

ForumIAS

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Prelims Marathon

13th June to 19th June, 2022

*HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT*

FORUMIAS



Schemes/ Programmes/ Institutions

Q.1) Consider the following statements about Association of World Election Bodies:

1. The permanent secretariat is located in Washington DC.
2. It was established with the vision of achieving sustainable democracy around the world.

Which of the statement given above is/are correct?

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

ANS: B

Explanation: Association of World Election Bodies

It is the largest association of Election Management Bodies (EMBs) worldwide. It was established in 2013. The permanent secretariat is located in Seoul, South Korea. At present, it has 118 EMBs as Members & 20 Regional Associations/Organisations as Associate Members. It was established with the vision of achieving sustainable democracy around the world. A-WEB undertakes Election Visitor and Observation Programmes in various countries to study various election management practices and share knowledge with other Member of EMBs.

Source: EPIC May 2022

Q.2) Consider the following statements about National Open Access Registry (NOAR):

1. NOAR is the key to enable the integration of Renewable Energy (RE) resources into the grid.
2. It has been launched by Ministry of New and Renewable Energy.

Which of the statement given above is/are correct?

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

ANS: A

Explanation: National Open Access Registry (NOAR)

It has successfully gone live from 1st May 2022. It has been launched by the Ministry of Power. It is a centralized online platform through which short-term open access to the interstate transmission system is being managed. The platform is accessible to all stakeholders including open access participants, traders, power exchanges, and national/regional/state load despatch centres. NOAR is the key to facilitate faster electricity markets and enable the integration of Renewable Energy (RE) resources into the grid.

Source: EPIC May 2022

PRELIMS MARATHON COMPILATION FOR THE MONTH OF JUNE (THIRD WEEK), 2022

Q.3) Consider the following statements about Microprocessor Development Program:

1. Microprocessors named Shakti and Vega have been developed under this program.
2. It has been launched by Ministry of Science and Technology.

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

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

ANS: B

Explanation: Digital India RISC-V Microprocessor (DIR-V) Program

It has been launched by the Ministry of Electronics and Information Technology. Its aim is to enable the creation of Microprocessors, and achieve industry-grade silicon and Design wins by December 2023. It will promote partnerships between Start-ups, Academia & Multinationals to make India a supplier of RISC-V SoC (System on Chips) for Servers, Mobile devices, Automotive, IoT & Microcontrollers. IIT Madras and the Center for Development of Advanced Computing (CDAC) have developed two microprocessors named Shakti (32-bit) and Vega (64-bit) respectively under the Microprocessor Development Program.

Source: EPIC May 2022

Q.4) Which of the following statements about National Film Heritage Mission is/are correct?

1. Its aim is to preserve, restore and digitize India's cinematic heritage.
2. It is launched in 2022 by the Ministry of Information & Broadcasting.
3. It is being implemented by the National Film Archives of India (NFAI).

Select the correct answer using the codes given below:

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

ANS: D

Explanation: National Film Heritage Mission (NFHM)

It was launched in 2016 by the Ministry of Information & Broadcasting. Its aim is to preserve, restore and digitize India's cinematic heritage. It is being implemented by the National Film Archives of India (NFAI). It is one of the world's largest film preservation missions. NFAI was setup in 1964 as a media unit of the Ministry of Information & Broadcasting. It is headquartered in Pune, Maharashtra.

Source: EPIC May 2022

Q.5) Which of the following statement about BioNEST Scheme is correct?

- a) BioNEST stands for Bio-Incubators Nurturing Entrepreneurship for Scaling Technologies.
- b) Its aim is to inhibit the biotech innovation ecosystem in the country.
- c) It has been launched by Biotechnology Industry Research Assistance Council (BIRAC).
- d) Both (a) and (c)

ANS: D

Explanation: BioNEST Scheme

PRELIMS MARATHON COMPILATION FOR THE MONTH OF JUNE (THIRD WEEK), 2022

BioNEST stands for Bio-Incubators Nurturing Entrepreneurship for Scaling Technologies. It has been launched by Biotechnology Industry Research Assistance Council (BIRAC).

Its aim is to foster the biotech innovation ecosystem in the country by creating globally competent bio-incubation facilities across the country.

Source: EPIC May 2022

Q.6) Consider the following statements about National Behaviour Change Communication Framework for Garbage Free Cities:

1. It has been launched by the Ministry of Housing and Urban Affairs.
2. The framework focuses on areas of source segregation, collection, transportation, and processing of waste, plastic waste management etc.

Which of the statement given above is/are correct?

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

ANS: C

Explanation: National Behaviour Change Communication Framework for Garbage Free Cities

It has been launched by the Ministry of Housing and Urban Affairs under Swachh Bharat Mission: Urban 2.0. Its aim is to strengthen the ongoing Jan Andolan for 'Garbage Free Cities'. The framework serves as a guiding document and blueprint for States and Cities to undertake large scale multimedia campaigns along with intensive and focused interpersonal communication campaigns. The framework focuses on intensifying messaging around the key focus areas of source segregation, collection, transportation, and processing of waste, plastic waste management etc.

Source: EPIC May 2022

Q.7) Consider the following statements about European Union:

1. European Union is only Economic Union of 27 countries.
2. European Union was established through Treaty of Lisbon.

Which of the statement given above is/are correct?

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

ANS: D

Explanation:

European Union

- **Political and Economic Union** of 27 countries.
- **Area:** 4.2 million sq. km; **Population:** 447 million (5.8% of global).
- Nominal GDP of **US\$ 17.1 trillion** in 2021 (18% of global, 3rd overall).
- Traces its origin to **European Coal and Steel Community** and the **European Economic Community**.
- Established through **Maastricht Treaty** (1993). **Treaty of Lisbon** (2009) amended significant provisions regarding the legal structure of EU.
- **Institutions:**
 - **European Council:** Sets the general political directions and priorities of the EU.
 - **Council of the EU:** Brings together ministers of member Governments'. Its approval is required for any proposal to enter into law.
 - **European Parliament:** 705 directly elected representatives. It shares with the Council of the EU **equal legislative powers** to amend, approve or reject European Commission proposals for most areas of EU legislation.
 - **European Commission:** Only institution **empowered to propose legislation**, serves as the 'Guardian of the Treaties'. It consists of an executive cabinet of public officials. Manages and directs the Commission's permanent civil service.

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Source: EPIC May 2022

Q.8) “Ecowrap Report”, recently seen in news is released by which of the following institutions?

- a) RBI
- b) NITI Aayog
- c) SBI
- d) Ministry of Earth Science

ANS: C

Explanation:

State Bank of India's Economic Research Department has released the Ecowrap Report.

Key Findings of the Ecowrap Report: India's GDP growth is expected to be in the range of 8.2% to 8.5 % in FY22.

States opting for Freebies:

Several states in the country are resorting to offering freebies like farm loan waivers and restoring the old pension system. Telangana has committed 35% of revenue receipts to finance populist schemes. Rajasthan, Chhattisgarh, Andhra Pradesh and others have all committed to spend 5-19% of their revenue receipts on similar schemes. These populist schemes are economically unsustainable and also limit states flexibility to spend on development projects. With the GST compensation from the Center ending in June, the states need to re-prioritise expenditure in accordance with the revenue receipts.

Source: EPIC May 2022

Q.9) Consider the following statements about World Economic Outlook Report:

1. It is published by IMF once in two years.
2. The aim is to provide forecasts of economic developments of member countries and highlight risks and uncertainty.

Which of the statement given above is/are correct?

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

ANS: B

Explanation:

About the World Economic Outlook Report

The report is published by the IMF twice a year: in April and October. It also provides updates to these two reports in January and July. The aim of the report is to provide analysis and forecasts of economic developments of member countries and highlight risks and uncertainty.

Source: EPIC May 2022

Q.10) “Pyramid Scheme”, recently seen in news is related to which of the following?

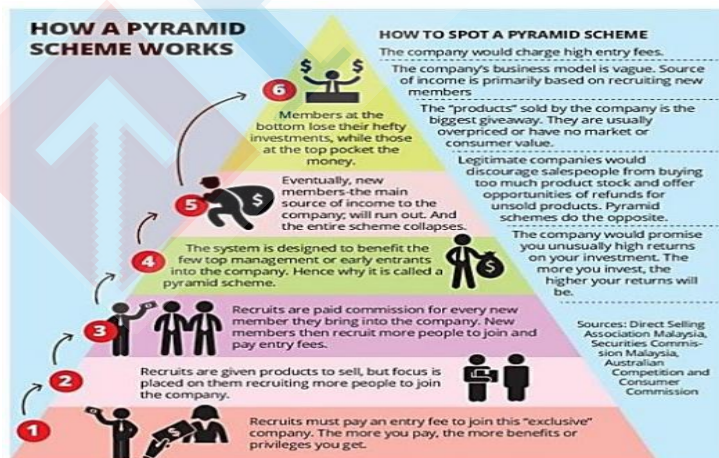
- a) Ecological sustainability
- b) Demographic dividend
- c) Unsustainable business model
- d) Bridging Digital Divide

ANS: C

Explanation:

About the Pyramid Scheme

A pyramid scheme is a sketchy and unsustainable business model where a few top-level members recruit newer members. Those members pay upfront costs up the chain to those who enrolled them. As newer members in turn recruit underlings of their own, a portion of the subsequent fees they receive is also kicked up the chain. In a pyramid scheme, the major profit comes from the recruitment fees rather than the sale of the actual products. Multi-Level Marketing operations (MLMs) are similar to pyramid schemes with one difference: they involve the sale of tangible goods.



Source: EPIC May 2022

Science and Technology

Q.1) Consider the following statements about INS Varghese:

1. It is a type of Scorpene-class submarines.
2. It has been manufactured in collaboration with Israel.

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

ANS: A

Explanation:

INS Vagsheer

It is the 6th and last of the Scorpene-class submarines made under Project 75. It can join the Navy fleet within 12-18 months. It has been manufactured by Mazagon Dock Shipbuilders Limited (MDL) in collaboration with Naval Group, France. It has been named after the sandfish, a deep-sea predator.

It is a diesel attack submarine. It can reach a top speed of 11 knots (at surface) and 20 knots (submerged). It is also enabled with Anti-Torpedo Countermeasure system. Its superior stealth features include advanced acoustic absorption techniques and low noise levels.

Source: EPIC May 2022

Q.2) National Cyber Security Incident Response Exercise has been sponsored by which of the following?

- a) NITI Aayog
- b) Ministry of Home Affairs
- c) DRDO
- d) Department of Science and Technology

ANS: C

Explanation:

National Cyber Security Incident Response Exercise:

It is conducted by the National Security Council Secretariat (NSCS) in association with Data Security Council of India (DSCI) as the knowledge partner. The exercise supported by the DRDO. It aims to train senior management and technical personnel of Government/Critical Sector organizations and agencies on contemporary cyber threats and handling cyber incidents and response.

Source: EPIC May 2022

Q.3) SOFIA Telescope is located at which of the following place?

- a) India
- b) China
- c) Russia
- d) None of the above

ANS: D

Explanation: SOFIA Telescope:

SOFIA stands for Stratospheric Observatory for Infrared Astronomy. It is a 2.7-meter infrared telescope sitting inside a Boeing 747SP airplane. The plane flies at an altitude of 38,000-45,000 feet above the surface of earth. It is the world's largest flying telescope. The telescope has made important discoveries like presence of water on Moon in Clavius Crater (2020). It also discovered helium hydride; the first molecule formed in the Universe almost 14 billion years ago. NASA has decided to shut down the SOFIA Telescope.

Source: EPIC May 2022

Q.4) Consider the following statements about InSight Mission:

1. It is a robotic lander designed to study the interior of the moon.
2. It is part of NASA's Discovery Program.

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

ANS: B

Explanation:

InSight Mission:

The Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission is a robotic lander designed to study the interior of the planet Mars. It is part of NASA's Discovery Program. The objective of the Mission is to determine the rate of Martian tectonic activity and meteorite impacts.

Source: EPIC May 2022

Q.5) Consider the following statements about Tomato Flu:

1. The flu recently affected children below the age of 5 in Kerala.
2. Tomato fever is contagious.

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

ANS: C

Explanation:

Tomato Flu:

Tomato Flu got its name from the tomato-shaped blisters it causes on the body. The flu is affecting children below the age of 5 in Kerala. The affected child can get blisters, high fever,

body ache, joint swelling and fatigue. Tomato fever is contagious. This flu is a self-limiting and there is no specific drug for this. This means that the symptoms will resolve over time on their own if supportive care is given.

Source: EPIC May 2022

Q.6) India's First pure Green Hydrogen pilot plant has been commissioned at which of the following place?

- a) Haryana
- b) Maharashtra
- c) Gujarat
- d) Assam

ANS: D

Explanation:

India's First Green Hydrogen Plant:

Oil India Limited (OIL) has commissioned India's First pure Green Hydrogen pilot plant at its Jorhat Pump Station in Assam. The plant produces Green Hydrogen from the electricity generated by the existing 500kW Solar plant using a 100 kW Anion Exchange Membrane (AEM) Electrolyser array. The use of AEM technology is being used for the first time in India.

Source: EPIC May 2022

Q.7) Consider the following statements about Anion Exchange Membrane (AEM) Technology and Electrolysis:

1. Both technologies uses expensive metals like platinum and ruthenium.
2. Both technologies can be used to split water into hydrogen and oxygen.

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

ANS: B

Explanation:

Anion Exchange Membrane (AEM) Technology:

Electrolysis is the process of splitting water into hydrogen and oxygen. An electrolyzer is a system that uses electricity to break water into hydrogen and oxygen through electrolysis. Typically, electrolyzers use proton exchange membranes (PEMs) to produce hydrogen. This method needs expensive metals like platinum and ruthenium to remain in an acidic environment. Anion Exchange Membranes (AEMs) is an alternate to this method. It uses alkaline conditions, so there is no need for expensive metals. The materials involved in AEMs are thus some 3,000 times less expensive than PEMs.

Source: EPIC May 2022

Q.8) 'Earendel' Star, the farthest star ever seen to date has been discovered by which of the following?

- a) SOFIA Telescope
- b) Hubble Telescope
- c) James Webb Space Telescope
- d) Advanced Telescope for High Energy Astrophysics.

ANS: B

Explanation:

'Earendel' Star:

NASA's Hubble Space Telescope has discovered the farthest star ever seen to date. It has been nicknamed as Earendel. It means 'morning star' in Old English. The star is more than 12.9 billion light-years away and likely existed within the first billion years after the beginning of the universe. The star has been discovered by phenomena of 'gravitational lensing'.

Source: EPIC May 2022

Q.9) Which of the following statement about Gravitational Lensing is/are correct?

1. Gravitational Lensing occurs when a huge amount of matter, like a cluster of galaxies, creates a very strong gravitational field.
2. The 'Earendel' Star has been recently discovered by phenomena of 'gravitational lensing'.

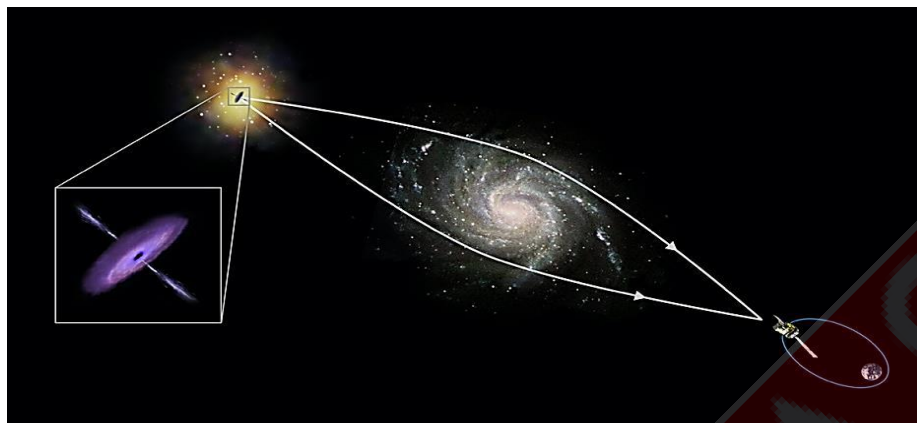
Select the correct answer using the codes given below:

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

ANS: C

Explanation:

- Gravitational Lensing Einstein's General Theory of Relativity predicts that light can be bent by gravity.
- Gravitational Lensing occurs when a huge amount of matter, like a cluster of galaxies, creates a very strong gravitational field.
- This field distorts and magnifies the light from distant galaxies that are behind it but in the same line of sight. The effect is like looking through a giant magnifying glass. This effect allows researchers to study the details of early galaxies too far away to be seen with current technology and telescopes.
- 'Earendel' Star NASA's Hubble Space Telescope has discovered the farthest star ever seen to date. It has been nicknamed as Earendel. It means 'morning star' in Old English. The star is more than 12.9 billion light-years away and likely existed within the first billion years after the beginning of the universe. The star has been discovered by phenomena of 'gravitational lensing'.



Source: EPIC May 2022

Q.10) India Patents Report has been released by which of the following?

- a) NITI Aayog
- b) Ministry of Commerce
- c) NASSCOM
- d) Both (a) and (b)

ANS: C

Explanation:

India Patents Report:

The National Association of Software and Services Companies (NASSCOM) has released the India Patents report. Indian companies have filed 1.38 lakh tech patents in India from 2015 to 2021. Start-ups have been key contributors in terms of technology innovation. Over 60% of the technology patents were filed by Indian companies and start-ups while 16.7% of the tech patents were filed by Individual Inventors and Academia/Research. Artificial Intelligence (AI) continues to lead in terms of total patents filed under various emerging technology domains.

Source: EPIC May 2022

Economy

Q.1) If rest of the things remains equal, and a good has more substitutes, its price elasticity of demand is:

- a) Zero
- b) Smaller
- c) Larger
- d) Infinite

ANS: C

Explanation: Factors Determining Price Elasticity of Demand for a Good

- The price elasticity of demand for a good depends on the nature of the good and the availability of close substitutes of the good.
- Consider, for example, necessities like food. Such goods are essential for life and the demands for such goods do not change much in response to changes in their prices. Demand for food does not change much even if food prices go up. On the other hand, the demand for luxuries can be very responsive to price changes. In general, demand for necessity is likely to be price inelastic while demand for a luxury good is likely to be price elastic.
- Though the demand for food is inelastic, the demands for specific food items are likely to be more elastic. For example, think of a particular variety of pulses. If the price of this variety of pulses goes up, people can shift to some other variety of pulses which is a close substitute. The demand for a good is likely to be elastic if close substitutes are easily available. On the other hand, if close substitutes are not available easily, the demand for a good is likely to be inelastic.
- Other things equal, if a good has more substitutes, its price elasticity of demand is larger.

Source: NCERT

Q.2) Consider the following statements about “Free Market”:

1. It is a system in which there is a free provision of products.
2. In free market, forces of supply and demand are free from any intervention by a government.

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

ANS: B

Explanation: Free market

In economics, a free market is an idealized system in which the prices for goods and services are determined by the open market and by consumers.

In a free market, the laws and forces of supply and demand are free from any intervention by a government, by a price-setting monopoly, or by other authority.

Proponents of the concept of free-market contrast it with a regulated market, in which a government intervenes in supply and demand through various methods — such as tariffs — used to restrict trade and to protect the local economy.

In an idealized free-market economy, prices for goods and services are set freely by the forces of supply and demand and are allowed to reach their point of equilibrium without intervention by government policy.

Although free markets are commonly associated with capitalism within a market economy in contemporary usage and popular culture, free markets have also been advocated by free-market anarchists, market socialists, and some proponents of cooperatives and advocates of profit sharing.

Source: NCERT

Q.3) Which of the following can be described as ‘Factors of Production’?

1. Land
2. Tools & machines
3. Skilled professionals
4. Entrepreneurship

Select the correct answer using the codes given below:

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

ANS: D

Explanation: Factors of Production

- Factors of production describe the inputs that are used in the production of goods or services in order to make an economic profit. The factors of production include land, labor (Skilled Professionals), capital (Tools & Machines), and entrepreneurship.
- In the absence of indirect taxes or subsidies, the total value of the final goods output is distributed among different factors of production – wages to labor, interest to capital, rent to land, etc.

Source: NCERT

Q.4) When demand is perfectly inelastic, an increase in price will result in:

- a) A decrease in total revenue
- b) An increase in total revenue
- c) No change in total revenue
- d) A decrease in quantity demanded

ANS: B

Explanation: How to Price Inelasticity Affects Total Revenue

For price inelastic goods or services, the change in the amount demanded is minimal with respect to the change in price. This can affect demand and total revenue for the business as:

- If the price for an inelastic good is increased and the demand does not change, the total revenue increases due to the higher price and static quantity demanded.
- However, price increases typically do lead to a small decrease in quantity demanded.

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- This means that firms that deal with inelastic goods or services can increase prices, selling a little less but making higher revenues.
- Therefore, businesses that deal in goods that are price inelastic are better equipped for profit maximization and are better protected against economic downturns.
- Similarly, If the price for an inelastic good is lowered, the demand for that good does not increase, resulting in less overall revenue due to the lower price and no change in demand.

Source: NCERT

Q.5) Which of the following is correct with respect to Giffen goods?

- a) Good that people buy more as their incomes fall
- b) Good on which people spend a small portion of their income
- c) Good that has a vertical demand curve parallel to the y-axis
- d) Good that people buy more as its price increases

ANS: D

Explanation: Giffen Good

- The good for which the demand increases as its price increases, rather than falls is known as Giffen goods-named after Robert Giffen (1837–1910).
- It is a product that people consume more as the price rises and vice versa violating the basic law of demand in microeconomics.
- It applies to the large proportion of the goods belonging to the household goods (as flour, rice, pulses, salt, onion, potato, etc. in India)—an increase in their prices produces a large negative income effect completely overcoming the normal substitution effect with, people buying more of the goods.
- Examples: Bread, Rice, and Wheat.

Source: NCERT

Q.6) With reference to Harrod - Domar growth model, growth has been defined as which of the following?

- a) Directly related to investments and inversely related to the capital-output ratio
- b) Directly related to the capital-output ratio and inversely related to investments
- c) Indirectly related to investments and the capital-output ratio
- d) Directly related to investments and the capital-output ratio

ANS: A

Explanation: Harrod-Domar Growth Model

Harrod-Domar Growth Model suggests that the economy's rate of growth depends on:

- The level of national saving (S)
- The productivity of capital investment (this is known as the capital-output ratio)
- If the capital-output ratio is low, an economy can produce a lot of output from a little capital. If the capital-output ratio is high then it needs a lot of capital for production, and it
- will not get as much value of output for the same amount of capital.

As per this model, Rate of growth of GDP = Savings ratio / capital-output ratio

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This implies if the savings rate is 10% and the capital-output ratio is 2, then a country would grow at 5% per year. Based on the model, therefore, the rate of growth in an economy can be increased in one of two ways:

- Increased level of savings in the economy (i.e. gross national savings as a % of GDP)
- Reducing the capital-output ratio (i.e. increasing the quality/productivity of capital inputs)

Source: NCERT

Q.7) With respect to Real and Nominal GDP, which of the following statement is/are correct?

1. Real GDP is equal to the economic output adjusted for the effects of inflation whereas Nominal GDP is economic output without the inflation adjustment.
2. Nominal GDP is usually higher than Real GDP.

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

ANS: D

Explanation: Real and Nominal GDP

- GDP stands for Gross Domestic Product (GDP) and is the measure of the total economic output of the goods and services of a country. It is usually expressed on an annual basis but is sometimes expressed on a quarterly basis within a year.
- Real GDP is equal to the economic output adjusted for the effects of inflation. Nominal GDP is an economic output without the inflation adjustment.
- Real GDP is calculated in a way such that the goods and services are evaluated at some constant set of prices (or constant prices).
- When comparing the GDP of two or more years, real GDP is used because, by removing the effects of inflation, the comparison of the different years focuses solely on volume.
- The year-to-year comparison for real GDP requires what is called a base year.
- The base year is nothing more than the year to which all the other years are adjusted.
- Nominal GDP is simply the value of GDP at the current prevailing prices.
- Nominal GDP is usually higher than real GDP because inflation is typically a positive number.
- Nominal GDP is used when comparing different quarters of output within the same year.

Source: NCERT

Q.8) Which of the following statements about GDP Deflator is/are not correct?

1. It represents the ratio of GDP at current prices to GDP at constant prices.
2. It covers only fixed basket of goods and services.

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

ANS: B

Explanation: GDP Deflator

- It is a tool to measure inflation comprehensively.
- It represents the ratio of GDP at current prices to GDP at constant prices. The GDP deflator is published on a quarterly basis since 1996 with a lag of two months.
- It is because of this very reason that economists prefer the use of the Wholesale Price Index (WPI) or Consumer Price Index (CPI) for deflating nominal price estimates to derive real price estimates.
- $\text{GDP deflator} = (\text{Nominal GDP} / \text{Real GDP}) * 100$ (if calculated in a percentage form).
- Unlike the WPI and the CPI, GDP deflator is not based on a fixed basket of goods and services, it covers the whole economy.
- It does not include the prices of imported goods.
- The weights are constant in CPI, but they differ according to the production level of each good in GDP deflator.

Source: NCERT

Q.9) Which of the following pairs are correctly matched?

Types of Inflation

1. Creeping Inflation
2. Trotting Inflation
3. Core Inflation
4. Disinflation

Meaning

- A kind of mild inflation that boosts demand.
When inflation rises to 10 percent or more.
It measures rising prices in food and energy
It is the opposite of inflation in which prices fall.

Select the correct answer using the codes given below:

- a) One pair only
- b) Two Pairs only
- c) Three pairs only
- d) All four pairs

ANS: B

Explanation: Inflation

- Inflation means a sustained increase in the general price level. However, this increase in the cost of living can be caused by different factors.
- Creeping or mild inflation is when prices rise 3 percent a year or less.
- Trotting Inflation is when inflation rises to 10 percent or more.
- Core inflation is a measure of inflation that excludes certain items that face volatile price movements (like food and energy) because in finding out the legitimate long-run inflation, short-term price volatility and transitory changes in price must be removed. Core inflation reflects the long-term trend at a particular price level.

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- Disinflation is a decrease in the rate of inflation – a slowdown in the rate of increase of the general price level of goods and services in a nation's gross domestic product over time. It is the opposite of reflation. Disinflation occurs when the increase in the "consumer price level" slows down from the previous period when the prices were rising.

Source: NCERT

Q.10) Consider the following statements about the effect of inflation:

1. Inflation redistributes wealth from creditors to debtors.
2. Rising inflation indicates rising aggregate demand.

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

ANS: C

Explanation: Effect of Inflation

- There are multi-dimensional effects of inflation on an economy both at the micro and macro levels.
- It redistributes income, distorts relative prices, destabilises employment, tax, saving and investment policies, and finally, it may bring in recession and depression in an economy.

On Creditors and Debtors

- Inflation redistributes wealth from creditors to debtors, i.e., lenders suffer and borrowers benefit out of inflation. The opposite effect takes place when inflation falls (i.e., deflation).

On lending

- With the rise in inflation, lending institutions feel the pressure of higher lending. Institutions don't revise the nominal rate of interest as the 'real cost of borrowing' (i.e., the nominal rate of interest minus inflation) falls by the same percentage with which inflation rises.

On Aggregate Demand

- Rising inflation indicates rising aggregate demand and indicates a comparatively lower supply and higher purchasing capacity among the consumers. Usually, higher inflation suggests the producers increase their production level as it is generally considered as an indication of higher demand in the economy.

Source: NCERT

Indian Polity

Q.1) Consider the following statements about Montagu-Chelmsford Reforms:

1. Montagu-Chelmsford Reforms came into force in 1921.
2. Chelmsford was the Secretary of State for India and Lord Montagu was the Viceroy of India.

Which of the above given statements is/are correct?

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

ANS: A

Explanation:

Government of India Act of 1919

On August 20, 1917, the British Government declared, for the first time, that its objective was the gradual introduction of responsible government in India.

The Government of India Act of 1919 was thus enacted, which came into force in 1921. This Act is also known as Montagu-Chelmsford Reforms (Montagu was the Secretary of State for India and Lord Chelmsford was the Viceroy of India).

Source: Indian Polity by Laxmikanth

Q.2) To protest against which of the following, Gandhi ji undertook fast unto death in Yeravada Jail?

- a) Simon Commission
- b) Government of India Act of 1935
- c) Communal Award
- d) Rowlatt Act

ANS: C

Explanation:

Communal Award In August 1932, Ramsay MacDonald, the British Prime Minister, announced a scheme of representation of the minorities, which came to be known as the Communal Award. The award not only continued separate electorates for the Muslims, Sikhs, Indian Christians, Anglo-Indians and Europeans but also extended it to the depressed classes (scheduled castes). Gandhiji was distressed over this extension of the principle of communal representation to the depressed classes and undertook fast unto death in Yeravada Jail (Poona) to get the award modified. At last, there was an agreement between the leaders of the Congress and the depressed classes.

The agreement, known as Poona Pact, retained the Hindu joint electorate and gave reserved seats to the depressed classes.

Source: Indian Polity by Laxmikanth

Q.3) Consider the following pairs:

Committee

1. Steering Committee
2. Fundamental Rights Sub-Committee
3. Union Constitution Committee
4. States Committee

Headed by

- Dr. Rajendra Prasad
- J.B. Kripalani
- Jawaharlal Nehru
- Sardar Patel

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

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

ANS: C

Explanation:

Major Committees

1. Union Powers Committee – Jawaharlal Nehru
2. Union Constitution Committee – Jawaharlal Nehru
3. Provincial Constitution Committee – Sardar Patel
4. Drafting Committee – Dr. B.R. Ambedkar
5. Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas – Sardar Patel. This committee had the following five sub-committees:
 - (a) Fundamental Rights Sub-Committee – J.B. Kripalani
 - (b) Minorities Sub-Committee – H.C. Mukherjee
 - (c) North-East Frontier Tribal Areas and Assam Excluded & Partially Excluded Areas Sub-Committee – Gopinath Bardoloi
 - (d) Excluded and Partially Excluded Areas (Other than those in Assam) Sub-Committee – A.V. Thakkar
 - (e) North-West Frontier Tribal Areas Sub-Committee
6. Rules of Procedure Committee – Dr. Rajendra Prasad
7. States Committee (Committee for Negotiating with States) – Jawaharlal Nehru
8. Steering Committee – Dr. Rajendra Prasad

Source: Indian Polity by Laxmikanth

Q.4) Which of the following is not revealed by the Preamble of Indian Constitution?

- a) Objective of the constitution
- b) Date of Independence
- c) Source of authority of the Constitution
- d) Nature of Indian State

ANS: B

Explanation:

INGREDIENTS OF THE PREAMBLE

The Preamble reveals four ingredients or components:

1. **Source of authority of the Constitution:** The Preamble states that the Constitution derives its authority from the people of India.
2. **Nature of Indian State:** It declares India to be of a sovereign, socialist, secular democratic and republican polity.

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3. **Objectives of the Constitution:** It specifies justice, liberty, equality and fraternity as the objectives.

4. **Date of adoption of the Constitution:** It stipulates November 26, 1949 as the date.

Source: Indian Polity by Laxmikanth

Q.5) With reference to Indian Constitution, which of the following statements is correct?

- a) Liberty conceived by the Preamble is absolute but not qualified.
- b) Liberty conceived by the Preamble is not absolute but qualified.
- c) Liberty conceived by the Preamble is both absolute and qualified.
- d) Liberty conceived by the Preamble is neither absolute nor qualified.

ANS: B

Explanation:

- The term 'liberty' means the absence of restraints on the activities of individuals, and at the same time, providing opportunities for the development of individual personalities.
- The Preamble secures to all citizens of India liberty of thought, expression, belief, faith and worship, through their Fundamental Rights, enforceable in court of law, in case of violation.
- Liberty as elaborated in the Preamble is very essential for the successful functioning of the Indian democratic system. However, liberty does not mean 'license' to do what one likes, and has to be enjoyed within the limitations mentioned in the Constitution itself. In brief, the liberty conceived by the Preamble or fundamental rights is not absolute but qualified.
- The ideals of liberty, equality and fraternity in our Preamble have been taken from the French Revolution (1789-1799).

Source: Indian Polity by Laxmikanth

Q.6) Consider the following pairs:

Person

Statement about Preamble

- | | |
|----------------------------|--|
| 1. K M Munshi | horoscope of our sovereign democratic republic |
| 2. Pt. Thakur Das Bhargava | soul of the Constitution |
| 3. Sir Ernest Barker | key-note to the Constitution |

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

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

ANS: D

Explanation:

SIGNIFICANCE OF THE PREAMBLE

- The Preamble embodies the basic philosophy and fundamental values political, moral and religious on which the Constitution is based. It contains the grand and noble vision of the Constituent Assembly, and reflects the dreams and aspirations of the founding fathers of the Constitution. In the words of Sir Alladi Krishnaswami Iyer, a member of the Constituent

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- Assembly who played a significant role in making the Constitution, 'The Preamble to our Constitution expresses what we had thought or dreamt so long'.
- According to K M Munshi, a member of the Drafting Committee of the Constituent Assembly, the Preamble is the 'horoscope of our sovereign democratic republic'.
- Pandit Thakur Das Bhargava, another member of the Constituent Assembly, summed up the importance of the Preamble in the following words: 'The Preamble is the most precious part of the Constitution. It is the soul of the Constitution. It is a key to the Constitution. It is a jewel set in the Constitution. It is a proper yardstick with which one can measure the worth of the Constitution'.
- Sir Ernest Barker, a distinguished English political scientist, paid a glowing tribute to the political wisdom of the authors of the Preamble. He described the Preamble as the 'key-note'¹³ to the Constitution. He was so moved by the text of the preamble that he quoted¹⁴ it at the opening of his popular book, Principles of Social and Political Theory (1951).
- M Hidayatullah, a former Chief Justice of India, observed, 'Preamble resembles the Declaration of Independence of the United States of America, but is more than a declaration. It is the soul of our Constitution, which lays down the pattern of our political society. It contains a solemn resolve, which nothing but a revolution can alter

Source: Indian Polity by Laxmikanth

Q.7) Consider the following statements with respect to citizenship in India:

1. In India, a citizen by birth only is eligible for the office of President.
2. Cultural and educational rights under article 29 and 30 are conferred to Indian Citizens only.

Which of the above given statements is/are correct?

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

ANS: B

Explanation:

The Constitution confers the following rights and privileges on the citizens of India (and denies the same to aliens):

1. Right against discrimination on grounds of religion, race, caste, sex or place of birth (Article 15).
2. Right to equality of opportunity in the matter of public employment (Article 16).
3. Right to freedom of speech and expression, assembly, association, movement, residence and profession (Article 19).
4. Cultural and educational rights (Articles 29 and 30).
5. Right to vote in elections to the Lok Sabha and state legislative assembly.
6. Right to contest for the membership of the Parliament and the state legislature.
7. Eligibility to hold certain public offices, that is, President of India, Vice-President of India, judges of the Supreme Court and the high courts, governor of states, attorney general of India and advocate general of states.

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Along with the above rights, the citizens also owe certain duties towards the Indian State, as for example, paying taxes, respecting the national flag and national anthem, defending the country and so on.

In India both a citizen by birth as well as a naturalized citizen is eligible for the office of President while in USA, only a citizen by birth and not a naturalized citizen is eligible for the office of President.

Source: Indian Polity by Laxmikanth

Q.8) Right to property was deleted from the list of fundamental rights by which of the following amendment?

- a) 42nd Amendment
- b) 44th Amendment
- c) 1st amendment
- d) 61st amendment

ANS: B

Explanation:

Originally, the Constitution provided for seven Fundamental Rights viz:

1. Right to equality (Articles 14–18)
2. Right to freedom (Articles 19–22)
3. Right against exploitation (Articles 23–24)
4. Right to freedom of religion (Articles 25–28)
5. Cultural and educational rights (Articles 29–30)
6. Right to property (Article 31)
7. Right to constitutional remedies (Article 32)

However, the right to property was deleted from the list of Fundamental Rights by the 44th Amendment Act, 1978. It is made a legal right under Article 300-A in Part XII.

Source: Indian Polity by Laxmikanth

Q.9) Which of the following article expressly provides for the doctrine of judicial review?

- a) Article 32
- b) Article 226
- c) Article 13
- d) Article 21

ANS: C

Explanation:

Article 13 declares that all laws that are inconsistent with or in derogation of any of the fundamental rights shall be void. In other words, it expressly provides for the doctrine of judicial review. This power has been conferred on the Supreme Court (Article 32) and the high court's (Article 226) that can declare a law unconstitutional and invalid on the ground of contravention of any of the Fundamental Rights.

Source: Indian Polity by Laxmikanth

Q.10) Which of the following article requires the state to promote equal justice and to provide free legal aid to the poor?

- a) Article 44
- b) Article 41
- c) Article 51
- d) Article 39A

ANS: D

Explanation:

NEW DIRECTIVE PRINCIPLES:

The 42nd Amendment Act of 1976 added four new Directive Principles to the original list. They require the State:

1. To secure opportunities for healthy development of children (Article 39).
2. To promote equal justice and to provide free legal aid to the poor (Article 39 A).
3. To take steps to secure the participation of workers in the management of industries (Article 43 A).
4. To protect and improve the environment and to safeguard forests and wildlife (Article 48 A).

The 44th Amendment Act of 1978 added one more Directive Principle, which requires the State to minimise inequalities in income, status, facilities and opportunities (Article 38).

The 86th Amendment Act of 2002 changed the subject-matter of Article 45 and made elementary education a fundamental right under Article 21 A. The amended directive requires the State to provide early childhood care and education for all children until they complete the age of six years.

The 97th Amendment Act of 2011 added a new Directive Principle relating to co-operative societies. It requires the state to promote voluntary formation, autonomous functioning, democratic control and professional management of co-operative societies (Article 43B).

Source: Indian Polity by Laxmikanth

Indian Geography

Q.1) Consider the following factors:

1. Low Temperature
2. High Temperature
3. Humidity
4. Dry Condition

Which of the above is/are reason for “October Heat”?

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

ANS: D

Explanation: October Heat:

The retreating southwest monsoon season is marked by clear skies and rise in temperature. The land is still moist. Owing to the conditions of high temperature and humidity, the weather becomes rather oppressive. This is commonly known as the ‘October heat’. In the second half of October, the mercury begins to fall rapidly, particularly in northern India. The weather in the retreating monsoon is dry in north India but it is associated with rain in the eastern part of the Peninsula. Here, October and November are the rainiest months of the year.

Source: NCERT- Indian Physical Geography

Q.2) Consider the following pairs:

Term	Type of Forest
1. Parkland Landscape	Dry Deciduous Forest
2. Teak	Evergreen Forest
3. Sholas	Tropical Forest

Which of the above pair is/are correctly matched?

- a) Only 1 pair
- b) Only 2 pair
- c) All 3pairs
- d) None of the pair

ANS: A

Explanation:

Dry deciduous forest covers vast areas of the country, where rainfall ranges between 70 -100 cm. On the wetter margins, it has a transition to the moist deciduous, while on the drier margins to thorn forests. These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and Bihar. In the higher rainfall regions of the Peninsular plateau and the northern Indian plain, these forests have a **parkland landscape** with open stretches in which teak and other trees interspersed with patches of grass are common. As the dry season begins, the trees shed their leaves completely and the forest appears like a vast grassland with naked trees all around. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees

of these forests. In the western and southern part of Rajasthan, vegetation cover is very scanty due to low rainfall and overgrazing.

The southern mountain forests include the forests found in three distinct areas of Peninsular India viz; the Western Ghats, the Vindhya and the Nilgiris. As they are closer to the tropics, and only 1,500 m above the sea level, vegetation is temperate in the higher regions, and subtropical on the lower regions of the Western Ghats, especially in Kerala, Tamil Nadu and Karnataka. The temperate forests are called Sholas in the Nilgiris, Anaimalai and Palani hills. Some of the other trees of this forest of economic significance include, magnolia, laurel, cinchona and wattle. Such forests are also found in the Satpura and the Maikal ranges.

Source: NCERT- Indian Physical Geography

Q.3) Which among the following is called as “Monsoon Forest”?

- a) Montane Forest
- b) Tropical Deciduous Forests
- c) Evergreen Forest
- d) Temperate Forest

ANS: B

Explanation: Tropical Deciduous Forests

These are the most widespread forests in India. They are also called the monsoon forests. They spread over regions which receive rainfall between 70-200 cm. On the basis of the availability of water, these forests are further divided into moist and dry deciduous.

The Moist deciduous forests are more pronounced in the regions which record rainfall between 100-200 cm. These forests are found in the northeastern states along the foothills of Himalayas, eastern slopes of the Western Ghats and Odisha. Teak, sal, shisham, hurra, mahua, amla, semul, kusum, and sandalwood etc. are the main species of these forests.

Dry deciduous forest covers vast areas of the country, where rainfall ranges between 70 -100 cm. On the wetter margins, it has a transition to the moist deciduous, while on the drier margins to thorn forests. These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and Bihar. In the higher rainfall regions of the Peninsular plateau and the northern Indian plain, these forests have a parkland landscape with open stretches in which teak and other trees interspersed with patches of grass are common. As the dry season begins, the trees shed their leaves completely and the forest appears like a vast grassland with naked trees all around. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees of these forests. In the western and southern part of Rajasthan, vegetation cover is very scanty due to low rainfall and overgrazing.

Source: NCERT- Indian Physical Geography

Q.4) Which of the following statement about South-west Monsoon is/are correct?

1. It is formed after southeast trade winds crosses equator.
2. The Monsoon has two branches- the Arabian Sea branch and the Bay of Bengal branch.
3. The Monsoon enters West Bengal and Bangladesh in South-westerly direction.
4. The Arabian Sea branch reaches Punjab plains.

Select the correct answer using the codes given below:

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

ANS: B

Explanation:

As a result of rapid increase of temperature in May over the northwestern plains, the low pressure conditions over there get further intensified. By early June, they are powerful enough to attract the trade winds of Southern Hemisphere coming from the Indian Ocean. These southeast trade winds cross the equator and enter the Bay of Bengal and the Arabian Sea, only to be caught up in the air circulation over India. Passing over the equatorial warm currents, they bring with them moisture in abundance. After crossing the equator, they follow a southwesterly direction. That is why they are known as southwest monsoons.

As these winds approach the land, their southwesterly direction is modified by the relief and thermal low pressure over the northwest India. The monsoon approaches the landmass in two branches:

- (i) The Arabian Sea branch
- (ii) The Bay of Bengal branch.

A third branch of this monsoon wind strikes the Saurashtra Peninsula and the Kachchh. It then passes over west Rajasthan and along the Aravalis, causing only a scanty rainfall. In Punjab and Haryana, it too joins the Bay of Bengal branch.

Source: NCERT- Indian Physical Geography

Q.5) Which of the following is true about Konkan Coast?

1. It extends from Mumbai to South Karnataka.
2. Annual range of temperature is high.
3. It receives rainfall by the Arabian Sea branch of South west monsoon.

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

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

ANS: D

Explanation:

With a long coastline, large coastal areas have an equable climate. Areas in the interior of India are far away from the moderating influence of the sea. Such areas have extremes of climate. That is why, the people of Mumbai and the Konkan coast have hardly any idea of extremes of temperature and the seasonal rhythm of weather. On the other hand, the seasonal contrasts in weather at places in the interior of the country such as Delhi, Kanpur and Amritsar affect the entire sphere of life.

Source: NCERT- Indian Physical Geography

Q.6) Consider the following statements:

“Vegetation is temperate in the higher region and subtropical in lower regions.”

Which of the region has the above mentioned characteristics?

- a) Andaman and Nicobar island
- b) Western Ghats
- c) Northeastern Himalayas
- d) Lesser Himalayas

ANS: B

Explanation:

The southern mountain forests include the forests found in three distinct areas of Peninsular India viz; the Western Ghats, the Vindhyas and the Nilgiris. As they are closer to the tropics, and only 1,500 m above the sea level, vegetation is temperate in the higher regions, and subtropical on the lower regions of the Western Ghats, especially in Kerala, Tamil Nadu and Karnataka. The temperate forests are called Sholas in the Nilgiris, Anaimalai and Palani hills. Some of the other trees of this forest of economic significance include, magnolia, laurel, cinchona and wattle. Such forests are also found in the Satpura and the Maikal ranges.

Source: NCERT- Indian Physical Geography

Q.7) “Rainfall occurs in winter from the retreating monsoon and summer is dry.”

The above statement best describe which of the following region?

- a) Punjab Plains
- b) Rajasthan
- c) Coromandel Coast
- d) Malabar Coast

ANS: C

Explanation:

The widespread rain in this season is associated with the passage of cyclonic depressions which originate over the Andaman Sea and manage to cross the eastern coast of the southern Peninsula. These tropical cyclones are very destructive. The thickly populated deltas of the Godavari, Krishna and Kaveri are their preferred targets.

Every year cyclones bring disaster here. A few cyclonic storms also strike the coast of West Bengal, Bangladesh and Myanmar. A bulk of the rainfall of the Coromondal coast is derived from these depressions and cyclones. Such cyclonic storms are less frequent in the Arabian Sea.

Source: NCERT- Indian Physical Geography

Q.8) Which of the following forest is described in the below given statement?

“The forests are highly developed in Andaman and Nicobar and are usually criss-crossed by creeks of stagnant water and tidal flows.”

- a) Evergreen forest
- b) Temperate forest
- c) Tropical forest
- d) Mangrove forest

ANS: D

Explanation:

The mangrove forest and other wetlands of the island arcs of the Andaman and Nicobar Islands. Mangroves grow along the coasts in the salt marshes, tidal creeks, mud flats and estuaries.

Source: NCERT- Indian Physical Geography

Q.9) Which of the following characteristic of India's climate is not correct?

- a) India has cold monsoonal climate
- b) Northern India experiences high daily range of temperature than southern India
- c) Himalayas trap the monsoon winds.
- d) Jet streams influences winter weather in India

ANS: A

Explanation:

Monsoon connotes the climate associated with seasonal reversal in the direction of winds. India has **hot monsoonal climate** which is the prevalent climate in south and southeast Asia.

Source: NCERT- Indian Physical Geography

Q.10) Consider the following statements:

1. These forests are found in warm and humid areas.
2. There is no definite time for trees to shed their leaves.

The forest described in the above statements is?

- a) Andaman and Nicobar
- b) Plains of Uttar Pradesh and Bihar
- c) Coromandel Coast
- d) Western Himalayas

ANS: A

Explanation:

Tropical Evergreen and Semi Evergreen Forests

These forests are found in the western slope of the Western Ghats, hills of the northeastern region and the Andaman and Nicobar Islands. They are found in warm and humid areas with an annual precipitation of over 200 cm and mean annual temperature above 22oC. Tropical evergreen forests are well stratified, with layers closer to the ground and are covered with shrubs and creepers, with short structured trees followed by tall variety of trees. In these forests, trees reach great heights up to 60 m or above. There is no definite time for trees to shed their leaves, flowering and fruition. As such these forests appear green all the year round. Species found in these forests include rosewood, mahogany, aini, ebony, etc.

Source: NCERT- Indian Physical Geography

Environment

Q.1) Consider the following statements with respect to salt content of Aquatic ecosystem:

1. The salt content of fresh bodies is always less than 5 ppt (parts per thousand).
2. The salt content of brackish water bodies is equal to or above 35 ppt.

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

ANS: A

Explanation:

Ecosystems consisting of water as the main habitat are known as aquatic ecosystems. Aquatic ecosystems are classified based on their salt content.

- Fresh water ecosystems- The salt content of fresh bodies is very low, always less than 5 ppt (parts per thousand). E.g lakes, ponds, pools, springs, streams, and rivers.
- Marine ecosystems - the water bodies containing salt concentration equal to or above that of sea water (i.e., 35 ppt or above). E.g shallow seas and open ocean.
- Brackish water ecosystems – these water bodies have salt content in between 5 to 35 ppt. e.g. estuaries, salt marshes, mangrove swamps and forests.

Source: Environment by Shankar IAS

Q.2) Consider the following pairs:

Aquatic Organisms

Description

- | | |
|---------------|--|
| 1. Neuston | unattached organisms which live at the air-water interface |
| 2. Nekton | animals which are swimmers |
| 3. Periphyton | organisms which remain attached to stems and leaves of rooted plants |
| 4. Benthos | organisms are those found living in the bottom of the water mass |

Which of the following codes is correct for the correctly matched pairs?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

ANS: D

Explanation:

AQUATIC ORGANISMS

The aquatic organisms are classified on the basis of their zone of occurrence and their ability to cross these zones.

The organisms (both flora and fauna) in the aquatic ecosystem are unevenly distributed but can be classified on the basis of their life form or location into five groups

i) Neuston:

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- These are unattached organisms which live at the airwater interface such as floating plants, etc.
- Some organisms spend most of their lives on top of the air-water interface such as water striders, while others spend most of their time just beneath the air-water interface and obtain most of their food within the water.
- E.g., beetles and back-swimmers.

ii) Periphyton:

- These are organisms which remain attached to stems and leaves of rooted plants or substances emerging above the bottom mud such as sessile algae and their associated group of animals.

iii) Plankton:

- This group includes both microscopic plants like algae (phytoplankton) and animals like crustaceans and protozoans (zooplankton) found in all aquatic ecosystems, except certain swift moving waters.
- The locomotory power of the planktons is limited so that their distribution is controlled, largely, by currents in the aquatic ecosystems.

iv) Nekton:

- This group contains animals which are swimmers.
- The nektons are relatively large and powerful as they have to overcome the water currents.
- The animals range in size from the swimming insects (about 2 mm long) to the largest animals, the blue whale.

v) Benthos:

- The benthic organisms are those found living in the bottom of the water mass.
- Practically every aquatic ecosystem contains well developed benthos.

Source: Environment by Shankar IAS

Q.3) Which of the following statement about ecosystems is/are correct?

1. Sunlight and oxygen are important limiting factors of the terrestrial ecosystems
2. Moisture and temperature are the limiting factors of aquatic ecosystem

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

ANS: D

Explanation:

Factors Limiting the Productivity of Aquatic Habitats Sunlight and oxygen are most important limiting factors of the aquatic ecosystems whereas moisture and temperature are the main limiting factors of terrestrial ecosystem.

Sunlight:

- Sunlight penetration rapidly diminishes as it passes down the column of water. The depth to which light penetrates a lake determines the extent of plant distribution.

Temperature:

- The water temperature changes less rapidly than the temperature of air because water has a considerably higher specific heat than air, i.e. larger amounts of heat energy must be added to or taken away from water to raise or lower its temperature.

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- Since water temperatures are less subject to change, the aquatic organisms have narrow temperature tolerance limit.
- As a result, even small changes in water temperature are a great threat to the survival of aquatic organisms when compared to the changes in air temperatures in the terrestrial organisms.

Source: Environment by Shankar IAS

Q.4) “It is a syndrome of ecosystem, primarily caused by the leaching of phosphate and - or nitrate containing fertilizers from agricultural lands into lakes or rivers.”

Which of the following is described in the above given statement?

- a) Biocapacity
- b) Ecological footprint
- c) Eutrophication
- d) Algal bloom

ANS: C

Explanation:

EUTROPHICATION

- Greek word – Eutrophia means adequate & healthy nutrition.
 - Eutrophication is a syndrome of ecosystem, response to the addition of artificial or natural nutrients such as nitrates and phosphates through fertilizer, sewage, etc that fertilize the aquatic ecosystem.
 - It is primarily caused by the leaching of phosphate and - or nitrate containing fertilisers from agricultural lands into lakes or rivers.
- The growth of green algae which we see in the lake surface layer is the physical identification of an Eutrophication.
- Some algae and blue-green bacteria thrive on the excess ions and a population explosion covers almost entire surface layer is known as algal bloom. This growth is unsustainable, however.
 - As Algal Bloom covers the surface layer, it restricts the penetration of sunlight.
- Diffusion of gas from atom.
- Oxygen is required by all respiring animals in the water and it is replenished by diffusion and photosynthesis of green plants.
 - The oxygen level is already low because of the population explosion and further oxygen is taken up by microorganisms which feed off the dead algae during decomposition process.
 - Due to reduced oxygen level, fishes and other aquatic organism suffocate and they die.
 - The anaerobic conditions can promote growth of bacteria which produces toxins deadly to aquatic organisms, birds and mammals.
 - All this eventually leads to degradation of aquatic ecosystem and death of its organisms.
 - It often leads to change in animal and plant population & degradation of water & habitat quality.

Source: Environment by Shankar IAS

Q.5) Consider the following statements about Red Tide:

1. It is a phenomenon where certain phytoplankton species contain pigments and “bloom” such that the human eye perceives the water to be discolored.
2. The blooms are always red.

Which of the statement given above is/are correct?

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

ANS: A

Explanation:

“Red Tide” is a common name for such a phenomenon where certain phytoplankton species contain pigments and “bloom” such that the human eye perceives the water to be discolored.

- Blooms can appear greenish, brown, and even reddish orange depending upon the type of organism, the type of water, and the concentration of the organisms.
- The term “red tide” is thus a misnomer because blooms are not always red, they are not associated with tides, they are usually not harmful, and some species can be harmful or dangerous at low cell concentrations that do not discolor the water.
- They are scientifically referred as Harmful Algal Blooms (HABs).

Source: Environment by Shankar IAS

Q.6) The term “Montreux Record” is related to which of the following?

- a) UNESCO’s Natural Site
- b) Ramsar site
- c) UNEP’s Red List
- d) List of endemic plant species

ANS: B

Explanation:

Montreux Record

Montreux Record is the principal tool under the Ramsar Convention, is a register of wetland sites on the List of Wetlands of International Importance It highlights those sites where adverse changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference and which are therefore in need of priority conservation attention. It is maintained as part of the Ramsar List.

Montreux Record are employed to identify priority sites for positive national and international conservation attention.

Sites may be added to and removed from the Record only with the approval of the Contracting Parties in which they lie.

Source: Environment by Shankar IAS

Q.7) Consider the following statements:

1. It has a free connection with open sea.
2. It is the most productive region as it receives the high amount of nutrients from fresh and marine water.

Which of the following is described in the above given statements?

- a) Lagoons
- b) Estuary
- c) Swamp
- d) Gulf

ANS: B

Explanation: ESTUARY ECOSYSTEM

- Estuaries are located where river meets the sea. Estuaries are water bodies where the flow of freshwater from river mixes with salt water transported, by tide, from the ocean. Estuaries are the most productive water bodies in the world. They are located at the lower end of a river and are subject to tidal fluctuations.

- Estuaries are either once or twice, daily washed by the seawater.

Characters

- An Estuary is a semi enclosed coastal body of water with one or more rivers or streams flowing into it.
- It has a free connection with open sea.
- The complete salinity range from 0-35 ppt is seen from the head (river end) to the mouth (sea end) of an estuary.
- An estuary has very little wave action, so it provides a calm refuge from the open sea. It provides the shelter for some of the animals.
- It is the most productive region as it receives the high amount of nutrients from fresh and marine water.
- Estuaries are most heavily populated areas throughout the world, with about 60% of the world's population living along estuaries and the coast.

Source: Environment by Shankar IAS

Q.8) Consider the following statements:

1. Grasslands are found on every continent.
2. These terrestrial ecosystems occupy roughly 19% of the earth's surface.
3. Grasslands are characterized by treeless herbaceous plant cover, dominated by a wide variety of grass species.

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

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) None

ANS: A

Explanation: grasslands are found on every continent except Antarctica. These terrestrial ecosystems occupy roughly 19% of the earth's surface. They are characterized by treeless herbaceous plant cover, dominated by a wide variety of grass species.

Features of grassland ecosystems:

- Land is dominated by grasses. Large shrubs or trees are not there.

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- Grasslands have a rich variety of animals.
- Grasslands have been the home for grazing animals for Millions of years. Since the grass height is low and trees are few, animals found in their areas are exposed to the stress of sun and sweeping winds.

Source: Environment by Shankar IAS

Q.9) Environmental studies aims at developing

- a) Understanding local environment/environmental issues
- b) Understanding global environment/environmental issues.
- c) To develop positive attitude towards environment
- d) All of the above

ANS: D

Explanation:

Environmental studies aim at the following-Creating awareness about the environment as a whole as well as its related problems.

- Gaining experiences and acquiring a basic understanding of the environment and its allied problems.
- Skill acquisition for identifying and solving environmental problems.
- Protection of the environment through participation.
- Acquiring an attitude of concern towards the environment and solving its problems.
- Developing an ability to evaluate and analyze measures to protect the environment.
- Raise consciousness about the environment.
- Creating environmental ethics and environmentally sensitive society.
- Teaching environmentally appropriate behaviour.

Source: Environment by Shankar IAS

Q.10) Biosphere reserves are:

1. Area comprising terrestrial, marine and coastal ecosystems.
2. Monitored by national governments.
3. Areas where threatened animals and plants are kept in their habitat.
4. Wildlife sanctuaries.

Select the correct statements using the codes given below:

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

ANS: A

Explanation:

Biosphere reserves are 'learning places for sustainable development'.

- They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity.
- They are places that provide local solutions to global challenges.
- Biosphere reserves include terrestrial, marine, and coastal ecosystems. Each site promotes solutions reconciling the conservation of biodiversity with its sustainable use.

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- Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located.
- Biosphere Reserves are designated under the intergovernmental MAB Programme by the Director-General of UNESCO following the decisions of the MAB International Coordinating Council (MAB ICC).
- Their status is internationally recognized. Member States can submit sites through the designation process.
- Biosphere Reserves involve local communities and all interested stakeholders in planning and management. They integrate three main "functions":
- Conservation of biodiversity and cultural diversity Economic development that is socio-culturally and environmentally sustainable Logistic support, underpinning development through research, monitoring, education, and training These three functions are pursued through the Biosphere Reserves' three main zones: Core area, Buffer zones, and Transition area.
- Hence, Biosphere reserves are areas comprising terrestrial, marine and coastal ecosystems and monitored by national governments.

Source: Environment by Shankar IAS

History

Q.1) Consider the following statements regarding the Portuguese Governors in India:

1. Francisco de Almeida is considered as the real founder of Portuguese power in India.
2. Nino de Cunha was known for his Blue Water Policy which aimed at making the Portuguese the masters of the Indian Ocean.

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

ANS: C

Explanation:

Francisco De Almeida:

In 1505, the King of Portugal appointed a governor in India for a three-year term and equipped the incumbent with sufficient force to protect the Portuguese interests. Francisco De Almeida, the newly appointed governor, was asked to consolidate the position of the Portuguese in India. Almeida's vision was to make the Portuguese the master of the Indian Ocean. His policy was known as the 'Blue Water Policy' i.e. to be powerful at sea instead of building fortresses on land.

Alfonso de Albuquerque:

Albuquerque, who succeeded Almeida as the Portuguese governor in India, was the real founder of the Portuguese power in the East. He secured for Portugal the strategic control of the Indian Ocean by establishing bases overlooking all the entrances to the sea. The Portuguese, under Albuquerque, bolstered their stranglehold by introducing a permit system for other ships and exercising control over the major ship-building centers in the region. He acquired Goa from the Sultan of Bijapur in 1510 with ease. An interesting feature of his rule was the abolition of sati.

Nino da Cunha:

He assumed the office of the governor of Portuguese interests in India in November 1529 and almost one year later shifted the headquarters of the Portuguese government in India from Cochin to Goa. Bahadur Shah of Gujarat, during his conflict with the Mughal emperor Humayun, secured help from the Portuguese by ceding to them in 1534 the island of Bassein with its dependencies and revenues. He also promised them a base in Diu.

Source: NCERT

Q.2) With reference to Constitutional development in India during the British period, consider the following statements:

1. Pitts India Act established the Supreme Court in Bengal Province.
2. Charter Act of 1873 defined the Constitutional position of British territories in India.

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

ANS: D

Explanation:

Constitutional development in India East India

- Company transformed itself from merely trading company to the ruling body through various stages of Constitutional developments in India.
- Regulating Act of 1773 was the first attempt of the British government to control and regulate the functioning of East India Company. Therefore, this is marked as the beginning of the parliamentary government of the Company.
- Under this Act, all the directors of the company were required to submit all correspondence regarding revenue affairs and civil and military administration of the company. This Act laid the foundation of a unitary type of Government in British India.
- Regulating Act of 1773 provides the establishment of the Supreme Court at Fort William in Bengal with original and appellate jurisdiction where all subjects could seek redressal.
- Charter Act of 1813 provided territories and revenue for 20 more years. Thus, it defined the Constitutional position of British territories in India explicitly for the first time.

Source: NCERT

Q.3) Which of the following colleges was the first to be established?

- a) Hindu College, Calcutta
- b) Banaras Hindu University
- c) Lady Hardinge Medical College
- d) Aligarh Muslim University

ANS: A

Explanation:

The 'Hindu College', established in 1817, was transformed into the 'Presidency College of Bengal'. Hindu College was the earliest institution of higher learning in the modern sense in Asia.

Banaras Hindu University is an internationally reputed temple of learning, situated in the holy city of Varanasi. This Creative and innovative university was founded by the great nationalist leader, Pandit Madan Mohan Malviya, in 1916 with the cooperation of great personalities like Dr. Annie Besant, who viewed it as the University of India. Banaras Hindu University was created under the Parliamentary legislation - B.H.U. Act of 1915

Lady Hardinge Medical College is a medical college for women located in New Delhi, India. Established in 1916, it became part of the Faculty of Medical Sciences, University of Delhi in 1950. The college is funded by the Government of India.

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Aligarh Muslim University is a public central university in Aligarh, Uttar Pradesh, India, which was originally established by Sir Syed Ahmad Khan as the Muhammadan Anglo-Oriental College in 1875. Muhammadan Anglo-Oriental College became Aligarh Muslim University in 1920, following the Aligarh Muslim University Act.

Source: NCERT

Q.4) Which of the following statement about Woods Despatch is not correct?

- It was the first comprehensive plan for the spread of education in India.
- It recommended English as the medium of for higher studies and at the school level.
- It recommended a system of grants-in-aid to encourage private enterprises.
- All are correct statements.

ANS: B

Explanation:

Woods Dispatch

- In 1854, Charles Wood prepared a dispatch on an educational system for India. This document was the first comprehensive plan for the spread of education in India so considered the “Magna Carta of English Education in India”.
- It recommended English as the medium of for higher studies and vernaculars at the school level.
- It laid down that the education imparted in government institutions should be secular. And recommended a system of grants-in-aid to encourage private enterprise.

Other provisions of despatch:

- It asked the Government of India to assume responsibility for the education of the masses, thus repudiating the ‘downward filtration theory’, at least on paper.
- It systematized the hierarchy from vernacular primary schools in villages at the bottom, followed by Anglo-Vernacular High Schools and an affiliated college at the district level, and affiliating universities in the presidency towns of Calcutta, Bombay and Madras.
- It laid stress on female and vocational, education, and teachers’ training.

Source: NCERT

Q.5) Ban of Human Sacrifice was the major cause of which of the following tribal uprisings?

- Santhal Uprising
- Rampa Uprising
- Khond Uprising
- Munda Uprising

ANS: C

Explanation:

Khonds Uprising

From 1837 to 1856, the Khonds of the hilly tracts extending from Odisha to the Srikakulam and Visakhapatnam districts of Andhra Pradesh revolted against Company rule. Chakra Bisnoi, a young raja, led the Khonds who were joined by the Ghumsar, Kalahandi and other tribals to oppose the suppression of human sacrifice, new taxes, and the entry of zamindars into their areas. With Chakra Bisnoi’s disappearance, the uprising came to an end.

Source: NCERT

Q.6) With reference to the Revolt of 1857, who of the following laid siege to Jhansi in March 1857?

- a) Major General Wyndham
- b) Major General Havelock
- c) Sir Colin Campbell
- d) Sir Hugh Rose

ANS: D

Explanation:

Revolt of 1857

- The Rani of Jhansi and Tantia Tope marched towards Gwalior where they were hailed by the Indian soldiers. The Sindhia, the local ruler, however, decided to side with the English and took shelter at Agra. Nana Saheb was proclaimed the Peshwa and plans were chalked out for a march into the south. Gwalior was recaptured by the English in June 1857.
- When the British forces finally arrived in March to recapture Jhansi they found it well-defended and the fort had heavy guns that could fire over the town and nearby countryside. Hugh Rose, commanding the British forces, demanded the surrender of the city. After a fierce battle, Jhansi was fallen to the British army.

Source: NCERT

Q.7) Consider the following statements with respect to decline of Portuguese Empire in India:

1. The religious policies followed by Portuguese
2. The honest trade practices followed by Portuguese
3. The discovery of Brazil
4. The monopoly of sea of knowledge

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The decline of the Portuguese was brought about by several factors. The local advantages gained by the Portuguese in India were reduced with the emergence of powerful dynasties in Egypt, Persia and North India and the rise of the turbulent Marathas as their immediate neighbours. (The Marathas captured Salsette and Bassein in 1739 from the Portuguese.) The religious policies of the Portuguese, such as the activities of the Jesuits, gave rise to political fears. Their antagonism for the Muslims apart, the Portuguese policy of conversion to Christianity made Hindus also resentful. Their dishonest trade practices also evoked a strong reaction. The Portuguese earned notoriety as sea pirates. Their arrogance and violence brought them the animosity of the rulers of small states and the imperial Mughals as well. The discovery of Brazil diverted colonising activities of Portugal to the West. The union of the two kingdoms of Spain and Portugal in 1580-81, dragging the smaller kingdom into Spain's wars with England and Holland, badly affected Portuguese monopoly of trade in India. The earlier monopoly of knowledge of the sea route to India held by the Portuguese could not

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remain a secret forever; soon enough the Dutch and the English, who were learning the skills of ocean navigation, also learnt of it.

Source: NCERT

Q.8) Consider the given below pairs:

Author	Book
1. Kautilya	Arthashastra
2. Kalidasa	Mudrarakshasa
3. Vishakadatta	Malvikagnimitram

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

- One pair only
- Two Pair only
- Three pair only
- None of the pair

ANS: A

Explanation: The Dharmasutras and the Smritis, are rules and regulations for the general public and the rulers. It can be termed in the modern concept as the constitution and the law books for the ancient Indian polity and society. These are also called Dharmashastras. These were compiled between 600 and 200 B.C. Manusmriti is prominent among the Kautilya's Arthashastra, a book on statecraft was written in the Maurya period. The text is divided into 15 chapters known as books. Different books deal with different subject matter concerning polity, economy and society. It appears that even before the final version of Arthashastra was written in the fourth century B.C. by Kautilya, there appeared a tradition of writing on and teaching of statecrafts because Kautilya acknowledges his debt to his predecessors in the field. Mudrarakshasha, a play written by Vishakhadatta, also gives a glimpse of society and culture. Kalidasa's Malavikagnimitram is based on some events of the reign of Pusyamitra Sunga, a dynasty which followed the Mauryas.

Source: NCERT

Q.9) The newspaper Som Prakash was started by:

- Dayanand Saraswati
- Ishwar Chandra Vidyasagar
- Raja Ram Mohan Roy
- Surendranath Banerjee

ANS: B

Explanation: Ishwar Chandra Vidyasagar

Shom Prakash was started by Ishwar Chandra Vidyasagar in 1859 under the editorship of Dwarakanath Vidyabhushan. It was a weekly paper coming from the Sanskrit Press. It is remembered for its contribution to the Indigo Movement.

Source: NCERT

Q.10) Who among the below given Governor-Generals started the policy of Ring-Fence?

- a) Warren Hastings
- b) Lord Cornwallis
- c) William Bentick
- d) Lord Hastings

ANS: A

Explanation: Warren Hastings took charge as the governor-general at a critical period of British rule when the British were to encounter the powerful combination of the Marathas, Mysore and Hyderabad. He followed a policy of ring-fence which aimed at creating buffer zones to defend the Company's frontiers. Broadly speaking, it was the policy of defence of their neighbours' frontiers for safeguarding their own territories. This policy of Warren Hastings was reflected in his war against the Marathas and Mysore. The chief danger to the Company's territories was from the Afghan invaders and the Marathas. To safeguard against these dangers, the Company undertook to organise the defence of the frontiers of Awadh on the condition that the Nawab would defray the expenses of the defending army. The defence of Awadh constituted the defence of Bengal during that time. Thus the states brought under the ring-fence system were assured of military assistance against external aggression-but at their own expense. In other words, these allies were required to maintain subsidiary forces which were to be organised, equipped and commanded by the officers of the Company who, in turn, were to be paid by the rulers of these states.

Source: NCERT