free education up to 14 years of age.
- (8) Right to free legal aid.
- (9) Right against solitary confinement.
- (10) Right to speedy trial.
- (11) Right against handcuffing.
- (12) Right against inhuman treatment.
- (13) Right against delayed execution.
- (14) Right to travel abroad.
- (15) Right against bonded labour.
- (16) Right against custodial harassment.
- (17) Right to emergency medical aid.
- (18) Right to timely medical treatment in government hospital.
- (19) Right not to be driven out of a state.
- (20) Right to fair trial.
- (21) Right of prisoner to have necessities of life.
- (22) Right of women to be treated with decency and dignity.
- (23) Right against public hanging.
- (24) Right to road in hilly areas.
- (25) Right to information.
- (26) Right to reputation.
- (27) Right of appeal from a judgement of conviction
- (28) Right to family pension
- (29) Right to social and economic justice and empowerment
- (30) Right against bar fetters
- (31) Right to appropriate life insurance policy

- (32) Right to sleep
- (33) Right to freedom from noise pollution
- (34) Right to sustainable development
- (35) Right to opportunity.

Ref: Laxmikanth Indian Polity Chapter 7 – Fundamental Rights Page No 209

Sprint UPSC

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 him/her winning in all the constituencies.**

Which of the statements given above is/are correct?

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

Answer – Option B

Explanation – Statement 1 is incorrect - Section 33 (7) of the Representation of the People Act of 1951 which restricts candidates to contesting from two constituencies. Before the amendment, candidates could contest from any number of constituencies.

Statement 2 is correct

Statement 3 is incorrect - The poll body informed the Supreme Court that it had proposed the amendment of Section 33(7) way back in July 2004. It was one of the 22 “urgent electoral reforms” the Election Commission had suggested to a Rajya Sabha Parliamentary Standing Committee. The poll body had pointed out that “there have been cases where a person contests election from two constituencies, and wins from both. In such a situation he vacates the seat in one of the two constituencies. The consequence is that a by-election would be required from one constituency involving avoidable labour and expenditure on the conduct of that by-election.”

The EC concluded that the “law should be amended to provide that a person cannot contest from more than one constituency at a time. The poll body suggested that a candidate should deposit an amount of ₹ 5 lakh for contesting in two constituencies in an Assembly election or ₹ 10 lakh in a general election. This would be used to conduct a by-election in the eventuality that he or she is victorious in both constituencies and has to relinquish one. If a candidate is contesting from more than one constituency, he has to lodge a separate return of election expenses for every election which he has contested. The election for each constituency is a separate election. (Refer : Section 77 of the Representation of People Act, 1951)

Ref: Book Laxmikanth Indian Polity, Chapter – Electoral Reform, Page No - 1203

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

Answer – Option C

Explanation: The right to the city is defined as the right of all inhabitants present and future, to occupy, use and produce just, inclusive and sustainable cities, defined as a common good essential to the quality of life. The right to the city further implies responsibilities on governments and people to claim, defend, and promote this right. RTC gives every occupant, irrespective of their legality, a claim over the city. It requires the State to act on the principles of social justice and provide equal services to each and every resident.

Recognising RTC would make it incumbent on city and state government to provide equal access to shelter and basic services to everyone irrespective of their legal status or duration of domicile in the city. besides RTC, the other major sticking point in the run-up to Habitat III is the role of UN Habitat in monitoring the commitments made by each country.

A city/human settlement with quality public spaces and services that enhance social interactions and political participation, promote sociocultural expressions, embrace diversity, and foster social cohesion; a city/human settlement where public spaces and services contribute to building safer cities (especially for women and girls) and to meeting the needs of its inhabitants (especially those related to livelihoods). The Global Platform for the Right to the City (GPR2C) aims to inspire a better future for all human settlements. The GPR2C is an open, flexible, diverse network of civil society and local government organizations committed to political action and social change through the promotion, defense and fulfillment of the Right to the City at all levels, paying special attention to people and communities affected by exclusion and marginalization.

Ref: <https://indianexpress.com/article/india/india-news-india/habitat-iii-and-draft-new-urban-agenda-right-to-city-3010794/>

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

<https://www.right2city.org/right-to-the-city-components/>

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

- 1. Judicial custody means an 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**

Answer – Option B

Explanation - Statement 1 is incorrect - Whenever a person is arrested by police or investigating agency and detained in custody and if the investigation cannot be completed in 24 hours, the person is mandated to be produced before a magistrate court. The section 167 of CrPC and subsequent provisions lay down procedures that may follow in various scenarios.

The magistrate may further remand the person to custody of police for a period not more than 15 days as a whole. The police custody means that the person is confined at a lock up or remains in the custody of the officer. After lapse of 15 days or the police custody period granted by the magistrate, the person may be further remanded to judicial custody. **Judicial custody means that the person is detained under the purview of the judicial magistrate is lodged in central or state prison.** In judicial custody, the person can apply for a bail as per the CrPC chapter 33 pertaining to the bails and bonds. The judicial custody can extend up to 60 or 90 days as a whole, depending upon the maximum punishment prescribed for the offence. An undertrial person cannot remain in judicial custody beyond half the time period of prescribed maximum punishment.

Statement 2 is correct - In police custody, the investigating authority can interrogate a person while in judicial custody, officials need permission of the court for questioning. In police custody, the person has the right to legal counsel, right to be informed of the grounds which the police have to ensure. In the judicial custody in jails, while the person under responsibility of the magistrate, the Prison Manual comes into picture for routine conduct of the person.

Ref: <https://indianexpress.com/article/explained/explained-police-and-judicial-custody-in-context-of-rhea-chakraborty-6589444/>

(9 September 2020) – Indian Express

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 Prisoners 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

Answer – Option B

Explanation - Parole is a system of releasing a prisoner with suspension of the sentence. The release is conditional, usually subject to behaviour, and requires periodic reporting to the authorities for a set period of time. Parole is considered a reformatory process. The provision (along with furlough) was introduced with a view to humanising the prison system.

Statement 1 is incorrect – Parole, by contrast, is not seen as a matter of right, and is given to a prisoner for a specific reason, such as a death in the family or a wedding of a blood relative. Parole may be denied to a prisoner even when he makes out a sufficient case, if the competent authority is satisfied that releasing the convict would not be in the interest of society.

Statement 2 is correct - In India, parole (as well as furlough) are covered under The Prisons Act of 1894. Prisoners convicted of multiple murders or under the anti-terror Unlawful Activities Prevention Act (UAPA) are not eligible for parole. Since prisons is a State subject in the Constitution, the Prisons Act of each state government defines the rules under which parole is granted in that state. State governments have their own Prisoner Release on Parole Rules. For instance, in Rajasthan, initial parole is granted for 20 days; a second parole is for 30 days, and a third for 40 days. Thereafter, the prisoner can apply for permanent parole.

Learning - Parole is granted by the state executive — the jail authorities submit the report to state government — and the competent authority takes a final decision on grant of parole on humanitarian considerations.

If a plea for parole is rejected, the convict can move the High Court challenging the order of the competent authority.

Apart from regular parole, the superintendent of a jail can also grant parole up to a period of seven days in emergencies. For instance, actor [Sanjay Dutt](#) was granted parole on medical grounds; and Santosh Kumar Singh, who is serving a life term for the 1996 rape and murder

of law student Priyadarshini Mattoo, was granted three weeks' parole to write his LLM examination.

Furlough - This is a concept broadly similar to parole, but with some significant differences. Furlough is given in cases of long-term imprisonment. The period of furlough granted to a prisoner is treated as remission of his sentence.

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

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

(October – 2019)

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

Answer – Option D

Explanation - The Ministry of the Central Government dealing with Tribal Affairs or any officer or authority authorised by the Central Government in this behalf shall be the nodal agency for the implementation of the provisions of this Act. In 1999, a new Ministry of Tribal Affairs was created to provide a sharp focus to the welfare and development of the STs. It was felt necessary that the Ministry of Tribal Affairs should coordinate all activities relating to the STs as it would not be administratively feasible for the Ministry of Social Justice and Empowerment to perform this role.

Ref: Book – Laxmikanth Indian Polity – Chapter 48 – National Commission for STs, Page No – 948

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

Answer – Option A

Explanation – Article 14 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. This provision confers rights on all persons whether citizens or foreigners. Moreover, the word 'person' includes legal persons, viz, statutory corporations, companies, registered societies or any other type of legal person. The Supreme Court held that the 'Rule of Law' as embodied in Article 14 is a 'basic feature' of the constitution. Hence, it cannot be destroyed even by an amendment.

The concept of 'equality before law' is of British origin while the concept of 'equal protection of laws' has been taken from the American Constitution. The first concept connotes: (a) the absence of any special privileges in favour of any person, (b) the equal subjection of all persons to the ordinary law of the land administered by ordinary law courts, and (c) no person (whether rich or poor, high or low, official or non-official) is above the law.

The second concept, on the other hand, connotes: (a) the equality of treatment under equal circumstances, both in the privileges conferred and liabilities imposed by the laws, (b) the similar application of the same laws to all persons who are similarly situated, and (c) the like should be treated alike without any discrimination. Thus, the former is a negative concept while the latter is a positive concept. However, both of them aim at establishing equality of legal status, opportunity and justice.

Ref: Book – Laxmikanth Indian Polity – Chapter Fundamental Rights

News link - <https://indianexpress.com/article/india/uidai-to-sc-tender-expired-no-plan-to-hire-agency-for-social-media-management-6172503/>

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 enforceable by Courts of Law are enforceable by Courts of Law.**

Answer – Option A

Explanation – The federal features of the Constitution of India are:

1. The Constitution establishes a dual polity consisting of the Union at the Centre and the states at the periphery. Each is endowed with sovereign powers to be exercised in the field assigned to them respectively by the Constitution.
2. The Constitution is not only a written document but also the lengthiest Constitution of the world.
3. The Constitution is the supreme (or the highest) law of the land. The laws enacted by the Centre and the states must conform to its provisions. Otherwise, they can be declared invalid by the Supreme Court or the high courts through their power of judicial review. Thus, the organs of the government (legislative, executive and judicial) at both the levels must operate within the jurisdiction prescribed by the Constitution.
4. The division of powers established by the Constitution as well as the supremacy of the Constitution can be maintained only if the method of its amendment is rigid. Hence, the Constitution is rigid to the extent that those provisions which are concerned with the federal structure (i.e., Centre-state relations and judicial organisation) can be amended only by the joint action of the Central and state governments.
5. The Constitution establishes an independent judiciary headed by the Supreme Court for two purposes: one, to protect the supremacy of the Constitution by exercising the power of judicial review; and two, to settle the disputes between the Centre and the states or between the states.
6. The Constitution provides for a bicameral legislature consisting of an Upper House (Rajya Sabha) and a Lower House (Lok Sabha).

Ref: Book Laxmikanth Indian Polity – Chapter Federal System, Page No 313

Sprint UPSC

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, to 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**

Answer – Option A

Explanation – The term 'State' is central to the study of Political Science. But it is wrongly used as synonym for nation, society, government etc. The term 'state' is also used as State management, State aid and so on. Also, as the States of Indian union or the fifty States that make the United States of America. But in Political Science, we use this term differently; it has a more specific meaning.

State is "a community of persons, more or less numerous, permanently occupying a definite portion of territory, independent, or nearly so, of external control, and possessing an organized government to which the great body of inhabitants render habitual obedience." – Garner

Learning - The term 'State' has been used in different provisions concerning the fundamental rights. Hence, Article 12 has defined the term for the purposes of Part III. According to it, the State includes the following:

- (a) Government and Parliament of India, that is, executive and legislative organs of the Union government.
- (b) Government and legislature of states, that is, executive and legislative organs of state government.
- (c) All local authorities, that is, municipalities, panchayats, district boards, improvement trusts, etc.
- (d) All other authorities, that is, statutory or non-statutory authorities like LIC, ONGC, SAIL, etc.

Thus, State has been defined in a wider sense so as to include all its agencies. It is the actions of these agencies that can be challenged in the courts as violating the Fundamental Rights.

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

Book – Book Laxmikanth Indian Polity – Chapter Fundamental Rights, Page No 188

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

Answer – Option C

Explanation –

Statement 1 is correct - At any time, the chief justice of India can request a retired judge of the Supreme Court or a retired judge of a high court (who is duly qualified for appointment as a judge of the Supreme Court) 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. But he will not otherwise be deemed to be a judge of the Supreme Court.

Statement 2 is correct – As a court of record, a high court also has the power to review and correct its own judgement or order or decision, even though no specific power of review is conferred on it by the Constitution. The Supreme Court, on the other hand, has been specifically conferred with the power of review by the constitution.

Ref: Book Laxmikanth Indian Polity – Chapter Supreme Court, Page No 625

Book Laxmikanth Indian Polity – Chapter High Court, Page No 776

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 circumstances.**

Which of the statements given above is/are correct?

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

Answer – Option A

Explanation - Statement 1 is correct - Though the Indian Constitution is federal and envisages a dual polity (Centre and states), it 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. The other federal states like USA and Switzerland, on the other hand, adopted the system of double citizenship.

Statement 2 is incorrect - In India both a citizen by birth as well as a naturalised citizen are eligible for the office of President while in USA, only a citizen by birth and not a naturalised citizen is eligible for the office of President.

Statement 3 is incorrect - The Citizenship Act (1955) prescribes three ways of losing citizenship whether acquired under the Act or prior to it under the Constitution, viz, renunciation, termination and deprivation. In India, all citizens irrespective of the state in which they are born or reside enjoy the same political and civil rights of citizenship all over the country and no discrimination is made between them. However, this general rule of absence of discrimination is subject to some exceptions.

Ref: Book Laxmikanth Indian Polity – Chapter Citizenship, Page No 163

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**

Answer – Option D

Explanation – Separation of power (executive, legislature and judiciary) checks the abuse of power by other organs. So, this helps in checking the authoritarian tendencies. This is the best safeguard to safeguard liberty.

Learning - The term 'liberty' means the absence of restraints on the activities of individuals, and at the same time, providing opportunities for the development of individual personalities. The Preamble secures to all citizens of India liberty of thought, expression, belief, faith and worship, through their Fundamental Rights, enforceable in court of law, in case of violation. Liberty as elaborated in the Preamble is very essential for the successful functioning of the Indian democratic system. However, liberty does not mean 'license' to do what one likes, and has to be enjoyed within the limitations mentioned in the Constitution itself. In brief, the liberty conceived by the Preamble or Fundamental Rights is not absolute but qualified.

Liberal democracy is a form of government. It is a representative democracy in which the ability of the elected representatives to exercise decision-making power is subject to the rule of law, and usually moderated by a constitution that emphasizes the protection of the rights and freedoms of individuals, and which places constraints on the leaders and on the extent to which the will of the majority can be exercised against the rights of minorities. The rights and freedoms protected by the constitutions of liberal democracies are varied, but they usually include most of the following: rights to due process, privacy, [property](#) and equality before the law, and freedoms of speech, assembly and religion. In liberal democracies these rights (also known as "liberal rights") may sometimes be constitutionally guaranteed or are otherwise created by statutory law or case law, which may in turn empower various civil institutions to administer or enforce these rights. Liberal democracies also tend to be characterized by tolerance and pluralism; widely differing social and political views, even those viewed as extreme or fringe, are permitted to co-exist and compete for political power on a democratic basis. Liberal democracies periodically hold [elections](#) where groups with differing political views have the opportunity to achieve political power. In practice, these elections are nearly always won by groups who support liberal democracy; thus, the system perpetuates itself.

Ref: Book Laxmikanth Indian Polity – Chapter Preamble, Page No 129

Q 91 Under 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

Answer – Option B

Explanation – The Constitution does not contain any classification of Directive Principles. However, on the basis of their content and direction, they can be classified into three broad categories, viz, socialistic, Gandhian and liberal-intellectual.

Socialist principles reflect the ideology of socialism. They lay down the framework of a democratic socialist state, aim at providing social and economic justice, and set the path towards welfare state.

Article 39 - To secure

- (a) the right to adequate means of livelihood for all citizens;
- (b) the equitable distribution of material resources of the community for the common good;
- (c) **prevention of concentration of wealth** and means of production; (d) equal pay for equal work for men and women;
- (e) preservation of the health and strength of workers and children against forcible abuse; and
- (f) opportunities for healthy development of children.

Ref: Book Laxmikanth Indian Polity – Chapter Directive Principles of State Policy, Page No 246

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**

Answer – Option B

Explanation – Originally, the right to property was one of the seven fundamental rights under Part III of the Constitution. It was dealt by Article 19(1) (f) and Article 31. Article 19(1)(f) guaranteed to every citizen the right to acquire, hold and dispose of property. Article 31, on the other hand, guaranteed to every person, whether citizen or non-citizen, right against deprivation of his property. It provided that no person shall be deprived of his property except by authority of law. It empowered the State to acquire or requisition the property of a person on two conditions: (a) it should be for public purpose, and (b) it should provide for payment of compensation (amount) to the owner.

The 44th Amendment Act of 1978 abolished the right to property as a Fundamental Right by repealing Article 19(1) (f) and Article 31 from Part III. Instead, the Act inserted a new Article 300A in Part XII under the heading 'Right to Property'. It provides that no person shall be deprived of his property except by authority of law. Thus, the right to property still remains a legal right or a constitutional right, though no longer a fundamental right. It is not a part of the basic structure of the Constitution.

Ref: Book Laxmikanth Indian Polity – Chapter Fundamental Rights, Page No 231

Q 93 What was the exact constitutional status of India on 26th January, 1950?

- (a) Democratic Republic**
- (b) A Sovereign Democratic Republic**
- (c) A Sovereign Secular Democratic Republic**
- (d) A Sovereign Socialist Secular Democratic Republic**

Answer – Option B

Explanation – The Preamble to the Indian Constitution is based on the 'Objectives Resolution', drafted and moved by Pandit Nehru, and adopted by the Constituent Assembly. It has been amended by the **42nd Constitutional Amendment Act (1976)**, which added three new words–**Socialist, Secular and Integrity**. So, before this amendment the status of Indian Constitution was Sovereign, Democratic and Republic.

The Preamble in its present form reads:
“We, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens: JUSTICE, Social, Economic and Political; LIBERTY of thought, expression, belief, faith and worship; EQUALITY of status and of opportunity; and to promote among them all; FRATERNITY assuring the dignity of the individual and the unity *and integrity* of the Nation; IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION”.

Ref: Book Laxmikanth Indian Polity – Chapter Preamble, Page No 123

Book NCERT Class 9 Democratic Politics – Chapter Constitutional Design, Page No 42

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**

Answer – Option D

Explanation – Constitutional government is defined by the existence of a constitution—which may be a legal instrument or merely a set of fixed norms or principles generally accepted as the fundamental Law of the polity—that effectively controls the exercise of political power. The essence of constitutionalism is the control of power by its distribution among several state organs or offices in such a way that they are each subjected to reciprocal controls and forced to cooperate in formulating the will of the state. Constitutional government in essence is about constitutionalism which is about limited government. In many cases, constitutional government is used interchangeably with “constitutionally limited government” or “limited government”.

Ref: Book NCERT Class 11 Democratic Politics – Chapter Constitution: Why and How, Page No 20

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**

Answer - Option D,

Halbi, Ho and Kui are the tribal languages.

Halbi (also Bastari, Halba, Halvas, Halabi, Halvi) is an Eastern Indo-Aryan language, transitional between Odia and Marathi. It is spoken by 500,000 people across the central part of India.

Kui (also Kandh, Khondi, Khond, Khondo, Kanda, Kodu (Kōdu), Kodulu, Kuinga (Kūinga), Kuy) is a South-Eastern Dravidian language spoken by the Kandhas. It is mostly spoken in Odisha, and written in the Odia script. With 941,988 registered native speakers, it figures at rank 29 in the 1991 Indian census. 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.

Ho (IPA: /hoː dʒʌŋʌr/) is a Munda language of the Austroasiatic language family spoken primarily in India by about 1.04 million people (0.103% of India's population) per the 2001 census. Ho is a tribal language. It is spoken by the Ho, Munda, Kolha and Kol tribal communities of Odisha, Jharkhand, Bihar, Chhattisgarh, West Bengal, Assam

Ref : https://en.wikipedia.org/wiki/Halbi_language

[https://en.wikipedia.org/wiki/Kui_language_\(India\)](https://en.wikipedia.org/wiki/Kui_language_(India))

https://en.wikipedia.org/wiki/Ho_language

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 instituted in the year 1954, were suspended only once.**
- 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**

Answer: Option D

Explanation - Bharat Ratna and Padma Awards are not titles under Article 18 of the Indian Constitution as clarified by the Supreme Court in 1996 Balaji Raghavan case. Article 18 prohibits only hereditary titles of Nobility.

Padma awards were suspended twice during the years 1978 and 1979 and 1993 to 1997.

The number of Bharat Ratna awards is restricted to a maximum of 3 in a particular year.

Ref: <https://padmaawards.gov.in/AboutAwards.aspx>

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**

Answer - Option D,

Explanation - Statement 1 is not correct but Statement 2 is correct

Hyderabad is the only city from India to have been recognized as a 2020 Tree City of the World by the Arbor Day Foundation and the FAO for its commitment to growing and maintaining urban forests.

Ref:<https://www.thehindubusinessline.com/news/hyderabad-a-tree-city-of-the-world/article33874032.ece>

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**
- (c) 1 and 3 only**
- (d) 1, 2 and 3**

Answer – Option C

Explanation - The award was received mostly by Tennis players so far.

American golfer Tiger Woods was the first winner of this award.

Roger Federer received this award maximum number of times compared to others.

Ref:

https://en.wikipedia.org/wiki/Laureus_World_Sports_Award_for_Sportsman_of_the_Year

Q 99. Consider the following statements in respect of the 32nd 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.**
- (b) 2 only**
- (c) Both 1 and 2**
- (d) Neither 1 nor 2**

Answer - Option B

Explanation - Tokyo 2020 Summer Olympics held in July-August 2021, official motto was "United by Emotion". The disciplines added by the Japanese Olympic Committee were baseball and softball, karate, sport climbing, surfing and skateboarding, the last four of which made their Olympic debuts

Ref: https://en.wikipedia.org/wiki/2020_Summer_Olympics

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

Answer – Option D

Explanation - The new system

In 2021-23, the percentage of available points collected will once again determine the standings but the amount of points available per Test has been made uniform.

No matter the length of the series, each Test will now see 12 points awarded for a win, four for a draw and six for a tie. Hence, a five-Test series will have a total of 60 points available and a two-Test series a maximum of 24.

As became the case in the previous edition of WTC, the standings will be determined on the percentage of available points collected.

This system allows the relative performance of teams to be compared at any point in time, meaning the cancellation of any matches or series for any reason does not directly impact the points table.

It will also standardize the imbalance in the number of matches played by teams.

New Zealand played 22 matches and earned 2764 points which are less than what has been earned by England 3753 by playing 35 matches. But the ranking is based on ratings. New Zealand rating is 126 while England's is 107

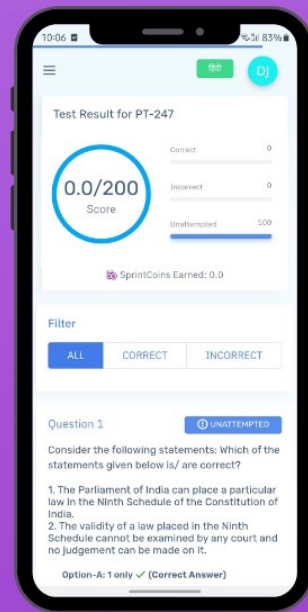
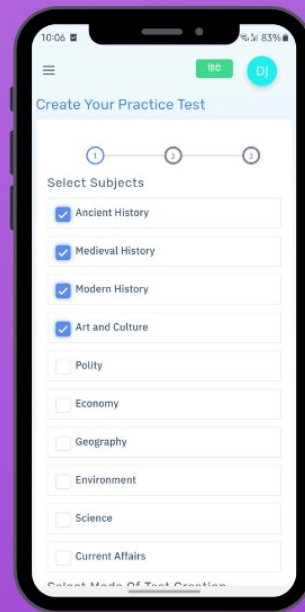
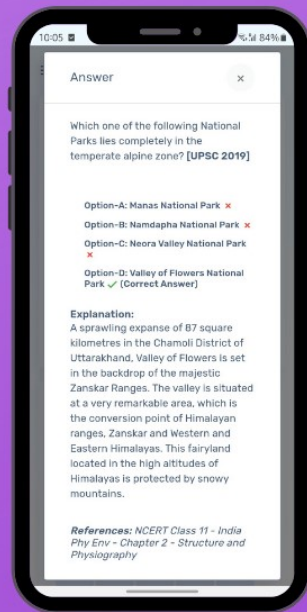
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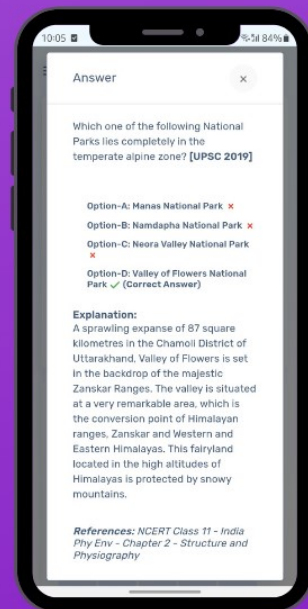
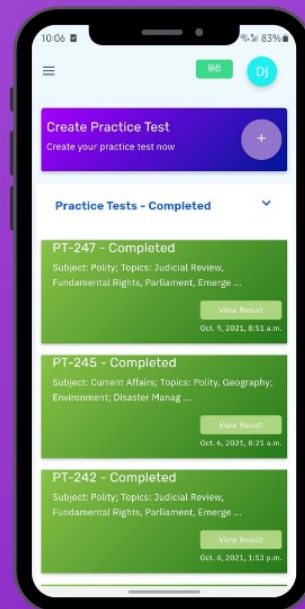
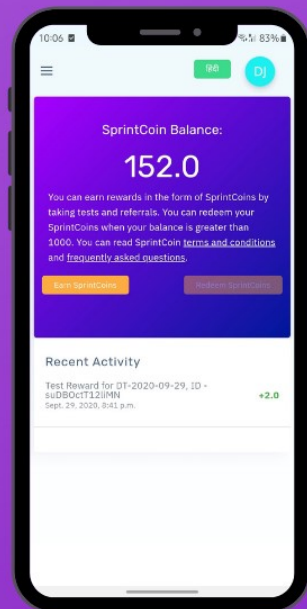
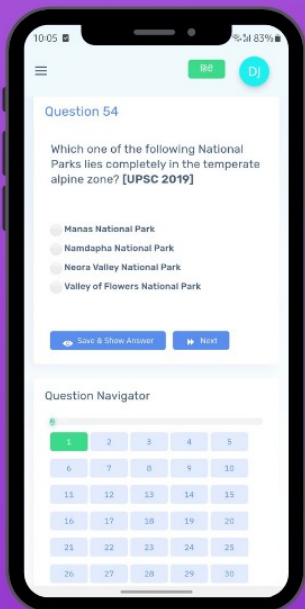


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