

Educrat IAS Academy

UPSC Prelims Mock Test: 10

Answer Key

1. Consider the following statements with respect to “Debt Recovery Tribunal (DRT)”:

1. DRTs were created to facilitate the speedy recovery of debt payable to banks and other financial institutions by their customers.
2. DRTs were set up after the passing of SARFAESI Act, 2002.

Which of the following codes below given is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct: Debt Recovery Tribunals also known as DRTs were created to facilitate the speedy recovery of debt payable to banks and other financial institutions by their customers. The banks and financial institutions had been facing problems in recovery of loans advanced by them to individual people or business entities. Due to this, the banks and financial institutions started restraining themselves from advancing out loans. There was a need to have an effective system to recover the money from the borrower.

Statement 2 is incorrect: DRTs was set up after the passing of Recovery of Debts due to Banks and Financial Institutions Act (RDBBFI), 1993.

2. In economics, “Fisher effect” is the relationship between which of the following variables?

- a) Income & Inequality
- b) Growth & Inflation
- c) Trade & Development
- d) Inflation & Interest rate

Correct Answer: D

Explanation: A concept developed by Irving Fisher (1867–1947) which shows relationship between inflation and the interest rate, expressed by an equation popular as the fisher equation, i.e., the nominal interest rate on a loan is the sum of the real interest rate and the rate of inflation expected over the duration of the loan: $R = r + F$; where R = nominal interest rate, r = real interest rate and F = rate of annual inflation.

3. Which of the following statements is/are NOT correct about “Quantitative Easing”?

1. It is a conventional monetary policy of a Central Bank.
2. It led to increase in the interest rates.

Choose the correct code from below given options:

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

Correct Answer: C

Explanation: “Quantitative Easing”.

Statement 1 is incorrect: Quantitative easing (QE) is a form of unconventional monetary policy of a central bank.

Statement 2 is incorrect: In Quantitative Easing central bank purchases longer-term securities from the open market in order to increase the money supply and encourage lending and investment. Buying these securities adds new money to the economy, and also serves to lower interest rates by bidding up fixed-income securities.

4. Consider the following statements with respect to “Pigovian Tax”:

1. It is a tax placed on any good which creates negative externalities.
2. Carbon tax is an example of Pigovian Tax.

Which of the following codes below given is/are correct?

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

Correct Answer: C

Explanation: Pigovian Tax.

Statement 1 is correct: A Pigovian tax is a tax placed on any good which creates negative externalities. The aim of a Pigovian tax is to make the price of the good equal to the social marginal cost and create a more socially efficient allocation of resources. It is named after the economist Arthur Pigou who developed the concept of externalities in the 1920s.

Statement 2 is correct: A carbon tax aims to make individuals and firms pay the full social cost of carbon pollution. In theory, the tax will reduce pollution and encourage more environmentally friendly alternatives.

5. Which of the following sectors is/are part of Index of eight core industries in India?

1. Steel
2. Cement
3. Coal
4. Aluminum
5. Natural gas

Select the correct answer using the codes given below:

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

Correct Answer: C

Explanation: The eight core industries, including coal, crude oil, natural gas, refinery products, fertilizers, steel, cement and electricity, comprise 40.27 per cent of the weight of items included in the Index of Industrial Production (IIP).

6. Which of the following statements is/are correct about 'Fifth five-year plan'?

1. The time period for Fifth five-year plan was 1974-79.
2. Plan focus was on growth and employment.
3. Plan was abruptly ended before completing its tenure.

Select the correct answer using the codes given below:

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

Correct Answer: C

Explanation: The fifth Plan (1974–79) has its focus on poverty alleviation and self-reliance. The Janata Party came to power with a thumping victory in 1977. As the government of the time had then complete say in the central planning in India, how could the new government continue with the Fifth Plan of the last government which had still more than one year to reach its completion.

7. With reference to the “Indian Depository Receipts (IDR)”, which of the following statements is/are correct?

1. IDR is a mechanism that allows investors in India to invest in listed foreign companies.
2. IDRs are denominated in Indian Rupees and issued by a Domestic Depository in India.

Select the correct answer using the codes given below:

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

Correct Answer: C

Explanation: Indian Depository Receipts (IDR).

Statement 1 is correct: An IDR is a mechanism that allows investors in India to invest in listed foreign companies, including multinational companies, in Indian rupees. IDRs give the holder the opportunity to hold an interest in equity shares in an overseas company.

Statement 2 is correct: IDRs are denominated in Indian Rupees and issued by a Domestic Depository in India. They can be listed on any Indian stock exchange. Anybody who can invest in an IPO (Initial Public Offer) is/are eligible to invest in IDRs.

8. “A graphic curve which advocates a relationship between inflation and unemployment in an economy”- describes which of the following?

- a) Gini-coefficient
- b) Laffer Curve
- c) Lorenz curve
- d) Phillips curve

Correct Answer: D

Explanation: Phillips curve is a graphic curve which advocates a relationship between inflation and unemployment in an economy. As per the curve there is a ‘trade off’ between inflation and unemployment, i.e., an inverse relationship between them. The curve suggests that lower the inflation, higher the unemployment and higher the inflation, lower the unemployment. During the 1960s, this idea was among the most important theories of the modern economists. This concept is known after the economists who developed it—Alban William Housego Phillips (1914–75).

9. With reference to the “Hybrid Annuity Model (HAM)”, which of the following statements is/are correct?

1. It is a mix of Build-Operate-Transfer (BOT) and Engineering, Procurement and Construction (EPC) models.
2. Under HAM 40% of the project cost is born by the government.

Select the correct answer using the codes given below:

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

Correct Answer: C

Explanation: Hybrid Annuity Model (HAM).

Statement 1 is correct: In India, the new HAM is a mix of BOT Annuity and EPC models.

Statement 2 is correct: As per the design, the government will contribute to 40% of the project cost in the first five years through annual payments (annuity). The remaining payment will be made on the basis of the assets created and the performance of the developer.

10. Which of the following “Consumer Price Index (CPI) numbers” is/are released by Labour Bureau in the Ministry of Labour?

1. CPI for Industrial Workers (IW).
2. CPI for Agricultural Labourers (AL).
3. CPI for Rural Labourers (RL).
4. CPI for Urban Non-Manual Employees (UNME).

Select the correct answer using the codes given below:

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

Correct Answer: D

Explanation: At the national level, there are four Consumer Price Index (CPI) numbers. These are:

CPI for Industrial Workers (IW),

CPI for Agricultural Labourers (AL),

CPI for Rural Labourers (RL) and

CPI for Urban Non-Manual Employees (UNME).

The base years of the current series of CPI (IW), CPI (AL) and CPI (RL), and CPI (UNME) are 1982, 1986-87 and 1984-85, respectively. While the first three are compiled and released by the Labour Bureau in the Ministry of Labour, the fourth one is released by the Central Statistical Organisation under the Ministry of Statistics and Programme Implementation.

Note – CPI for Urban Non-Manual Employees (UNME) has been discontinued since Dec 2010.

11. The term “Crowding out Effect”, often seen news, is related to which of the following?

- a) Rise in individual borrowings
- b) Rise in foreign investment
- c) Rise in borrowing of government
- d) Rise in high powered money

Correct Answer: C

Explanation: Crowding out Effect

In some situations, such as high budget deficit etc, there is rise in government borrowing from the market. Due to the excessive borrowing by the government from the market, there is little credit left for private sector to borrow. As a result, interest rate rises, making borrowings by private sector costly and leading to decline in private investment. This is known as crowding out effect. The private borrowing and subsequent private investment is discouraged.

12. Which of the following is/are characteristics of a Public good?

1. Non-excludability
2. Rival Consumption
3. Rejectable

Select the correct answer using the code given below:

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

Correct Answer: A

Explanation: Public goods are goods that can be consumed simultaneously by a large number of people without the consumption by one imposing an opportunity cost on others.

The characteristics of a public good:

- Non excludability., the citizens can enjoy its benefits at no explicit financial cost.
- Non rival consumptione., the marginal cost of supplying this public good to an extra citizen is zero.
- Non Rejectable i.e., collective supply for all citizens means that it cannot be rejected.

13. Which of the following parameters are consists of International Monetary Fund (IMF) Quota Formula?

1. Weighted average of GDP.
2. Openness.
3. Contribution to IMF.
4. Economic variability.
5. International reserves.

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: When a country joins the IMF, it is assigned an initial quota in the same range as the quotas of existing members of broadly comparable economic size and characteristics. The IMF uses a quota formula to help assess a member's relative position.

The current quota formula is a weighted average of GDP(weight of 50 percent), openness (30 percent), economic variability (15 percent), and international reserves (5 percent).

For this purpose, GDP is measured through a blend of GDP—based on market exchangerates (weight of 60 percent) and on PPP exchange rates (40 percent).

The formula also includes a “compression factor” that reduces the dispersion in calculated quota shares across members.

14. Consider the following statements regarding the Index of Industrial Production (IIP):

1. The all-India IIP is being released as a monthly series since 1950.
2. The base year of IIP is 2014-15.
3. There is a lag of three weeks in the publication of the IIP index data after the reference month ends.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: In India, the first official attempt to compute the Index of Industrial Production (IIP) was made much earlier than the first recommendation on the subject came at the international level.

The Office of the Economic Advisor, Ministry of Commerce and Industry made the first attempt of compilation and release of IIP with base year 1937, covering 15 important industries, accounting for more than 90% of the total production of the selected industries.

The all-India IIP is being released as a monthly series since 1950. With the inception of the Central Statistical Organization in 1951, the responsibility for compilation and publication of IIP was vested with the same.

When the index was commenced in India, the base year adopted was 1937 and this was revised successively to 1946, 1951, 1956, 1960, 1970, 1980-81, 1993-94, 2004-05 and recently to 2011-12.

The IIP number measures the industrial production for the period under review, usually a month, as against the reference period. IIP is a key economic indicator of the manufacturing sector of the economy. There is a lag of six weeks in the publication of the IIP index data after the reference month ends.

15. Which of the following are the pillars of the Basel Norms?

1. Capital adequacy requirements
2. Supervisory review
3. Market discipline
4. Independence of Central Bank

Select the correct answer using the code given below:

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

Correct Answer: A

Explanation: Basel is a city in Switzerland. It is the headquarters of Bureau of International Settlement (BIS), which fosters co-operation among central banks with a common goal of financial stability and common standards of banking regulations.

Basel guidelines refer to broad supervisory standards formulated by this group of central banks – called the Basel Committee on Banking Supervision (BCBS).

The set of agreement by the BCBS, which mainly focuses on risks to banks and the financial system are called Basel accord.

The purpose of the accord is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses. India has accepted Basel accords for the banking system.

In June 2004, Basel II guidelines were published by BCBS. The guidelines were based on three parameters, which the committee calls it as pillars.

Capital Adequacy Requirements: Banks should maintain a minimum capital adequacy requirement of 8% of risk assets

Supervisory Review: According to this, banks were needed to develop and use better risk management techniques in monitoring and managing all the three types of risks that a bank faces, viz. credit, market and operational risks

Market Discipline: This need increased disclosure requirements. Banks need to mandatorily disclose their CAR, risk exposure, etc to the central bank. Basel II norms in India and overseas are yet to be fully implemented.

16. Consider the following statements regarding the Pradhan Mantri Matsya Sampada Yojana (PMMSY):

1. PMMSY will be implemented over a period of 5 years from FY 2020-21 to FY 2024-25 in all coastal States/Union Territories.
2. More than 50% of the total estimated investment of the PMMSY is earmarked for creation and up-gradation of fisheries infrastructure facilities.
3. The scheme plans to reduce post-harvest losses from the present high of 25% to about 10% by modernizing and strengthening value chain.

Which of the statements given above is/are correct?

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

Correct Answer: D

Explanation: The Pradhan Mantri Matsya Sampada Yojana (PMMSY) aims to enhance fish production to 220 lakh metric tons by 2024-25 from 137.58 lakh metric tons in 2018-19 at an average annual growth rate of about 9%.

The Union Minister for Fisheries, Animal Husbandry and Dairying, Shri Giriraj Singh, said the ambitious scheme will result in doubling export earnings to Rs.1,00,000 crore and generate about 55 lakhs direct and indirect employment opportunities in fisheries sector over a period of next five years.

Dedicating the PMMSY to fishers, fish farmers, fish workers, fish vendors and other stakeholders associated with the fisheries sector, Shri Giriraj Singh said that insurance coverage for fishing vessels is being introduced for the first time.

The PMMSY will be implemented over a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories.

The Fisheries Minister said that about 42% of the total estimated investment of the PMMSY is earmarked for creation and upgradation of fisheries infrastructure facilities.

Focus areas include Fishing Harbours and Landing Centers, Post-harvest and Cold Chain Infrastructure, Fish Markets and Marketing Infrastructure, Integrated Modern Coastal Fishing Villages and Development of Deep-sea Fishing.

Besides creating critical fisheries infrastructure by attracting private investments in fisheries sector, the scheme plans to reduce post-harvest losses from the present high of 25% to about 10% by modernizing and strengthening value chain.

Under the Swath Sagar plan, activities envisaged with a view to modernize the fisheries sector include promotion of Bio-toilets, Insurance coverage for fishing vessels, Fisheries Management Plans, E-Trading/Marketing, Fishers and resources survey and creation of National IT-based databases.

17. The International Monetary Fund (IMF) defines the Balance of Payments (BoP) as a statistical statement that summarizes economic transactions between residents and non-residents during a specific time period. Which of the following transactions is/are consists of BoP?

1. Transactions in goods, services and income between an economy and the rest of the world.
2. Changes of ownership and other changes in economy's monetary gold, special drawing rights (SDRs), and financial claims on and liabilities to the rest of the world.
3. Unrequited transfers.

Select the correct answer using the codes given below:

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

Correct Answer: D

Explanation: The Balance of Payments and International Investment Position Manual (BPM6) of the International Monetary Fund (IMF) defines the Balance of Payments (BoP) as a statistical statement that summarizes economic transactions between residents and non-residents during a specific time period.

The BoP, thus, includes all transactions showing:

- transactions in goods, services and income between an economy and the rest of the world,
- changes of ownership and other changes in that economy's monetary gold, special drawing rights (SDRs), and financial claims on and liabilities to the rest of the world, and Unrequited transfers.

These transactions are categorized into

- The "current account" including "goods and services", the "primary income", and the "secondary income", The "capital account", and The "financial account".

18. Which of the following is/are correctly matched?

Committee/Panel : Significance

1. Ranga Rajan Committee: Balance of Payments
2. Vijay Kelkar Committee: Goods & Service Tax
3. Tarapore Committee: Currency Convertibility

Select the correct answer using the codes given below:

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

Correct Answer: A

Explanation: Besides, economic reforms in various sectors, various Committees were set up from time to time (by the Government of India and by RBI) to discuss policy issues related to international trade and balance of payments.

Some of the important Committees were –

Committee on Export – Import Policies & Procedures (Alexander Committee, 1978),

Committee on Trade policy (Abid Hussain Committee, 1984),

High – level Committee on Balance of Payments (Rangarajan Committee 1993), and

Committee on Capital Account Convertibility (Tarapore Committee I 1997 & Tarapore Committee II 2006).

In 2003, the Vajpayee government forms a task force under Vijay Kelkar to recommend tax reforms. In 2004, Vijay Kelkar, then advisor to the Finance Ministry, recommends GST to replace the existing tax regime.

19. Which of the following state taxes is/are subsumed under Goods and Service Tax (GST)?

1. Luxury Tax
2. Entertainment tax and Amusement tax levied by local bodies
3. Taxes on advertisements

Select the correct answer using the codes given below:

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

Correct Answer: D

Explanation: The introduction of the Goods and Services Tax (GST) is a very significant step in the field of indirect tax reforms in India.

By amalgamating a large number of Central and State taxes into a single tax, GST will mitigate ill effects of cascading or double taxation in a major way and pave the way for a common national market.

The government rolled out GST with effect from 1st July 2017. State taxes that would be subsumed within the GST are:-

- State VAT
- Central Sales Tax
- Purchase Tax
- Luxury Tax
- Entry Tax (All forms)
- Entertainment Tax and Amusement Tax (except those levied by the local bodies)
- Taxes on advertisements
- Taxes on lotteries, betting and gambling
- State cesses and surcharges in so far as they relate to supply of goods and services.

20. With reference to the new Non-Performing Assets (NPA) recognition norms, which of the following statements is/are correct?

1. The new norms replace all the earlier resolution plans except Joint Lenders Forum (JLF).
2. The lenders can initiate the process of a resolution plan (RP) even before a default.
3. The lenders shall undertake a prima facie review of the borrower account within 30 days from the day of default.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: The Reserve Bank of India (RBI) on June 7, 2019 issued a new framework for resolution of bad loans, replacing the previous norms quashed by the Supreme Court in April, offering a 30-day gap for stress recognition instead of the one-day default earlier.

The new norms replaces all the earlier resolution plans such as the framework for revitalising distressed assets, corporate debt restructuring scheme, flexible structuring of existing long-term project loans, strategic debt restructuring scheme (SDR), change in ownership outside SDR, and scheme for sustainable structuring of stressed assets (S4A), and the joint lenders' forum with immediate effect.

The central bank said lenders shall recognise incipient stress in loan accounts, immediately on default, by classifying such assets as special mention accounts (SMA).

Since default with any lender is a lagging indicator of financial stress faced by the borrower, it is expected that the lenders initiate the process of implementing a resolution plan (RP) even before a default.

The central bank said once a borrower is reported to be in default by any lenders, financial institutions, small finance banks or NBFCs, the lenders shall undertake a prima facie review of the borrower account within 30 days from the day of default.

21. Which of the following is/are type (s) of Government Securities (G-Sec)?

1. Treasury Bills (T-bills)
2. Cash Management Bills (CMBs)
3. Dated Government Securities

Select the correct answer using the code given below:

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

Correct Answer: D

Explanation: A Government Security (G-Sec) is a tradeable instrument issued by the Central Government or the State Governments. It acknowledges the Government's debt obligation.

Such securities are short term (usually called treasury bills, with original maturities of less than one year) or long term (usually called Government bonds or dated securities with original maturity of one year or more).

In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).

G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments.

Treasury Bills (T-bills): Treasury bills or T-bills, which are money market instruments, are short term debt instruments issued by the Government of India and are presently issued in three tenors, namely, 91 day, 182 day and 364 day.

Cash Management Bills (CMBs): In 2010, Government of India, in consultation with RBI introduced a new short-term instrument, known as Cash Management Bills (CMBs), to meet the temporary mismatches in the cash flow of the Government of India. The CMBs have the generic character of T-bills but are issued for maturities less than 91 days.

Dated G-Secs: Dated G-Secs are securities which carry a fixed or floating coupon (interest rate) which is paid on the face value, on half-yearly basis. Generally, the tenor of dated securities ranges from 5 years to 40 years.

22. Which of the following pair (s) is/are correctly matched?

Index : Base Year

1. Wholesale price index: 2014-15
2. Consumer price index : 2004-05
3. Gross Domestic Product : 2011-12

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: Consumer Price Index or CPI as it is commonly called is an index measuring retail inflation in the economy by collecting the change in prices of most common goods and services used by consumers. Base Year for CPI is 2012.

Wholesale Price Index, or WPI, measures the changes in the prices of goods sold and traded in bulk by wholesale businesses to other businesses.

With an aim to align the index with the base year of other important economic indicators such as GDP and IIP, the base year was updated to 2011-12 from 2004-05 for the new series of Wholesale Price Index (WPI), effective from April 2017.

The present base year for gross domestic product is 2011-12.

23. The term “Fully Accessible Route” is recently in news is related to which of the following?

- a) Investment of NRI’s in Government securities
- b) Shipping transition with single window clearance
- c) Routes for tribes in forest areas
- d) The International North–South Transport Corridor

Correct Answer: A

Explanation: The Reserve Bank of India (RBI) has introduced a separate channel, namely ‘Fully Accessible Route’ (FAR), to enable non-residents to invest in specified government bonds with effect from April 1, 2020.

The move follows the Union Budget announcement that certain specified categories of government bonds would be opened fully for non-resident investors without any restrictions.

Under FAR, eligible investors can invest in specified government securities without being subject to any investment ceilings.

This scheme shall operate along with the two existing routes, viz., the Medium Term Framework (MTF) and the Voluntary Retention Route (VRR).

24. Consider the following statements regarding the Farm Subsidies:

1. The farm subsidies of developed countries are higher than developing countries like India.
2. World Bank has put some ceilings on the amount of subsidies being provided by the various developing and developed nations.

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

Correct Answer: A

Explanation: Farm subsidies form an integral part of the government's budget.

In the case of developed countries, the agricultural or farm subsidies compose nearly 40 per cent of the total budgetary outlay, while in India's case it is much lower (around 7.8 per cent of GDP) and of different nature.

The World Trade Organization (WTO) has put some ceilings on the amount of direct and indirect subsidies being provided by the various developing and developed nations due to the fact that these subsidies distort the free market forces which have their own implications.

25. Recently the Reserve Bank of India (RBI) has decided to change its accounting year from July-June to April- May on whom recommendations?

- a) Urjit Patel
- b) Ramesh Chand
- c) Bimal Jalan
- d) Shaktikant Das

Correct Answer: C

Explanation: After nearly eight decades, the Reserve Bank of India (RBI) has decided to change its accounting year from July-June to April- May.

Accordingly, the next accounting year will be a nine-month period, which starts from July 2020 and ends on March 31, 2021.

Thereafter, all the financial years will start from April every year, the RBI.

The Bimal Jalan Committee on Economic Capital Framework (ECF) of the RBI had proposed a more transparent presentation of the RBI's annual accounts and change in its accounting year from July to June to April to March from the financial year 2020-21.

26. Consider the following statements regarding the “Peninsular Drainage System”:

1. Peninsular Drainage System is older than Himalayan drainage system.
2. The Western Ghats running close to the western coast act as the water divide between the major Peninsular Rivers.
3. Chambal, Narmada and Tapi rivers flow from east to west.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: The Peninsular drainage system is older than the Himalayan one. This is evident from the broad, largely-graded shallow valleys, and the maturity of the rivers.

The Western Ghats running close to the western coast act as the water divide between the major Peninsular Rivers, discharging their water in the Bay of Bengal and as small rivulets joining the Arabian Sea.

Most of the major Peninsular Rivers except Narmada and Tapi flow from west to east. The Chambal, the Sind, the Betwa, the Ken, the Son, originating in the northern part of the Peninsula belong to the Ganga river system.

The other major river systems of the peninsular drainage are – the Mahanadi the Godavari, the Krishna and the Kaveri. Peninsular rivers are characterised by fixed course, absence of meanders and non-perennial flow of water.

The Narmada and the Tapi which flow through the rift valley are, however, exceptions.

27. Which of the following factors are affecting the Indian monsoon?

1. Differential heating of the landmass of Asia and the Indian Ocean.
2. Existence of the Himalayan ranges and the Tibetan Plateau.
3. Changes in the equatorial Atlantic Ocean.

Select the correct answer using the code given below:

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

Correct Answer: D

Explanation: The term monsoon has been derived from the Arabic word mausin or from the Malayan word monsin meaning 'season'.

Monsoons are seasonal winds (Rhythmic wind movements – Periodic Winds) which reverse their direction with the change of season.

Factors affecting monsoon in India–

The differential heating of the landmass of Asia and the Indian Ocean.

The existence of the Himalayan ranges and the Tibetan Plateau.

The occurrence of heavy-light snow over the Tibetan Plateau.

The existence and circulation of the upper air jet stream in the troposphere.

Changes in the equatorial Atlantic Ocean have been known to have an inverse relationship with the Indian summer monsoon rainfall. This means if there is a cold phase in the Atlantic, it can bring more rainfall to India and vice versa.

28. “The rainfall mostly experienced in winters. It is also known as Subtropical Winter Rain Zone. The vegetation is mostly deciduous type. In summer, short stature, moisture retentive trees especially citrus fruits grow here.” Which of the following region describes the above lines?

- a) Tropical grasslands
- b) Tropical monsoon type
- c) Mediterranean region
- d) Temperate grasslands

Correct Answer: C

Explanation: The climate is known for warm to hot, dry summers and mild to cool, wet winters. Winter temperatures are usually between 30 and 65 degrees. Summer months all average above 50 degrees. The warmest month averages about 72 degrees.

The cause of this climate is directly related to large bodies of water such as the Mediterranean Sea and ocean currents.

During the summer, cold currents keep the climate mild and dry. Ocean currents shift as the seasons change.

During the winter the water that was warmed up all summer moves in and keeps the land warm and often brings rain.

Plants in Mediterranean climate must be able to survive long dry summers. Evergreens such as Pine and Cypress trees are mixed with deciduous trees such as some Oaks.

Fruit trees and vines such as grapes, figs, olives, and citrus fruits grow well here. Other plants include what are called “scrub”, which include small shrubs, grasses, and herbs.

29. Consider the following statements regarding the “altitude of the midday sun”:

1. The sun is vertically overhead at the equator only.
2. Beyond the tropics the sun is never overhead at any time of the year.

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

Correct Answer: B

Explanation: In the course of a year, the earth’s revolution round the sun with its axis inclined at $66\frac{1}{2}$ to the plane of the ecliptic changes the apparent altitude of the midday sun.

The sun is vertically overhead at the equator on two days each year. These are usually 21st march and 21st

After the March equinox the sun appears to move north and is vertically overhead at the tropic of cancer on about 21st

By about 22nd December, the sun will be overhead at the tropic of Capricorn.

The tropics thus mark the limits of the overhead sun, for beyond these, the sun is never overhead at any time of the year.

30. Consider the following statements regarding the “igneous rocks”:

1. The acid igneous rocks are highly dense and darker in colour.
2. The basic igneous rocks are less dense and lighter in colour.

Which of the statements given above is/are NOT correct?

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

Correct Answer: C

Explanation: Igneous rocks may be subdivided on the basis of mineral composition.

When they contain a high proportion of silica they are said to be acid.

Acid igneous rocks, such as granite, are less dense and are lighter in colour than basic rocks.

These contain a greater proportion of basic oxides, e.g. of iron, aluminum or magnesium, and are thus denser and darker in colour.

31. Consider the following statements regarding “Copper mineral” in India:

1. India is critically deficient in the reserve and production of copper.
2. Balaghat mines in Maharashtra produce more than 50% per cent of India’s copper.
3. Khetri mines in Rajasthan are famous for copper ores.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: India is critically deficient in the reserve and production of copper.

Being malleable, ductile and a good conductor, copper is mainly used in electrical cables, electronics and chemical

The Balaghat mines in Madhya Pradesh produce 52 per cent of India’s copper.

The Singbhum district of Jharkhand is also a leading producer of copper.

The Khetri mines in Rajasthan are also famous.

32. Consider the following statements regarding the “Tropical Thorn Forest”:

1. These occur in areas with rainfall less than 50 cm.
2. Important species found here are oak, teak and sal.
3. The forests are given an expression of scrub vegetation.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: Tropical thorn forests occur in the areas which receive rainfall less than 50 cm.

These consist of a variety of grasses and shrubs. It includes semi-arid areas of south west Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh and Uttar Pradesh.

In these forests, plants remain leafless for most part of the year and give an expression of scrub vegetation.

Important species found are babool, ber, and wild date palm, khair, neem, khejri, palas, etc. Tussocky grass grows upto a height of 2 m as the under growth.

33. Consider the following statements regarding the “oil refineries in India”:

1. Trombay Refinery is India’s oldest refinery.
2. Digboi Oil refinery is located in Assam.
3. Barauni Oil refinery in Bihar is built in collaboration with Russia.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: Digboi Refinery is India’s oldest refinery. It was established in 1901. It gets crude oil from Moran and Naharkatiya fields.

Barauni petrochemicals plant is in the country the second oil refinery in the public sector and forms an important part of the Indian petrochemical industry.

It belongs to the Indian oil corporation limited (IOCL). It was built in partnership with Romania and USSR.

The plant of Barauni petrochemicals is located from Patna at a distance of 125 kilometers. In 1964 it was commissioned and had a 1 mmtpa refining capacity.

34. “Lake Pampulha” is recently in news is located in which of the following country?

- a) Brazil
- b) South Africa
- c) Russia
- d) Indonesia

Correct Answer: A

Explanation: In a lake in Brazil, researchers have discovered a virus that they find unusual and intriguing called Yaravirus, it has a “puzzling origin and phylogeny”, they report in a study on the pre-print server bioRxiv.

The Yaravirus infects amoeba and has genes that have not been described before, something that could challenge how DNA viruses are classified.

The researchers found the Yaravirus while looking in the lake for giant viruses that infect amoeba.

Because of the Yaravirus’s small size, it was unlike other viruses that infect amoeba and they named it as a tribute to Yara, the “mother of waters” in the mythological stories of the Tupi-Guarani indigenous tribes.

35. Consider the following statements:

1. Mesosphere lies above Stratosphere and extends up-to a height of 120km.
2. The ionosphere contains electrically charged particles known as ions, and hence, it is known as ionosphere.
3. The stratosphere extends up to a height of 50 km and it contains the ozone layer.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: The stratosphere is found above the tropo-pause and extends up to a height of 50 km. One important feature of the stratosphere is that it contains the ozone layer.

This layer absorbs ultra-violet radiation and shields life on the earth from intense, harmful form of energy.

The mesosphere lies above the stratosphere, which extends up to a height of 80 km.

In this layer, once again, temperature starts decreasing with the increase in altitude and reaches up to minus 100°C at the height of 80 km.

The upper limit of mesosphere is known as the mesopause. The ionosphere is located between 80 and 400 km above the mesopause.

It contains electrically charged particles known as ions, and hence, it is known as ionosphere. Radio waves transmitted from the earth are reflected back to the earth by this layer.

36. Which of the following is/are the characteristics of “Tropical Evergreen Forests”?

1. Tropical Evergreen Forests are located at more than 200cm rainfall.
2. Forests have no dry season.
3. Vegetation of all kinds are found in these forests.

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: Tropical Evergreen forests are restricted to heavy rainfall areas of the Western Ghats and the island groups of Lakshadweep, Andaman and Nicobar, upper parts of Assam and Tamil Nadu coast.

- They are at their best in areas having more than 200 cm of rainfall with a short dry season.
- The trees reach great heights up to 60 metres or even above. Since the region is warm and wet throughout the year, it has luxuriant vegetation of all kinds — trees, shrubs and creepers giving it a multilayered structure.
- There is no definite time for trees to shed their leaves. As such, these forests appear green all the year-round.

37. Which of the following pair (s) is/are NOT correctly matched?

- | Peak | Range |
|------------------|-------------------|
| 1. Anai Mudi: | Cardamom Hills |
| 2. Doda Beta: | Nilgiri Hills |
| 3. Guru Shikhar: | Western Himalayas |

Select the correct code from given below options:

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

Correct Answer: C

Explanation: Anamudi is a mountain located in the Indian state of Kerala. It is the highest peak in the Western Ghats and South India, at an elevation of 2,695 metres.

- Its parental hills are Anaimalai hills.
- Doda beta is the highest peak of nilgiri hills while Guru Shikhar is the highest peak of Aravali Range located in Rajasthan.

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38. Consider the following statements regarding “laterite Soils”:

1. They develop in areas with high temperature and low rainfall.
2. They respond well to Fertilizers and manures.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Laterite has been derived from the Latin word ‘later’ which means brick.

- The laterite soil develops in areas with high temperature and heavy rainfall. This is the result of intense leaching due to heavy rain.
- Humus content of the soil is low because most of the micro organisms, particularly the decomposers, like bacteria, get destroyed due to high temperature.
- Laterite soils are suitable for cultivation with adequate doses of manures and fertilizers.
- These soils are mainly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh, and the hilly areas of Orissa and Assam.
- After adopting appropriate soil conservation techniques particularly in the hilly areas of Karnataka, Kerala and Tamil Nadu, this soil is very useful for growing tea and coffee.
- Red laterite soils in Tamil Nadu, Andhra Pradesh and Kerala are more suitable for crops like cashew nut.

Source: NCERT

39. Consider the following statements regarding “Indian Desert”:

1. The Indian desert lies towards the western margins of the Aravali Hills.
2. In Indian desert Streams appear in winter season.
3. Luni is the only large river in Indian Desert region.

Which of the statements given above is/are NOT correct?

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

Correct Answer: B

Explanation: The Indian desert lies towards the western margins of the Aravali Hills.

- It is an undulating sandy plain covered with sand dunes.
- This region receives very low rainfall below 150 mm per year. It has arid climate with low vegetation cover.
- Streams appear during the rainy season.
- Soon after they disappear into the sand as they do not have enough water to reach the sea.
- Luni is the only large river in this region.

Source: NCERT

40. Consider the following statements regarding “Earthquakes”:

1. The L (surface or long) waves travel along the surface and are recorded before Primary and Secondary waves.
2. Shadow zone of Primary waves is wider than Secondary waves.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Earthquakes produce three types of seismic waves: primary waves, secondary waves, and surface waves.

Each type moves through materials differently. In addition, the waves can reflect, or bounce, off boundaries between different layers.

The waves can also bend as they pass from one layer into another. Scientists learn about Earth’s layers by studying the paths and speeds of seismic waves traveling through Earth.

- **Primary Waves:** The fastest seismic waves are called primary waves, or P waves. These waves are the first to reach any particular location after an earthquake occurs.
- **Secondary Waves:** Secondary waves are the second seismic waves to arrive at any particular location after an earthquake, though they start at the same time as primary waves. Secondary waves travel through Earth’s interior at about half the speed of primary waves. Secondary waves are also called S waves. As they pass through a material, the material’s particles are shaken up and down or from side to side. Secondary waves rock small buildings back and forth as they pass.
- **Surface Waves:** Surface waves are seismic waves that move along Earth’s surface, not through its interior. They make the ground roll up and down or shake from side to side. Surface waves cause the largest ground movements and the most damage. Surface waves travel more slowly than the other types of seismic waves.

Source: NCERT

41. Which of the following river (s) is/are antecedent origin?

1. Alaknanda
2. Gandak
3. Kosi

Select the correct answer using the codes given below:

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

Correct Answer: D

Explanation: The drainage pattern was already present before a period of uplift and folding that formed the present structure.

- As the uplift took place, the rivers were able to cut down at approximately the same rate and so maintain their courses.
- This process is called antecedence and the drainage system thus developed is called antecedent drainage.
- Many of the Himalayan Rivers have antecedent origin i.e. these rivers existed even before the Himalayan ranges were uplifted.
- These rivers originate in the Tibetan side beyond the mountain ranges of Himalayas. The Indus, Satluj, Alaknanda, Gandak, Kosi, Brahmaputra all has an antecedent origin.
- Since these rivers are antecedent, they run transverse to the mountain ranges cutting deep V-shaped, steep-sided valleys (deep gorges).

Source: NCERT & ICSE

42. Consider the following statements regarding the Dharwar Rock System:

1. These are the oldest sedimentary rocks.
2. The Aravali mountain range has been made with these rocks.

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

Correct Answer: C

Explanation: Dharwar system is later than the Archean system but older than the other systems.

- The Dharwar period of rock formation has been largely fixed from 2500 million years ago to 1800 million years ago.
- Dharwar Rock System is special because it is the first metamorphic sedimentary rocks in India.
- They are named Dharwar system because they were first studied in Dharwar region of Karnataka.
- But they are also found in Aravallis, Tamil Nadu, Chota-nagpur plateau, Meghalaya, Delhi, and the Himalayas region.
- The Dharwar rocks are rich in iron ore, manganese, lead, zinc, gold, silver etc.

Source: NCERT

43. Which of the following statement is NOT correct about India?

- a) India is the largest country in terms of area and population in South-Asia.
- b) The main India-Tibet trade route that connects Kalimpong near Darjeeling with Lhasa in Tibet passes through Jelep La.
- c) Meghalaya plateau is part of Purvanchal hills.
- d) The average elevation of the Western Ghats is 2000 metres.

Correct Answer: D

Explanation: Western Ghats or Sahyadris lie on the Western edge of the Deccan plateau.

- It runs parallel to the western coast for about 1600 km. The average elevation of the Western Ghats is 1000 metres.
- The famous peaks in this area are Doda Betta, Anaimudi and Makurti. The highest peak in this region is Anaimudi (2695m.).
- Western ghats are continuous and can be crossed through passes like Pal Ghat, Thal Ghat and Bhor Ghat.
- The rivers like Godavari, Bhima and Krishna flow eastward while the river Tapti flows westward.
- The streams form rapids & water falls before entering the Arabian Sea. The famous waterfalls are Jog falls on Sharavati, Shiva Samudram falls on Kaveri etc.

Source: NCERT

44. With reference to the 'Major ports in India', which of the following statements is/are correct?

1. Kolkata port is the only riverine port in India.
2. Vishakhapatnam port is India's deepest land locked port.

Select the correct answer using the codes given below:

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

Correct Answer: C

Explanation: Major ports in India.

Statement 1 is correct: Kolkata is the only riverine major port in India. Known for twin dock systems viz., Kolkata Dock System (KDS) on the eastern bank and Haldia Dock Complex (HDC) on the western bank of river Hooghly.

Statement 2 is correct: Vishakhapatnam is India's deepest landlocked port handling crude oil and petroleum products.

45. Which of the following crops is/are grown in 'kharif season'?

1. Rice
2. Maize
3. Jute
4. Mustard

Select the correct answer using the codes given below:

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

Correct Answer: A

Explanation: The kharif crops are associated with the Southwest Monsoon. They are sown in the months of June and July and harvested in autumn months, i.e., in September and October. Important kharif crops are rice, jowar, bajra, ragi, maize, sugarcane, cotton and jute.

46. Which of the following pairs is/are correctly matched:

Cyclone : Region

1. Hurricanes : Caribbean
2. Typhoons : China
3. Willy-Willies : South Africa

Select the correct answer using the codes given below:

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

Correct Answer: B

Explanation: In low latitudes, an intense depression with a low pressure centre is known as a Tropical cyclone in the Indian Ocean area, as hurricanes in the Caribbean, typhoons in China and Willy-willies in Australia.

47. With reference to the “International Date line”, which of the following statements is/are NOT correct?

1. It functions as a “line of demarcation”.
2. It has no legal international status.
3. It is a straight line.

Select the correct answer using the codes given below:

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

Correct Answer: D

Explanation: The International Date Line, established in 1884, passes through the mid-Pacific Ocean and roughly follows a 180 degrees longitude north-south line on the Earth. It is located halfway round the world from the prime meridian—the zero degrees longitude established in Greenwich, England, in 1852. The International Date Line functions as a “line of demarcation” separating two consecutive calendar dates. When you cross the date line, you become a time traveler of sorts! Cross to the west and its one day later; cross back and you’ve “gone back in time.” Despite its name, the International Date Line has no legal international status and countries are free to choose the dates that they observe. While the date line generally runs north to south from pole to pole, it zigzags around political borders such as eastern Russia and Alaska’s Aleutian Islands.

48. Which of the following is/are correctly matched?

Slash and burn agriculture: Region

1. Jhumming : North-east India
2. Milpa : Indonesia and Malaysia
3. Ladang : Mongolia and northern China

Select the correct answer using the code given below:

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

Correct Answer: A

Explanation: Primitive subsistence agriculture or shifting cultivation is widely practised by many tribes in the tropics, especially in Africa, south and Central America and south East Asia.

The vegetation is usually cleared by fire, and the ashes add to the fertility of the soil. Shifting cultivation is thus, also called slash and burn agriculture.

It is prevalent in tropical region in different names, e.g. Jhumming in North eastern states of India, Milpa in Central America and Mexico and Ladang in Indonesia and Malaysia.

49. Arrange the following Himalayan ranges from South to North:

1. Pir Panjal Range
2. Ladakh Range
3. Zaskar Range
4. Karakoram Range

Select the correct answer using the code given below:

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

Correct Answer: B

Explanation: The main geographic sections of the Kashmir Himalayan range are the Pir Panjal, Kashmir Valley, Zaskar, Ladakh and Karakoram.

50. Which of the following is/are correctly matched?

Mechanism/Process : Rock

1. Mechanically formed sedimentary rock: Sandstone
2. Organically formed sedimentary rock: Rock salt
3. Chemically formed sedimentary rock: Shale

Select the correct answer using the code given below:

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

Correct Answer: A

Explanation: Sedimentary rocks are formed by the accumulation of sediments. There are three basic types of sedimentary rocks.

Clastic sedimentary rocks such as breccia, conglomerate, sandstone, siltstone, and shale are formed from mechanical weathering debris.

Chemical sedimentary rocks, such as rock salt, iron ore, chert, flint, some dolomites, and some limestone, form when dissolved materials precipitate from solution.

Organic sedimentary rocks such as coal, some dolomites, and some limestone, form from the accumulation of plant or animal debris.

51. Which of the following are the applications of Nanobots

1. Targeted drug-delivery
2. Unblock blood vessels in heart
3. Taking biopsies in inaccessible areas of the body

Select the correct answer code:

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

Correct Answer: B

Explanation: Scientists are exploring the use of nanobots for a number of healthcare uses, not only for fighting cancer, but also to unblock blood vessels in hard to reach areas, taking biopsies or measuring the level of certain chemicals in otherwise inaccessible areas of the body. A nanobot is a device typically ranging from 0.1-10 micrometres (a micrometre is one millionth of a metre), roughly the size of a red blood cell or smaller. This is too small to add a traditional robotic element like a motor, computer chip or camera.

52. Consider the following statements regarding African Swine Fever (AFS).

1. ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute hemorrhagic fever.
2. The disease has a case fatality rate (CFR) of almost 100 per cent.
3. Biological vectors such as ticks can transmit the disease.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: African Swine Fever (AFS): Amid the COVID-19 lockdown, an outbreak of ASF killed thousands of pigs in Assam and Arunachal Pradesh. ASF is a severe viral disease that affects wild and domestic pigs typically resulting in an acute haemorrhagic fever. The disease has a case fatality rate (CFR) of almost 100 per cent. Its routes of transmission include direct contact with an infected or wild pig (alive or dead), indirect contact through ingestion of contaminated material such as food waste, feed or garbage, or through biological vectors such as ticks.

53. Consider the following statements regarding Environment Impact Assessment (EIA) In India.

1. India notified its first EIA norms in 2006, Under the Environment (Protection) Act, 1986.
2. EIA provides a legal framework for regulating activities that access, utilize, and affect natural resources.
3. The public hearing is a mandatory step in the process of environmental clearance for all developmental projects.

Which of the above statements is/ are correct?

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

Correct Answer: A

Explanation: Under the Environment (Protection) Act, 1986, India notified its first EIA norms in 1994, setting in place a legal framework for regulating activities that access, utilise, and affect (pollute) natural resources.

The 1994 EIA notification was replaced with a modified draft in 2006.

The public hearing is a mandatory step in the process of environmental clearance for certain developmental projects. This provides a legal space for people of an area to come face-to-face with the project proponent and the government and express their concerns.

54. Which of the following are the member states of Shanghai Co-operation Organization (SCO).

1. Kazakhstan
2. Kyrgyzstan
3. Uzbekistan
4. Turkmenistan
5. Russia

Select the correct answer code:

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

Correct Answer: A

Explanation: Presently, the SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People’s Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan;

55. Consider the following statements about Special 301 Report.

1. It is prepared annually by the World Bank.
2. The Report includes a list of “Priority Foreign Countries”, “Priority Watch List” and a “Watch List” country which are judged on the basis of intellectual property laws.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The Special 301 Report is prepared annually by the Office of the United States Trade Representative (USTR) that identifies trade barriers to United States companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.

The annual Special 301 Report includes a list of “Priority Foreign Countries”, that are judged to have inadequate intellectual property laws; these countries may be subject to sanctions. In addition, the report contains a “Priority Watch List” and a “Watch List”, containing countries whose intellectual property regimes are deemed of concern.

56. At the International level, which of the following Acts/ Agreements regulates Geographical Indications?

1. Paris Convention for the Protection of Industrial Property
2. Trade-Related Aspects of Intellectual Property Rights (TRIPS)
3. Geographical Indications of Goods (Registration and Protection) Act, 1999

Select the correct answer code:

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

Correct Answer: A

Explanation: Who accords and regulates Geographical Indications?

At the International level: Geographical Indications are covered as a component of intellectual property rights (IPRs) under the Paris Convention for the Protection of Industrial Property. GI is also governed by the World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act, 1999 which came into force with effect from September 2003.

57. Consider the following statements regarding CRISPR–Cas9.

1. CRISPR technology allows to easily alter DNA sequences and modify gene function.
2. It can be used to correct sickle cell anemia, a genetic blood disorder.
3. Gene editing system does not occur naturally in organisms.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Indian scientists have developed a new variant of currently popular gene editing tool, CRISPR-Cas9, and have shown that this variant can increase precision in editing genome while avoiding unintended changes in DNA.

The researchers have also shown that this type of gene editing can be used to correct sickle cell anemia, a genetic blood disorder.

By reprogramming and using a naturally occurring gene editing system – CRISPR-Cas9 – found in bacteria, scientists globally have been engaged in ‘editing’ genome of various organisms.

CRISPR-Cas9 stands for ‘Clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9.’ This protein can be programmed to go to a desired location in the genome and correct or edit defective strands (such as those involved in certain diseases) of DNA. The technology, when perfected, may be used to treat several genetic disorders.

58. Consider the following statements regarding DNA barcoding.

1. DNA barcoding is a method of species identification using a short section of DNA from a specific gene.
2. DNA barcoding is used to obtain taxonomic information about unidentified organisms.
3. The Zoological Survey of India (ZSI) has joined the International Barcode of Life Consortium which is part of UNEP, for the expansion of the global reference database.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: The Union Cabinet apprised a Memorandum of Understanding (MoU) signed between the Zoological Survey of India (ZSI) and International Barcode of Life (iBOL), a Canadian not-for-profit corporation.

iBOL is a research alliance involving nations that have committed both human and financial resources to enable expansion of the global reference database, the development of informatics platforms, and the analytical protocols needed to use the reference library to assess, and describe biodiversity.

The MoU will enable ZSI to participate at the global-level programmes like Bioscan and Planetary Biodiversity Mission.

ZSI is a subordinate organization under the Ministry of Environment, Forest and Climate Change. (ANI).

DNA barcoding, a methodology for rapidly and accurately identifying species by sequencing a short segment of standardized gene regions and comparing individual sequences to a reference database.

DNA barcoding is increasingly used to obtain taxonomic information about unidentified organisms.

59. Consider the following statements regarding heat dome.

1. High-pressure circulation in the atmosphere acts like a dome, trapping heat at the surface and favoring the formation of a heat wave.
2. Recently the high temperature recorded at the west coast of USA was the result of heat dome.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: High-pressure circulation in the atmosphere acts like a dome or cap, trapping heat at the surface and favouring the formation of a heat wave.

A heat dome occurs when the atmosphere traps hot ocean air like a lid or cap.

A team of scientists investigated what triggers heat domes and found the main cause was a strong change (or gradient) in ocean temperatures from west to east in the tropical Pacific Ocean during the preceding winter.

Recently the high temperature recorded at the west coast of USA was the result of heat dome.

California's Death Valley registered a temperature of 54.4 degrees Celsius or 129.9 degrees Fahrenheit on August 16, 2020, which, once verified, could be the hottest temperature ever recorded on Earth.

60. Thwaites Glacier, recently seen in news is located in

- a) Finland
- b) Iceland
- c) Svalbard
- d) Antarctica

Correct Answer: D

Explanation: In the Antarctic floats a massive glacier, roughly the size of Britain, whose melting has been a cause of alarm for scientists over the years.

Called the Thwaites Glacier, it is 120 km wide at its broadest, fast-moving and melting fast over the years. Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre.

Thwaites is important for Antarctica as it slows the ice behind it from freely flowing into the ocean. Because of the risk it faces — and poses — Thwaites is often called the Doomsday Glacier.

61. Consider the following statements regarding Global Hunger Index 2020.

1. Out of the total countries ranked in Global Hunger Index 2020, more than 3/4th of the countries fares better than India.
2. Global Hunger Index comprehensively measure and track hunger at the global, regional, and country levels.
3. Global Hunger Index is published by Food and Agriculture Organization.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: India ranked 94 among 107 countries in the Global Hunger Index 2020 and is in the 'serious' hunger category with a score of 27.2. India's rank was 102 out of 117 countries last year.

India features behind Nepal (73), Pakistan (88), Bangladesh (75), Indonesia (70) among others. Out of the total 107 countries, only 13 countries fare worse than India including countries like Rwanda (97), Nigeria (98), Afghanistan (99), Liberia (102), Mozambique (103), Chad (107) among others.

The Global Hunger Index is a peer-reviewed annual report, jointly published by Concern Worldwide and Welthungerhilfe, designed to comprehensively measure and track hunger at the global, regional, and country levels.

62. Consider the following statements regarding Production linked incentive scheme.

1. Under the National Policy on Electronics 2019, the Ministry of Electronics and Information Technology (MeitY) introduced a Production Linked Incentive Scheme for Large Scale Electronics Manufacturing.
2. The scheme provides for an incentive of 4-6 per cent on incremental sales of mobile phones and specified electronic components manufactured in India.
3. The scheme is applicable to only domestic companies.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Under the National Policy on Electronics 2019, introduced to position India as a global hub for electronics system design and manufacturing, the Ministry of Electronics and Information Technology (MeitY) has introduced a Production Linked Incentive Scheme for Large Scale Electronics Manufacturing (Scheme) with effect from April 1, 2020.

The scheme provides for an incentive of 4-6 per cent on incremental sales (as compared to the base year, i.e., 2019-20) of mobile phones and specified electronic components (such as semiconductors, diodes, printed circuit boards, etc) manufactured in India, to eligible companies, for a period of five years in the following three categories: (a) mobile phones manufactured and sold by domestic companies;

(b) mobile phones manufactured and sold by other companies (invoice value of ₹15,000 and above); and

(c) specified electronic components.

All electronic manufacturing companies which are either Indian or have a registered unit in India will be eligible to apply for the scheme. These companies can either create a new unit or seek incentives for their existing units from one or more locations in India.

Any additional expenditure incurred by companies on plant, machinery, equipment, research and development and transfer of technology for manufacture of mobile phones and related electronic items will be eligible for the incentive scheme.

However, all investment done by companies on land and buildings for the project will not be considered for any incentives or determine eligibility of the scheme.

63. India Energy Modeling Forum, recently seen in news is the joint initiative of

- a) India and Japan
- b) Indian and USA
- c) India and Russia
- d) India and Uzbekistan

Correct Answer: B

Explanation: About the India Energy Modeling Forum:

Jointly launched by NITI Aayog and United States Agency for International Development (USAID) under the US–India Strategic Energy Partnership.

Composition: The forum would include knowledge partners, data agencies and concerned government ministries.

Energy modeling or energy system modeling is the process of building computer models of energy systems in order to analyze them.

The Energy Modelling Forum (EMF) in USA was established in 1976 at Stanford University to connect leading modelling experts and decision makers from government, industry, universities, and other research organizations.

64. Consider the following statements.

1. According to WHO, no country in the southeast Asia region have successfully controlled Hepatitis B.
2. Hepatitis B is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.
3. In India, a nation-wide Hepatitis B vaccine was introduced in the Universal Immunization Programme.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: On September 3, 2019 Bangladesh, Bhutan, Nepal and Thailand became the first four countries in the World Health Organization's southeast Asia region to have successfully controlled hepatitis B.

The virus is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.

Despite the introduction of hepatitis B vaccine in the Universal Immunisation Programme in 2002 and scaling-up nationwide in 2011, about one million people in India become chronically infected with the virus every year.

65. Consider the following statements regarding Rudram missile.

1. Rudram is India's first indigenous anti-radiation missile.
2. It is an air-to-surface missile, designed and developed by the Defence Research and Development Organization (DRDO).
3. Anti-radiation missiles are designed to detect, track and neutralize the adversary's radar, communication assets and other radio frequency sources.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: India's first indigenous anti-radiation missile, Rudram, developed for the Indian Air Force, was successfully flight-tested from a Sukhoi-30 MKI jet off the east coast.

Anti-radiation missiles are designed to detect, track and neutralise the adversary's radar, communication assets and other radio frequency sources, which are generally part of their air defence systems.

Rudram is an air-to-surface missile, designed and developed by the Defence Research and Development Organisation (DRDO).

Once the Rudram missile locks on the target, it is capable of striking accurately even if the radiation source switches off in between. The missile has an operational range of more than 100 km (up to 200 km depending upon the launch conditions).

66. Consider the following statements regarding Malabar naval exercise.

1. Malabar naval exercise began as a bilateral exercise between India and Japan, and later United States became a permanent partner.
2. This is an annual exercise held in Indian Ocean.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Australia would join the Malabar 2020 naval exercise, consisting of India, Japan and the U.S. This will formally bring together the militaries of the four countries in the Quad group.

Originally begun in 1992 as a bilateral exercise between India and the United States, Japan became a permanent partner in 2015. Past non-permanent participants was Singapore.

In 2018, the exercise was conducted off the coast of Guam in the Philippine Sea, off the coast the Japan in 2019.

India had signed maritime information sharing agreements for Maritime Domain Awareness (MDA) with Australia and Japan and a similar agreement is under discussion with the U.S.

67. Consider the following statements regarding OSIRIS-REx mission.

1. OSIRIS-REx mission is NASA's first mission meant to return a sample from the ancient asteroid Bennu.
2. Asteroid Bennu has undergone drastic changes since its formation over billions of years ago and the sample helps in studying these changes.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: OSIRIS-REx mission is NASA's first mission meant to return a sample from the ancient asteroid. The mission is essentially a seven-year-long voyage and will conclude when at least 60 grams of samples are delivered back to the Earth. As per NASA, the mission promises to bring the largest amount of extraterrestrial material back to our planet since the Apollo era.

Significantly, Bennu hasn't undergone drastic changes since its formation over billions of years ago and therefore it contains chemicals and rocks dating back to the birth of the solar system. It is also relatively close to the Earth.

Because of Bennu's age, it is likely to contain material that contains molecules that were present when life first formed on Earth.

68. In India, the sectors where FDI is not allowed are:

1. Investment in Chit Funds
2. Tobacco industry
3. All Agricultural or Plantation Activities
4. Satellite and its associated activities

Select the correct answer code:

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

Correct Answer: B

Explanation: Sectors in the Indian economy where FDI is not allowed are:

- Atomic Energy Generation
- Cigars, Cigarettes, or any related tobacco industry
- Lotteries (online, private, government, etc)
- Investment in Chit Funds
- Agricultural or Plantation Activities (although there are many exceptions like horticulture, fisheries, tea plantations, Pisciculture, animal husbandry, etc)
- Housing and Real Estate (except townships, commercial projects, etc)
- Trading in TDR's (Transferable development rights)
- Any Gambling or Betting businesses

69. Which of the following are considered as main drivers of antimicrobial resistance?

1. Misuse and overuse of antimicrobials
2. Lack of access to clean water and hygiene for animals
3. Poor infection and disease prevention in health-care facilities

Select the correct answer code:

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

Correct Answer: D

Explanation: AMR occurs naturally over time, usually through genetic changes. Antimicrobial resistant organisms are found in people, animals, food, plants and the environment (in water, soil and air). They can spread from person to person or between people and animals, including from food of animal origin. The main drivers of antimicrobial resistance include the misuse and overuse of antimicrobials; lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals; poor infection and disease prevention and control in health-care facilities and farms; poor access to quality, affordable medicines, vaccines and diagnostics; lack of awareness and knowledge; and lack of enforcement of legislation.

70. Recently India and the United States signed the Basic Exchange and Cooperation Agreement (BECA). This will benefit India in which of the following areas.

1. Access to American geospatial intelligence
2. High-quality GPS
3. Response to natural disasters.

Select the correct answer code:

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

Correct Answer: D

Explanation: BECA will help India get real-time access to American geospatial intelligence that will enhance the accuracy of automated systems and weapons like missiles and armed drones. Through the sharing of information on maps and satellite images, it will help India access topographical and aeronautical data, and advanced products that will aid in navigation and targeting.

BECA will provide Indian military systems with a high-quality GPS to navigate missiles with real-time intelligence to precisely target the adversary.

Besides the sailing of ships, flying of aircraft, fighting of wars, and location of targets, geospatial intelligence is also critical to the response to natural disasters.

71. Singapore's Temasek-like model, sometimes seen in news is related to

- a) Restrictive lockdown measures
- b) Disinvestment programme
- c) Local Governance
- d) Primary Health care

Correct Answer: B

Explanation: The Economic Survey 2019-20 backed the government's move to aggressively privatise central public sector enterprises (CPSEs) through divestment of government stake, which will have a multiplier effect on improving efficiency and profitability of the divested company while unlocking capital that can be used for building public infrastructure.

The Survey cited the case of Temasek Holdings Company in Singapore, a model which it said can be adopted for successful maximisation of government stake in CPSEs.

In the model, the government can transfer its stake in the listed CPSEs to a separate corporate entity which would be managed by an independent board and would be mandated to divest the government stake in these CPSEs over a period of time. "This will lend professionalism and autonomy to the disinvestment programme which, in turn, would improve the economic performance of the CPSEs," the Survey said.

72. India is the largest emitter of sulphur dioxide (SO₂) in the world, contributing more than 15 per cent of global anthropogenic emissions, according to a new report by Greenpeace. The reasons for this is/are:

1. Very high sulphur content in Indian coal.
2. Vast majority of thermal power plants in India lack flue-gas desulfurisation (FGD) technology.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: India is the largest emitter of sulphur dioxide (SO₂) in the world, contributing more than 15 per cent of global anthropogenic emissions, according to a new report by Greenpeace released on August 19, 2019.

The primary reason for India's high emission output is the expansion of coal-based electricity generation over the past decade, the report added.

The greatest source of SO₂ in the atmosphere is the burning of fossil fuels in power plants and other industrial facilities. Other sources include industrial processes such as extracting metal from ore, natural sources such as volcanoes, and locomotives, ships and other vehicles and heavy equipment that burn fuel with high sulphur content.

The vast majority of plants in India lack flue-gas desulfurisation (FGD) technology to reduce air pollution, according to the report.

Studies show that the sulphur content in Indian coal is hardly 0.7%.

73. Consider the following statements regarding National Infrastructure Pipeline (NIP).

1. The National Infrastructure Pipeline (NIP) is a group of social and economic infrastructure projects in India over a period of five years.
2. Majority of the investments will be from the Central Government.
3. India Investment Grid provides real-time updates on the implementation of the National Infrastructure Pipeline (NIP).

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The National Infrastructure Pipeline (NIP) is a group of social and economic infrastructure projects in India over a period of five years with an initial sanctioned amount of ₹102 lakh crore.

The centre (39 percent) and state (39 percent) are expected to have an almost equal share in implementing the projects, while the private sector has 22 percent share.

The India Investment Grid is designed to give real-time updates on the implementation of the National Infrastructure Pipeline (NIP).

74. Consider the following statements regarding Antarctic Treaty.

1. Antarctic Treaty regulate international relations with respect to Antarctica.
2. For the purposes of the treaty system, Antarctica is defined as all of the land and ice shelves south of 60°S latitude.
3. The treaty establishes freedom of scientific investigation, and bans military activity on the continent.
4. Antarctica is earth's only continent without a native human population.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: The Antarctic Treaty and related agreements, collectively known as the Antarctic Treaty System (ATS), regulate international relations with respect to Antarctica, Earth's only continent without a native human population. For the purposes of the treaty system, Antarctica is defined as all of the land and ice shelves south of 60°S latitude. The treaty entered into force in 1961.

The treaty sets aside Antarctica as a scientific preserve, establishes freedom of scientific investigation, and bans military activity on the continent. The treaty was the first arms control agreement established during the Cold War. Since September 2004, the Antarctic Treaty Secretariat headquarters has been located in Buenos Aires, Argentina.

75. According to recent estimates, the number of Asiatic lions in Gujarat has increased between 2015 and 2020 census years. In this context, consider the following statements.

1. The increase in the number of Asiatic lions in Gir forest in Gujarat between 2015 and 2020 is the highest rise between two census years.
2. Asiatic lions are present only in the Protected Areas of Gir forest.
3. Asiatic Lions are listed as 'Endangered' under the IUCN Red List.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: The number of Asiatic lions in Gujarat's Gir forest has risen. It has grown by almost 29% over the last five years. The lion population now stands at 674, according to the State Forest Department. There has been a consistent increase in the population over the years.

Their distribution has also expanded from 22,000 sq. km in 2015 to 30,000 sq. km in 2020. Asiatic lions are present in Protected Areas and agro-pastoral landscapes of Saurashtra.

Asiatic Lions are listed as 'Endangered' under the IUCN Red List. Its population is restricted to the state of Gujarat in India.

76. Consider the following statements regarding Irrawaddy dolphins.

1. Of the six varieties of dolphins that are found in India's rivers, lakes and around coastline, the Irrawaddy Dolphins are among the highest in number.
2. The Irrawaddy Dolphins are found mostly in brackish water zones.
3. In India, Irrawaddy Dolphins are found mainly in Chilika Lake.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Of the six varieties of dolphins that are found in India's rivers, lakes and around coastline, the Irrawaddy Dolphins are among the lowest in number.

The Gangetic river dolphins are freshwater species that are found in the Sundarban river system and Brahmaputra rivers. On the other hand, the Irrawaddy Dolphins are found mostly in brackish water zones and that too in Chilika.

The Irrawaddy Dolphin (*Orcaella brevirostris*) is the flagship species of Chilika lake. Chilika is home to the only known population of Irrawaddy Dolphins in India and one of only two lagoons in the world that are home to this species.

77. Consider the following statements regarding Supply chain resilience initiative.

1. It is an initiative decided by India, Japan and Australia to achieve supply-chain resilience in the Indo-Pacific region.
2. The idea is to reduce the reliance on China for supply of goods and services.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: India, Japan and Australia are planning to widen the ambit of their proposed supply-chain partnership to include more like-minded countries in the Indo-Pacific region — a move seen as countering China's dominance in world trade.

In September, trade ministers of India, Japan and Australia decided to launch an initiative later this year to achieve supply-chain resilience in the Indo-Pacific region. The idea is also to reduce the reliance on China for supply of goods and services.

78. The government had recently amended the Environment Protection Act to drop the mandatory washing of coal supplied to thermal power plants. In this context what are the benefits of using washed coal.

1. Washing coal increases the efficiency and quality of the dry fuel.
2. Thermal power plants would have fewer operational problems.
3. The combustion of washed coal would be better from an emissions and local air pollution perspective.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Washing coal increases the efficiency and quality of the dry fuel.

In theory, a process like coal washing was supposed to be good for everyone; thermal power plants would have fewer operational problems.

The combustion of washed coal would be better from an emissions and local air pollution perspective, and the unnecessary transport of large amounts of ash and non-combustible material would be minimized.

79. Consider the following statements regarding over-the-top (OTT) platforms.

1. Over-the-top platforms, are audio and video hosting and streaming services offered directly to viewers via the Internet.
2. In India, OTT platforms are currently under the purview of the Ministry of Electronics and Information Technology.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: The government has brought video streaming over-the-top (OTT) platforms such as Netflix, Amazon's Prime Video, Hotstar, and others under the ambit of the Ministry of Information and Broadcasting.

OTT, or over-the-top platforms, are audio and video hosting and streaming services which started out as content hosting platforms, but soon branched out into the production and release of short movies, feature films, documentaries and web-series themselves.

These platforms offer a range of content and use artificial intelligence to suggest users the content they are likely to view based on their past viewership on the platform.

So far in India, there are no laws or rules regulating OTT platforms as it is a relatively new medium of entertainment. Unlike television, print or radio, which follow guidelines released by governments, OTT platforms, classified as digital media or social media, had little to no regulation on the choice of content they offered, the subscription rates, certification for adult movies and others.

80. Consider the following statements regarding Purchasing Managers' Index.

1. Manufacturing Purchasing Managers' Index (PMI) gives an indication of the economic health of the manufacturing sector.
2. Services sectors are not covered while calculating PMI.
3. PMI is released by Central Statistics Office (CSO).

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Purchasing Managers' Index is an economic indicator that is calculated from monthly surveys of purchasing managers and supply executives from specific companies. PMI Manufacturing gives an indication of the economic health of the manufacturing sector. The most followed PMI readings come from Markit and Institute of Supply Management.

It is calculated separately for the manufacturing and services sectors and then a composite index too is constructed.

A figure above 50 denotes an expansion while anything below 50 denotes a contraction in activity. The higher the difference from this mid-point of 50, greater the expansion or contraction.

Also, the rate of expansion can be judged by comparing the PMI with that of the previous month reading.

Even central banks use the PMI to take decisions on interest rates. Besides influencing equity market movements, PMI releases also impact bond and currency markets.

81. Consider the following pairs:

Places recently in news	Location
1. Kabartal	Bihar
2. Lonar lake	Maharashtra
3. Sur Sarovar	Kerala

Which of the above are correctly matched?

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

Correct Answer: A

Explanation: The Lonar lake in Maharashtra and Sur Sarovar, also known as Keetham lake, in Agra, have been added to the list of recognised Ramsar sites.

Kabartal in Bihar's Begusarai district has been recognised as a wetland of international importance — the first such wetland in the state — under the Ramsar Convention.

The Asan Conservation Reserve in Dehradun, the first wetland from Uttarakhand to be recognised by Ramsar convention, was also added to the list recently.

82. The renewable energy Ministry has expanded the scope of PM-KUSUM scheme to enable greater solar energy generation in farm sector. The scheme consists of which of the following components?

1. Decentralized ground mounted grid connected renewable power plants.
2. Installation of stand-alone solar powered agriculture pumps.
3. Solarization of grid-connected solar powered agriculture pumps.

Select the correct answer code:

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

Correct Answer: D

Explanation: The renewable energy Ministry has expanded the scope of PM-KUSUM scheme to enable greater solar energy generation in farm sector.

The Ministry has amended the guidelines of the scheme based on the learning from its implementation during the first year.

Now, besides barren, fallow and agricultural lands, solar power plants can also be installed on pasture land and marshy land of farmers.

To support small farmers, solar projects smaller than 500 kW may be allowed by states based on techno-commercial feasibility.

The scheme now consists of three components.

The first is 10,000 MW of decentralised ground mounted grid connected renewable power plants up to 2 MW.

The second is installation of 20 lakh (up from 17.50 lakh) stand-alone solar powered agriculture pumps.

The third component is solarisation of 15 lakh (up from 10 lakh) grid-connected solar powered agriculture pumps.

83. Consider the following statements regarding Bru or Reang Community.

1. Bru or Reang community is indigenous to Northeast India, living in Tripura, Mizoram, and Assam.
2. They are recognized as a Particularly Vulnerable Tribal Group (PVTG).

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: The Bru or Reang are a community indigenous to Northeast India, living mostly in Tripura, Mizoram, and Assam. In Tripura, they are recognised as a Particularly Vulnerable Tribal Group (PVTG).

84. Consider the following statements regarding Global Partnership on Artificial Intelligence (GPAI).

1. India joined Global Partnership for Artificial Intelligence as its founder member.
2. GPAI is a first initiative of its type for evolving better understanding of the challenges and opportunities around Artificial Intelligence.
3. It is supported by Organization for Economic Cooperation and Development (OECD).

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: India joined the league of leading economies including USA, UK, EU, Australia, Canada, France and others to launch the Global Partnership on Artificial Intelligence (GPAI).

In collaboration with partners and international organizations, GPAI will bring together leading experts from industry, civil society, governments, and academia to collaborate to promote responsible evolution of Artificial Intelligence.

By joining GPAI as a founding member, India will actively participate in the global development of Artificial Intelligence, leveraging its experience around use of digital technologies for inclusive growth.

GPAI is a first initiative of its type for evolving better understanding of the challenges and opportunities around Artificial Intelligence using the experience and diversity of participating countries.

This body is supported by Organization for Economic Cooperation and Development (OECD), Paris.

85. Consider the following statements regarding Compulsory licensing.

1. Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner.
2. It is included in the WTO's Trade-Related Aspects of Intellectual Property Rights Agreement.
3. India grants compulsory licenses frequently for the production of generic drugs.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself. It is one of the flexibilities in the field of patent protection included in the WTO's agreement on intellectual property — the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement.

For compulsory licensing, it's when the generic copy is produced mainly for the domestic market, not for export.

The patent owner still has rights over the patent, including a right to be paid compensation for copies of the products made under the compulsory licence.

The TRIPS Agreement does not specifically list the reasons that might be used to justify compulsory licensing. However, the Doha Declaration on TRIPS and Public Health confirms that countries are free to determine the grounds for granting compulsory licences, and to determine what constitutes a national emergency.

In March 2012, India granted its first compulsory license ever. The license was granted to Indian generic drug manufacturer Natco Pharma for Sorafenib tosylate, a cancer drug patented by Bayer.

86. Consider the following statements.

1. As trees grow, they incorporate information about the environmental conditions they are living in in their annual growth rings.
2. Tree rings grow wider in years when soil moisture is high.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Tree rings grow wider in years when soil moisture is high. Indirectly, wider rings reflect more rainfall and higher river runoff.

As trees grow, they incorporate information about the environmental conditions they are living in in their annual growth rings. Trees in the region grow more and put on wide rings in wet monsoon years. Conversely in dry monsoon years (or droughts) they grow less and put on narrow rings.

87. Consider the following statements regarding Greater one-horned rhinoceros.

1. Greater one-horned rhinoceros is native to the Indian subcontinent.
2. It is listed as Vulnerable on the IUCN Red List.
3. Kaziranga National Park has the highest density of Greater one-horned rhinos in the world.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Greater one-horned rhinoceros is a rhinoceros species native to the Indian subcontinent. It is listed as Vulnerable on the IUCN Red List

Pobitora is known for the highest density of Indian one-horned rhinos in the world along with Kaziranga National Park, the shelter for two thirds of the world's great one-horned rhinos.

88. In India, which of the following are considered as ‘exotic wildlife species’

1. Animals named under Appendices I, II and III of the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora.
2. Species from the Schedules of the Wild Life (Protection) Act, 1972.

Select the correct answer code:

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

Correct Answer: A

Explanation: The Environment Ministry’s wildlife division has introduced new rules to regulate the import and export of ‘exotic wildlife species’.

Under the new rules, owners and possessors of such animals and birds must also register their stock with the Chief Wildlife Warden of their States.

The advisory, issued recently, also says ‘exotic wildlife species’ will mean animals named under Appendices I, II and III of the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora.

It will not include species from the Schedules of the Wild Life (Protection) Act, 1972.

89. Consider the following statements regarding Negative-yield bonds.

1. These are debt instruments that offer to pay the investor a maturity amount lower than the purchase price of the bond.
2. These are generally issued by central banks or governments.
3. Negative-yield bonds attract investments during times of stress and uncertainty as investors look to protect their capital from significant erosion.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Recently China sold negative-yield debt for the first time, and this saw a high demand from investors across Europe. As yields in Europe are even lower, there was a huge demand for the 4-billion-euro bonds issued by China. China's 5-year bond was priced with a yield of -0.152% , and the 10-year and 15-year securities with positive yields of 0.318% and 0.664% .

What are negative-yield bonds?

These are debt instruments that offer to pay the investor a maturity amount lower than the purchase price of the bond. These are generally issued by central banks or governments, and investors pay interest to the borrower to keep their money with them.

Why do investors buy them?

Negative-yield bonds attract investments during times of stress and uncertainty as investors look to protect their capital from significant erosion. At a time when the world is battling the Covid-19 pandemic and interest rates in developed markets across Europe are much lower, investors are looking for relatively better-yielding debt instruments to safeguard their interests.

90. Havana syndrome, recently seen in news is related to

- a) Non-Communicable Diseases
- b) Neurological illness
- c) Tuberculosis
- d) Severe acute respiratory syndrome (SARS)

Correct Answer: B

Explanation: Nearly four years after a mysterious neurological illness, referred to as “Havana syndrome”, started to afflict American diplomats and intelligence operatives in Cuba, China, and other countries, a report by the National Academies of Sciences (NAS) has found “directed” microwave radiation to be its “plausible” cause.

In late 2016, US diplomats and other employees stationed in Havana reported feeling ill after hearing strange sounds and experiencing odd physical sensations in their hotel rooms or homes. The symptoms included nausea, severe headaches, fatigue, dizziness, sleep problems, and hearing loss, which have since come to be known as “Havana Syndrome”.

91. Emissions Gap Report 2020, recently seen in news is released by

- a) World Wide Fund for Nature
- b) United Nations Environment Programme (UNEP)
- c) World Economic Forum
- d) German watch

Correct Answer: B

Explanation: The United Nations Environment Programme (UNEP) released its annual Emissions Gap Report 2020.

The annual report from UNEP measures “the gap between anticipated emissions and levels consistent with the Paris Agreement goals of limiting global warming this century to well below 2°C and pursuing 1.5°C”.

92. Consider the following statements regarding Countering America’s Adversaries through Sanctions Act (CAATSA).

1. Its core objective is to counter Iran, Russia and North Korea through punitive measures.
2. It empowers the US President to impose some sanctions on persons engaged in a “significant transaction” with Russian defence and intelligence sectors.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Countering America’s Adversaries through Sanctions Act (CAATSA) was passed unanimously by the US Congress and signed reluctantly by Donald Trump. Enacted on August 2, 2017, its core objective is to counter Iran, Russia and North Korea through punitive measures.

Title II of the Act primarily deals with sanctions on Russian interests such as its oil and gas industry, defence and security sector, and financial institutions, in the backdrop of its military intervention in Ukraine and its alleged meddling in the 2016 US Presidential elections.

Section 231 of the Act empowers the US President to impose at least five of the 12 listed sanctions — enumerated in Section 235 of the Act — on persons engaged in a “significant transaction” with Russian defence and intelligence sectors.

93. Forest Carbon Partnership Facility (FCPF) and Forest Investment Program (FIP) are the initiatives by

- a) UN Environment
- b) World Bank
- c) United Nations Development Programme
- d) Food and Agriculture Organization

Correct Answer: B

Explanation: Forest Investment Programme (FIP) was established by the World Bank in 2009 for supporting sustainable forest management and reforestation activities, in line with REDD+ objectives.

Forest Carbon Partnership Facility (FCPF) is a World Bank programme and consists of a Readiness Fund and a Carbon Fund. The FCPF was created to assist developing countries to reduce emissions from deforestation and forest degradation, enhance and conserve forest carbon stocks, and sustainably manage forests (REDD+).

94. Consider the following statements regarding POSHAN Abhiyaan.

1. POSHAN Abhiyaan is Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers.
2. NITI Aayog is the monitoring authority for POSHAN Abhiyaan.
3. The target of the mission is to eliminate stunting among children in the age group 0-6 years by 2022.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: About Poshan Abhiyaan:

The programme seeks to improve nutritional outcomes for children, pregnant women and lactating mothers.

Launched in 2018 with specific targets to be achieved by 2022.

It aims to reduce:

- Stunting and wasting by 2% a year (total 6% until 2022) among children.
- Anaemia by 3% a year (total 9%) among children, adolescent girls and pregnant women and lactating mothers.
- The target of the mission is to bring down stunting among children in the age group 0-6 years from 38.4% to 25% by 2022.

NITI Aayog has played a critical role in shaping the POSHAN Abhiyaan. NITI Aayog has been entrusted with the task of closely monitoring the POSHAN Abhiyaan and undertaking periodic evaluations.

95. Consider the following statements.

1. Developing an inventory of exotic live species by India will ensure better compliance under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
2. Recently Supreme Court ordered an investigation and prosecution if one declared illegal acquisition or possession of exotic wildlife species.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: The Supreme Court upheld an Allahabad High Court order granting immunity from investigation and prosecution if one declared illegal acquisition or possession of exotic wildlife species between June and December. This was under a new amnesty scheme announced by the Centre.

The Ministry of Environment, Forest and Climate Change (MoEFCC) has come out with an advisory on a one-time voluntary disclosure scheme that allows owners of exotic live species that have been acquired illegally, or without documents, to declare their stock to the government between June and December 2020. With this scheme, the government aims to address the challenge of zoonotic diseases, develop an inventory of exotic live species for better compliance under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and regulate their import.

96. Planetary pressures-adjusted Human Development Index (PHDI) that reflect the impact caused by each country's per-capita carbon emissions and its material footprint, is released by

- a) World Economic Forum
- b) United Nations Development Programme
- c) World Bank
- d) United Nations Environment Programme (UNEP)

Correct Answer: B

Explanation: India dropped two ranks in the United Nations' Human Development Index this year, standing at 131 out of 189 countries. However, if the Index were adjusted to assess the planetary pressures caused by each nation's development, India would move up eight places in the ranking, according to the report.

For the first time, the United Nations Development Programme introduced a new metric to reflect the impact caused by each country's per-capita carbon emissions and its material footprint, which measures the amount of fossil fuels, metals and other resources used to make the goods and services it consumes.

97. The place Swabhiman Anchal, recently seen in news is located in

- a) Kerala
- b) Odisha
- b) Tamil Nadu
- d) West Bengal

Correct Answer: B

Explanation: Maoist-prone area in Odisha's Malkangiri district — Swabhiman Anchal.

98. Consider the following statements regarding PM SVANidhi scheme.

1. The PM SVANidhi scheme, is a credit facility that provides street vendors a collateral-free loan of Rs 1,00,000 with low rates of interest for a period of one year.
2. The scheme is part of the AtmaNirbhar Bharat package.
3. Small Industries Development Bank of India (SIDBI) is the implementing agency for the scheme.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Ministry of Housing & Urban Affairs launched a scheme PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) to empower Street Vendors by not only extending loans to them, but also for their holistic development and economic upliftment. The scheme intends to facilitate collateral free working capital loans of up to INR10,000/- of one-year tenure, to approximately 50 lakh street vendors, to help resume their businesses in the urban areas, including surrounding peri-urban/rural areas.

Small Industries Development Bank of India (SIDBI) is the implementing agency.

99. Proxima Centauri, sometimes seen in news is

- a) Closest Star to the Sun
- b) An exoplanet in habitable zone
- c) Nuclear powered submarine
- d) Electronic surveillance satellite

Correct Answer: A

Explanation: Astronomers running the world's largest initiative to look for alien life have recently picked up an "intriguing" radio wave emission from the direction of Proxima Centauri, the closest star to our Sun.

100. Consider the following statements regarding Himalayan serow, recently seen in news

1. Himalayan serow is described as resembling a cross between a goat, a donkey, a cow, and a pig.
2. It is restricted to the Himalayan region.
3. It is listed under Schedule V of The Wildlife Protection Act, 1972.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: A Himalayan serow has been sighted for the first time in the Himalayan cold desert region. The animal was spotted by locals and wildlife officials at a riverside rocky wall near Hurling village in Spiti, Himachal Pradesh.

This is the first recorded human sighting of the serow in Himachal Pradesh. The animal has been spotted a few times earlier in the state, but that has always been through camera traps.

Spiti lies in the cold mountain desert region of the western Himalaya, and its valley floor has an average elevation of 4,270 metres above sea level.

Serows are generally not found at this altitude, and never before has a serow been seen in the Himalayan cold desert. Wildlife officials believe this particular animal may have strayed into the Spiti valley from the Rupi Bhaba Wildlife Sanctuary in adjoining Kinnaur.

A biologist has described a Himalayan serow as resembling a cross between a goat, a donkey, a cow, and a pig. It's a medium-sized mammal with a large head, thick neck, short limbs, long, mule-like ears, and a coat of dark hair.

There are several species of serows, and all of them are found in Asia. The Himalayan serow, or *Capricornis sumatraensis* thar, is restricted to the Himalayan region.

According to the International Union for Conservation of Nature (IUCN), Himalayan serows have experienced significant declines in population size, range size and habitat in the last decade, and this is expected to continue due to intensive human impact.

Previously assessed as 'near threatened', the Himalayan serow is now been categorised as 'vulnerable' in the IUCN Red List of Threatened Species.

It is listed under Schedule I of The Wildlife Protection Act, 1972, which provides absolute protection.