

ForumIAS

F

Prelims Marathon

18th to 24th July, 2022

HISTORY

ECONOMICS

POLITY

SCIENCE AND TECHNOLOGY

GEOGRAPHY AND ENVIRONMENT

Schemes/ Programmes/ Institutions

Q.1) Consider the following statements with respect to the Prime Minister's National Relief Fund (PMNRF):

1. It was established by Indira Gandhi in 1971.
2. The fund is recognized as a Trust under the Societies Registration Act of 1860.

Which of the above given statement is/are correct?

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

ANS: D

Explanation: In pursuance of an appeal by the then Prime Minister, Pt. Jawaharlal Nehru in January, 1948, the Prime Minister's National Relief Fund (PMNRF) was established with public contributions to assist displaced persons from Pakistan. The resources of the PMNRF are now utilized primarily to render immediate relief to families of those killed in natural calamities like floods, cyclones and earthquakes, etc. and to the victims of the major accidents and riots. Assistance from PMNRF is also rendered, to partially defray the expenses for medical treatment like heart surgeries, kidney transplantation, cancer treatment and acid attack etc. The fund consists entirely of public contributions and does not get any budgetary support. The corpus of the fund is invested in various forms with scheduled commercial banks and other agencies. Disbursements are made with the approval of the Prime Minister. PMNRF has not been constituted by the Parliament. The fund is recognized as a Trust under the Income Tax Act and the same is managed by Prime Minister or multiple delegates for national causes.

Source: ForumIAS

Q.2) Consider the following statements about Innovation in Science Pursuit for Inspired Research (INSPIRE) Programme:

1. It is an innovation scheme proposed by NITI Aayog.
2. It attracts students to study science at higher studies only.

Which of the above given statement is/are correct?

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

ANS: D

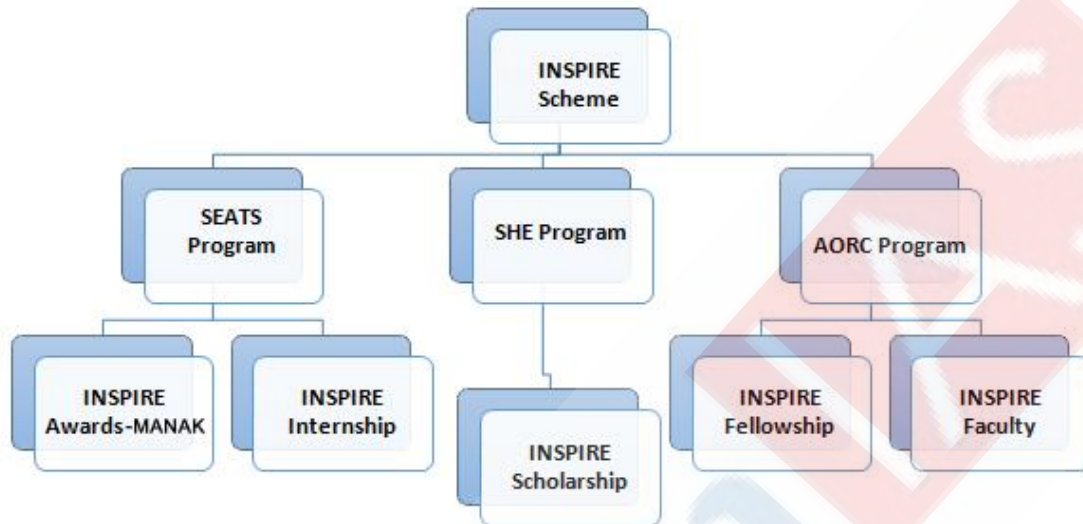
Explanation: Innovation of Science Pursuit for Inspire Research (INSPIRE) is one such innovative scheme proposed by the Department of Science & Technology for attraction of talent to science. The basic objective of INSPIRE would be to communicate to the youth population of the country the excitements of creative pursuit of science and attract talent to the study of science at an early stage and build the required critical human resource pool for strengthening and expanding the Science & Technology system and R&D base.

INSPIRE Scheme has included three programs and five components. They are

1. Scheme for Early Attraction of Talents for Science (SEATS),

2. Scholarship for Higher Education (SHE) and
3. Assured Opportunity for Research Careers (AORC).

The schematic diagram of the programme is shown below:



Source: ForumIAS

Q.3) Consider the following statements with respect to International Astronomical Union (IAU):

1. It was founded after World War-II.
2. Its mission is to promote and safeguard the science of astronomy in all its aspects, including research, communication, education and development, through international cooperation.

Which of the above given statement is/are correct?

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

ANS: B

Explanation: The International Astronomical Union (IAU) was founded in 1919. Its mission is to promote and safeguard the science of astronomy in all its aspects, including research, communication, education and development, through international cooperation. Its individual Members — structured into Divisions, Commissions, and Working Groups — are professional astronomers from all over the world, at the Ph.D. level and beyond, who are active in professional research, education and outreach in astronomy. The IAU also has Junior Members. The IAU has 13054 members. The Individual and Junior Members Directory contains 10567 names in 107 countries worldwide (these Individual Members are labeled as "active" in the IAU database: they have a valid, public email, and are affiliated to at least one Division.). Out of those countries, 82 are National Members. In addition, the IAU collaborates with various scientific organizations all over the world.

Source: ForumIAS

Q.4) Under which of the following Act, the Animal Welfare Board of India (AWBI) established?

- a) The Indian Forest Act, 1927
- b) The Prevention of Cruelty to Animals Act, 1960
- c) The Wildlife Protection Act, 1972
- d) The Forest (Conservation) Act, 1980

ANS: B

Explanation: The Animal Welfare Board of India is a statutory advisory body on Animal Welfare Laws and promotes animal welfare in the country. Established in 1962 under Section 4 of the Prevention of Cruelty to Animals Act, 1960 (No. 59 of 1960), the Animal Welfare Board of India was started under the stewardship of Late Smt. Rukmini Devi Arundale, well known humanitarian. From ensuring that animal welfare laws in the country are diligently followed, to provide grants to Animal Welfare Organizations and advising the Government of India on animal welfare issues, the Board has been the face of the animal welfare movement in the country for the last 50 years. The Board consists of 28 Members. The term of office of Members is for a period of 3 years.

Source: ForumIAS

Q.5) Consider the following statements with respect to Atal Bhujal Yojana:

- 1. It aims to recharge groundwater sources and ensure the efficient use of water by involving people at the local level.
- 2. It is a centrally sponsored scheme.
- 3. It is funded by Asian Development Bank.

Which of the statements given above is/are correct?

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

ANS: A

Explanation: Atal Bhujal Yojana is a central sector scheme under the ministry of Jal Shakti. The scheme was announced in the 2016-17, Union Budget. It aims to recharge groundwater sources and ensure the efficient use of water by involving people at the local level. The funding pattern of the scheme is 50:50 between the Government of India and the World Bank.

Source: ForumIAS

Q.6) Consider the following statements with respect to MPLADS Scheme:

1. Its aim is to provide funds to MPs to execute certain developmental projects to meet the urgent needs of their constituents.
2. Ministry of Rural Development is the nodal ministry to implement the scheme.

Which of the above given statement is/are correct?

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

ANS: A

Explanation: MPLADS is a central sector scheme. Its aim is to provide funds to MPs to execute certain developmental projects to meet the urgent needs of their constituents. Ex-drinking water facilities, education, etc. An MP is entitled to Rs. 5 crore per annum to identify and fund developmental projects. The Fund is non – lapsable. The role of the MP is only recommendatory in nature. The implementation of the project is done by local authorities. Elected Members of Rajya Sabha can recommend works in the state from where they have been elected. Nominated Members of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country. Ministry of Statistics and Programme Implementation is the nodal ministry to implement the scheme.

Source: ForumIAS

Q.7) Consider the following statements with respect to National Highway Authority of India (NHAI):

1. NHAI was set up by an act of Parliament.
- It was entrusted with National Highways Development Projects.

Which of the above given statement is/are correct?

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

ANS: C

Explanation: National Highways Authority of India was set up by an act of the Parliament, NHAI Act, 1988 “An Act to provide for the constitution of an Authority for the development, maintenance and management of national highways and for matter connected therewith or incidental thereto”. It has been entrusted with National Highways Development Project, which along with other minor projects, has vested in it 50329 kms of National Highways for development, maintenance and management. Our objective is to ensure that all contract awards and procurements conform to the best industry practices with regard to transparency of process, adoption of bid criteria to ensure healthy competition in award of contracts, implementation of projects conform to best quality requirements and the highway system is maintained to ensure best user comfort and convenience.

Source: ForumIAS

Q.8) Consider the following statements with respect to “Tech for Tribal”:

1. It aims at capacity building and imparting entrepreneurship skills to tribal forest produce gatherers enrolled under the Pradhan Mantri VanDhan Yojana (PMVDY)
2. It is launched by Khadi & Village Industries Commission (KVIC)

Which of the above given statement is/are correct?

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

ANS: A

Explanation: A game changing and unique project aimed to transform 5 crore Tribal Entrepreneurs under the name “Tech for Tribal” has been launched by TRIFED. It was launched by TRIFED and IIT-Kanpur along with IIT-Roorkee, IIM Indore, Kalinga Institute of Social Science, Bhubaneswar and SRIJAN, Jaipur in the first phase of organising tribal entrepreneurship and skill development program. Tech for Tribals, an initiative of TRIFED supported by Ministry of MSME, aims at capacity building and imparting entrepreneurship skills to tribal forest produce gatherers enrolled under the Pradhan Mantri VanDhan Yojana (PMVDY). The trainees will undergo a 30 days program over six weeks comprising 120 sessions.
Source: ForumIAS

Q.9) Which of the below given is/are regulatory bodies of civil aviation?

1. Directorate General of Civil Aviation (DGCA)
2. Bureau of Civil Aviation Security (BCAS)
3. Aircraft Accidents Investigation Bureau (AAIB)

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

ANS: D

Explanation: Lok Sabha has passed the Aircraft (Amendment) Bill, 2020. It seeks to amend the Aircraft Act, 1934 which regulates the manufacture, possession, use, operation, sale, import and export of civil aircrafts, and licensing of aerodromes. The Bill converts three existing bodies under the Ministry of Civil Aviation into statutory bodies under the Act. These three authorities are: (i) the Directorate General of Civil Aviation (DGCA), (ii) the Bureau of Civil Aviation Security (BCAS), and (iii) the Aircraft Accidents Investigation Bureau (AAIB). Each of these bodies will be headed by a Director General who will be appointed by the centre.
Source: ForumIAS

Q.10) Consider the following statements about 'Samudrayaan Project':

1. It would be undertaken by National Institute of Ocean Technology.
2. It is under Ministry of Science and technology.
3. It aims for deep ocean mining of rare minerals.

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

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

ANS: B

Explanation: The 'Samudrayaan' project undertaken by the NIOT, Chennai, is in line with the ISRO's ambitious 'Gaganyaan' mission of sending an astronaut to space by 2022. The 'Samudrayaan' is a part of the Ministry of Earth Sciences' pilot project for deep ocean mining for rare minerals. The indigenously developed vehicle is capable of crawling on the sea bed at a depth of six kilometre for 72 hours. The success of the 'Samudrayaan' will help India to join the league of developed nations in exploration of minerals from oceans.

Source: ForumIAS

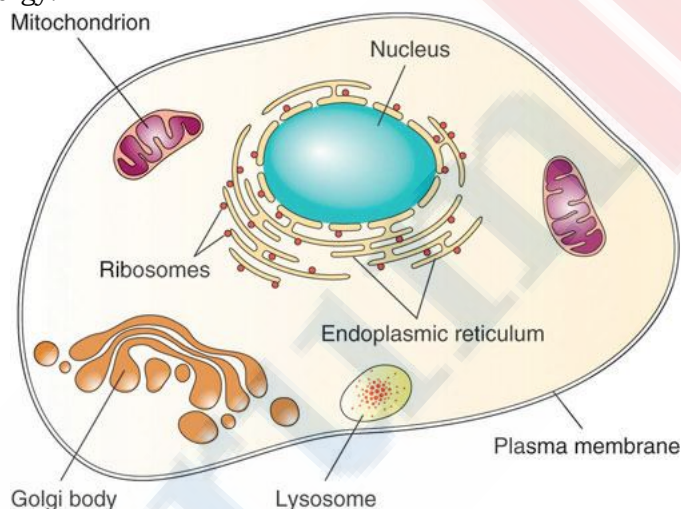
Science and Technology

Q.1) Which of the following is a functional unit of a body?

- a) Mitochondria
- b) Cytoplasm
- c) Spleen
- d) Cell

ANS: D

Explanation: The cell is called the structural and functional unit of life as all living organisms are made up of cells. Cells are also essential for performing various life processes required for sustaining life. Furthermore, cells provide form and structure, process nutrients and convert them into useable energy.



Source: ForumIAS

Q.2) Which of the following is first human hormone produced by recombinant DNA technology?

- a) Insulin
- b) Thyroxin
- c) Estrogen
- d) Progesterone

ANS: A

Explanation: Human insulin produced by recombinant DNA technology is the first commercial health care product derived from this technology. Work on this product was initiated before there were federal guidelines for large-scale recombinant DNA work or commercial development of recombinant DNA products. The steps taken to facilitate acceptance of large-scale work and proof of the identity and safety of such a product are described. While basic studies in recombinant DNA technology will continue to have a profound impact on research in the life sciences, commercial applications may well be controlled by economic conditions and the availability of investment capital.

Source: ForumIAS

Q.3) Which body of the Government of India regulates GM research and safety of introducing GM organisms for public services?

- a) Bio-safety committee
- b) Indian council for Agriculture Research
- c) Genetic engineering Approval Committee
- d) Research Committee on Genetic Manipulation.

ANS: C

Explanation: Genetic Engineering Appraisal Committee (GEAC)

The Genetic Engineering Appraisal Committee (GEAC) functions in the Ministry of Environment, Forest and Climate Change (MoEF&CC). As per Rules, 1989, it is responsible for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. The committee is also responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials.

GEAC is chaired by the Special Secretary/Additional Secretary of MoEF&CC and co-chaired by a representative from the Department of Biotechnology (DBT). Presently, it has 24 members and meets every month to review the applications in the areas indicated above

Source: ForumIAS

Q.4) “The Use of bio-resources by multinational companies and organizations without authorization from the concerned country and its people.” Which of the following is described in the above statement?

- a) Biodegradation
- b) Bio-infringement
- c) Biopiracy
- d) Bioexploitation

ANS: C

Explanation: Biopiracy is term used for or refer to the use of bioresources by multinational companies and other organisations without proper authorisation from the countries and people concerned with compensatory payment.

Multinational companies use traditional knowledge related to bioresources for developing modern technologies and applications. They make huge profits from this end that are not often shared with poor countries.

Basmati rice was grown in India for thousands of years and is actually a bioresource of our country. But an American company tried to earn patents from the united states patent and trademark office to sell basmati rice in other countries. They made slight modifications in the rice by crossing the plant with semi-dwarf varieties and claimed the sole ownership of the product. This is an example of biopiracy.

Source: ForumIAS

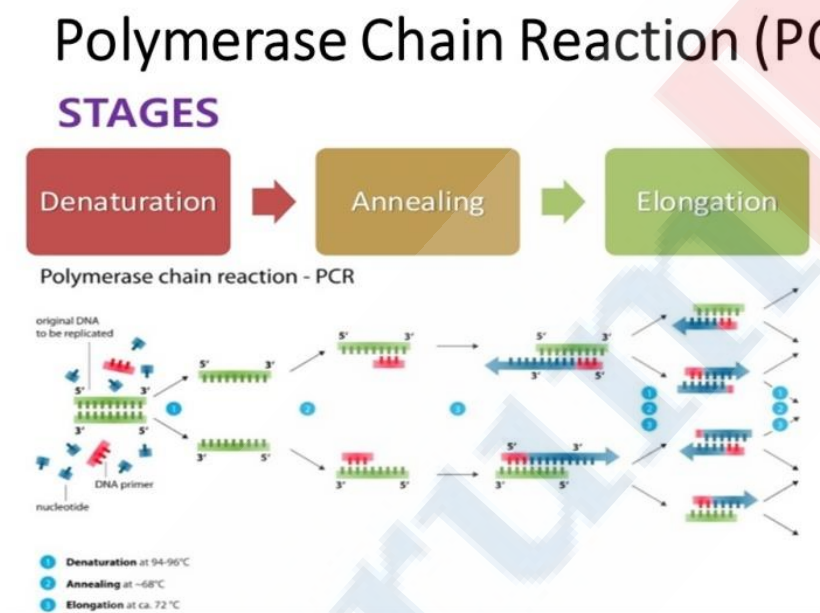
Q.5) The correct order of steps in Polymerase Chain Reaction (PCR) is given in which of the following codes?

- a) Denaturation, Extension, Annealing
- b) Annealing, Extension, Denaturation
- c) Extension, Denaturation, Annealing
- d) Denaturation, Annealing, Extension

ANS: D

Explanation: PCR is based on three simple steps required for any DNA synthesis reaction:

- (1) denaturation of the template into single strands;
- (2) annealing of primers to each original strand for new strand synthesis; and
- (3) extension of the new DNA strands from the primers.



Source: ForumIAS

Q.6) Which of the following is/are some of the characteristics of Bt cotton?

- a) Long fibre and resistance to aphids
- b) Medium yield, long fibre and resistance to beetle pests
- c) High yield and production of toxic protein crystals which kill dipteran pests
- d) High yield and resistance to bollworms

ANS: D

Explanation: Bt cotton is an insect-resistant transgenic crop designed to combat the cotton bollworm. Bt cotton was created by genetically altering the cotton genome to express a microbial protein from the bacterium *Bacillus thuringiensis*. The transgene inserted into the plant's genome produces toxin crystals that the plant would not normally produce which, when ingested by a certain population of organisms, dissolves the gut lining, leading to the organism's death. Cotton bollworm is a lepidopteran pest.

Source: ForumIAS

Q.7) Which of the following is the first transgenic plant to be produced?

- a) Brinjal
- b) Tobacco
- c) Rice
- d) Cotton

ANS: B

Explanation: In 1982, the first transgenic plants were produced in tobacco plants (*Nicotiana tabacum*) which expressed antibiotic resistance. A gene resistant to PPT (L-phosphinothricin), an active ingredient of herbicide 'Basta', was isolated from *Medicago sativa*. It inhibits the enzyme GS (glutamine synthase) which is involved in ammonia assimilation. This gene resistant to PPT was incorporated into tobacco, as a result of which transgenic tobacco was produced which was resistant to PPT.

Source: ForumIAS

Q.8) "Biotechnologies consisting of the use of biological systems (bacteria) for the manufacture, transformation or degradation of molecules through enzymatic or fermentation processes for industrial purposes." Which of the following is described in the above statement?

- a) Yellow biotechnologies
- b) Blue biotechnologies
- c) Green biotechnologies
- d) White biotechnologies

ANS: D

Explanation: White biotechnology is a term that is now often used to describe the implementation of biotechnology in the industrial sphere. [Biocatalysts](#) (enzymes and microorganisms) are the key tools of white biotechnology, which is considered to be one of the key technological drivers for the growing bioeconomy. Biocatalysts are already present in sectors such as the chemical and agro-food industries, and are used to manufacture products as diverse as antibiotics, paper pulp, bread or advanced polymers.

Source: ForumIAS

Q.9) Which of the following is an autonomously replicating circular extra-chromosomal DNA?

- a) Bacteria
- b) Nitrogenous base
- c) RNA
- d) Plasmid

ANS: d

Explanation: Plasmid is typically a small circular DNA strand in the cytoplasm of a bacterium or protozoan. It is a genetic structure in a cell that can replicate independently of the chromosomes. They are commonly used in recombinant DNA technology. Plasmids naturally exist in bacterial cells, and they also occur in some eukaryotes. Often, the genes carried in plasmids provide bacteria with genetic advantages, such as antibiotic resistance.

Source: ForumIAS

Q.10) Which of the following is the first step in cloning a gene?

- a) Isolation of DNA from an organism carrying the gene of interest.
- b) Cell culture on agar Insertion of a plasmid into a bacterium.
- c) Treatment of plasmids with restriction enzymes.
- d) All of these

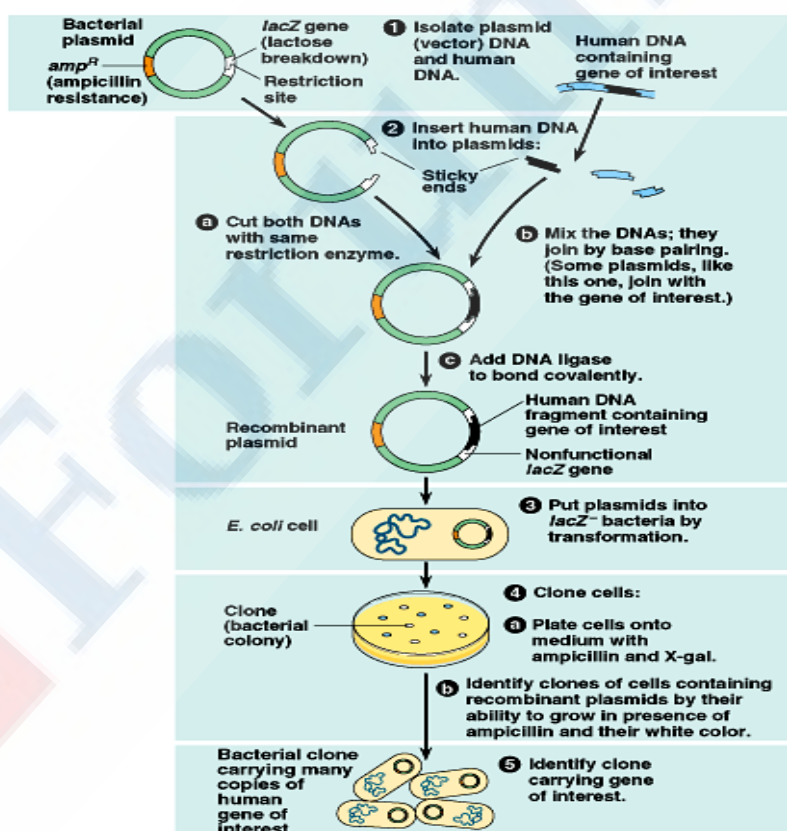
ANS: A

Explanation: Cloning

Molecular cloning refers to the isolation of a DNA sequence from any species (often a gene), and its insertion into a vector for propagation, without alteration of the original DNA sequence. Once isolated, molecular clones can be used to generate many copies of the DNA for analysis of the gene sequence, and/or to express the resulting protein for the study or utilization of the protein's function. The clones can also be manipulated and mutated in vitro to alter the expression and function of the protein.

The basic cloning workflow includes four steps:

- 1. Isolation of target DNA fragments (often referred to as inserts)
- 2. Ligation of inserts into an appropriate cloning vector, creating recombinant molecules (e.g., plasmids)
- 3. Transformation of recombinant plasmids into bacteria or other suitable host for propagation
- 4. Screening/selection of hosts containing the intended recombinant plasmid



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Source: ForumIAS

Economy

Q.1) Which of the following correctly defines monetary policy?

- a) The process by which the Parliament controls the money supply
- b) The process by which the central bank or monetary authority of a country controls the supply of money
- c) The process by which International Market controls the money supply
- d) None of the above

Ans. B

Explanation: Monetary policy is a set of tools that a nation's central bank has available to promote sustainable economic growth by controlling the overall supply of money that is available to the nation's banks, its consumers, and its businesses.

The goal is to keep the economy humming along at a rate that is neither too hot nor too cold. The central bank may force up interest rates on borrowing in order to discourage spending or force down interest rates to inspire more borrowing and spending.

Source: ForumIAS

Q.2) Consider the following statements regarding the Cost Inflation Index (CII):

- 1. It calculates the increase in the price of goods due to inflation monthly.
- 2. The Central Board of Direct Taxes (CBDT) is responsible for notifying the CII every 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

ANS: B

Explanation: As inflation increases, the prices of goods increase too. Due to this, the purchasing power of money falls. Cost Inflation Index (CII) is a tool used in the calculation of an estimated yearly increase in an asset's price as a result of inflation.

The Central Government fixes this index and publishes it in its official gazette for measuring inflation. This index, notified each year by the CBDT is mandated under Section 48 of the Income Tax Act, 1961.

CII has a base year concept, currently the base year is 2001 having CII of 100. CII for 2020-21 has been notified at 301.

Source: ForumIAS

Q.3) Consider the following statements regarding Monetary Policy of Reserve Bank of India (RBI):

1. The Monetary Policy framework in India is based on Cost Inflation Index (CII) inflation targeting.
2. RBI Governor does not generally have a vote and votes only in the event of an equality of votes in Monetary Policy Committee.

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: In May 2016, the Reserve Bank of India (RBI) Act, 1934 was amended to provide a statutory basis for the implementation of the flexible inflation targeting framework.

The amended RBI Act also provides for the inflation target to be set by the Government of India, in consultation with the Reserve Bank, once in every five years. Accordingly, the Central Government has notified 4 per cent Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016 to March 31, 2021 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

Under the amended RBI Act: The Monetary Policy Committee consists of the following Members:

- the Governor of the Bank—Chairperson, ex officio;
- Deputy Governor of the Bank, in charge of Monetary Policy—Member, ex officio;
- One officer of the Bank to be nominated by the Central Board—Member, ex officio; and
- Three persons to be appointed by the Central Government—Members.

The Monetary Policy Committee (MPC) is required to meet at least four times in a year.

- The quorum for the meeting of the MPC is four members.
- Each member of the MPC has one vote, and in the event of an equality of votes, the Governor has a second or casting vote.

Source: ForumIAS

Q.4) Which of the following is/are type/types of External Benchmark Rates?

1. Government of India 3-Months Treasury bill yield published by the Financial Benchmarks India Private Ltd (FBIL).
2. Government of India 6-Months Treasury bill yield published by the Financial Benchmarks India Private Ltd (FBIL).

Select the correct answer using the code given below:

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

ANS: C

Explanation: The RBI has made it compulsory for banks to link their new floating rate home, auto and MSME loans to an external benchmark so that the borrowers can enjoy lower rate of interest. All new floating rate personal or retail loans (housing, auto, etc.) and floating rate

loans to Micro and Small Enterprises extended by banks from October 01, 2019 shall be benchmarked to one of the following:

- Reserve Bank of India policy repo rate
- Government of India 3-Months Treasury Bill yield published by the Financial Benchmarks India Private Ltd (FBIL)
- Government of India 6-Months Treasury Bill yield published by the FBIL
- Any other benchmark market interest rate published by the FBIL.

Source: ForumIAS

Q.5) Consider the following statements regarding the Market Stabilization Scheme (MSS):

1. It is a tool used by central bank (RBI) to increase the liquidity and bringing the money market under control.
2. It was initiated by Reserve Bank under Governor YV Reddy in 2004.

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

ANS: A

Explanation: Market Stabilisation Scheme or MSS is a tool used by the Reserve Bank of India to suck out excess liquidity from the market through issue of securities like Treasury Bills, Dated Securities etc. on behalf of the government.

- The money raised under MSS is kept in a separate account called MSS Account and not parked in the government account or utilized to fund its expenditures.
- The Reserve Bank under Governor YV Reddy initiated the MSS scheme in 2004, to control the surge of US dollars in the Indian market; RBI started buying US dollars while pumping in rupee.
- This eventually led to over-supply of the domestic currency raising inflationary expectations. MSS was introduced to mop up this excess liquidity.

Source: ForumIAS

Q.6) Consider the following statements regarding the Cash Reserve Ratio (CRR):

1. CRR needs to be maintained only in cash.
2. Banks get interest on the money that is with the RBI under the CRR requirements.

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

ANS: C

Explanation: The Reserve Bank of India or RBI mandates that banks store a proportion of their deposits in the form of cash so that the same can be given to the bank's customers if the need arises.

- The percentage of cash required to be kept in reserves, vis-a-vis a bank's total deposits, is called the Cash Reserve Ratio.
- The cash reserve is either stored in the bank's vault or is sent to the RBI.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF JULY (THIRD WEEK). 2022

- Banks do not get any interest on the money that is with the RBI under the CRR requirements.
- Unlike Statutory Liquidity Ratio or SLR, which can be maintained in either gold or cash, CRR needs to be maintained only in cash.

Source: ForumIAS

Q.7) Consider the following statements regarding the Monetary Policy Committee (MPC):

1. It is statutorily mandated to determine the Policy Rate required achieving the inflation target.
2. A Member of Parliament or any State Legislature cannot be appointed as a member of MPC by Central 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: C

Explanation: As per the Reserve Bank of India Act; the Central Government shall, in consultation with the Bank, determine the inflation target in terms of the Consumer Price Index, once in every five years. Further, the Monetary Policy Committee shall determine the Policy Rate required achieving the inflation target.

The Monetary Policy Committee consists of:

- the Governor of the Bank—Chairperson, ex officio;
- Deputy Governor of the Bank, in charge of Monetary Policy—Member, ex officio;
- One officer of the Bank to be nominated by the Central Board—Member, ex officio; and
- Three persons to be appointed by the Central Government—Members.

No person shall be appointed as a Member, in case such person:

- has completed the age of seventy years on the date of appointment as Member;
- is a Member of any Board or Committee of the Bank or is an employee of the Bank;
- is a public servant as defined under the Indian Penal Code;
- is a Member of Parliament or any State Legislature;
- has been at any time, adjudged as an insolvent;
- has been convicted of an offence which is punishable with an imprisonment for a term of one hundred and eighty days or more;
- is physically or mentally incapable of discharging the duties of a Member of the Monetary Policy Committee; or
- has a material conflict of interest with the Bank and is unable to resolve such conflict.

Source: ForumIAS

Q.8) Consider the following statements regarding the flexible inflation targeting (FIT) framework of Reserve Bank of India:

1. The inflation target is set by the Government of India, in consultation with the Reserve Bank every year.
2. RBI's flexible inflation targeting places price stability, in terms of Consumer Price Index inflation, as the primary objective of the monetary policy.

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: India formally adopted flexible inflation targeting (FIT) in June 2016 to place price stability, defined in terms of a target CPI inflation, as the primary objective of the monetary policy.

In May 2016, the Reserve Bank of India (RBI) Act, 1934 was amended to provide a statutory basis for the implementation of the flexible inflation targeting framework.

The amended RBI Act also provides for the inflation target to be set by the Government of India, in consultation with the Reserve Bank, once in every five years. Accordingly, the Central Government has notified in the Official Gazette 4 per cent Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016 to March 31, 2021 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

Source: ForumIAS

Q.9) Consider the following statements regarding the Open Market Operations (OMOs):

1. These are the market operations conducted by the RBI by way of sale/ purchase of Government Securities to/ from the market.
2. RBI resorts to purchase of securities if there is excess liquidity in the market.

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: Open Market Operations (OMOs) are the market operations conducted by the RBI by way of sale/ purchase of G-Secs to/ from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis.

When the RBI feels that there is excess liquidity in the market, it resorts to sale of securities thereby sucking out the rupee liquidity. Similarly, when the liquidity conditions are tight, RBI may buy securities from the market, thereby releasing liquidity into the market.

Source: ForumIAS

Q.10) Consider the following statements regarding the Consumer Price Index for Industrial Workers (CPI-IW):

1. It is compiled by the Labour Bureau.
2. The base year for the CPI-IW has been updated to the year 2014.

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: The Labour Bureau, an attached office of the M/o Labour & Employment, has been compiling Consumer Price Index for Industrial Workers every month on the basis of the retail prices of selected. The index is compiled for 78 centres and All-India and is released on the last working day of succeeding month.

The Labour and Employment Ministry has recently revised the base year of the Consumer Price Index for Industrial Workers (CPI-IW) from 2001 to 2016.

The number of items directly retained in the index basket has increased to 463 items as against 392 items in the 2001 series. The weight to food and beverage was reduced from 46.2% to 39%, while spending on housing increased from 15.2% to 17%.

Source: ForumIAS

Indian Polity

Q.1) Removal of SC & HC Judges is taken from which of the following constitution?

- a) US
- b) British
- c) Australian
- d) Irish

ANS: A

Explanation:

Sources	Features Borrowed
1. Government of India Act of 1935	Federal Scheme, Office of governor, Judiciary, Public Service Commissions, Emergency provisions and administrative details.
2. British Constitution	Parliamentary government, Rule of Law, legislative procedure, single citizenship, cabinet system, prerogative writs, parliamentary privileges and bicameralism.
3. US Constitution	Fundamental rights, independence of judiciary, judicial review, impeachment of the president, removal of Supreme Court and high court judges and post of vice-president.
4. Irish Constitution	Directive Principles of State Policy, nomination of members to Rajya Sabha and method of election of president.
5. Canadian Constitution	Federation with a strong Centre, vesting of residuary powers in the Centre, appointment of state governors by the Centre, and advisory jurisdiction of the Supreme Court.
6. Australian Constitution	Concurrent List, freedom of trade, commerce and inter-course, and joint sitting of the two Houses of Parliament.
7. Weimar Constitution of Germany	Suspension of Fundamental Rights during Emergency.
Soviet Constitution	Fundamental duties and the ideal of justice (social,

Source: Laxmikanth

Q.2) Who among the following is authorized by the constitution to appoint any other place or places as seat of the Supreme Court?

- a) Parliament
- b) President
- c) Chief justices of India
- d) Law Minister

ANS: C

Explanation: SEAT OF SUPREME COURT:

The Constitution declares Delhi as the seat of the Supreme Court. But, it also authorises the chief justice of India to appoint other place or places as seat of the Supreme Court.

He can take decision in this regard only with the approval of the President. This provision is only optional and not compulsory. This means that no court can give any direction either to the President or to the Chief Justice to appoint any other place as a seat of the Supreme Court.

Source: Laxmikanth

Q.3) Consider the following statements:

- 1. The President has never made references to the sure court under Article 143.
- 2. No Supreme Court judge has been impeached so far.

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:

The Constitution (Article 143) authorises the president to seek the opinion of the Supreme Court.

So far (2013), the President has made fifteen references to the Supreme Court under its advisory jurisdiction (also known as consultative jurisdiction). These are mentioned below in the chronological order.

- 1. Delhi Laws Act in 1951
- 2. Kerala Education Bill in 1958
- 3. Berubari Union in 1960
- 4. Sea Customs Act in 1963
- 5. Keshav Singh's case relating to the privileges of the Legislature in 1964
- 6. Presidential Election in 1974
- 7. Special Courts Bill in 1978
- 8. Jammu and Kashmir Resettlement Act in 1982
- 9. Cauvery Water Disputes Tribunal in 1992
- 10. Rama Janma Bhumi case in 1993
- 11. Consultation process to be adopted by the chief justice of India in 1998
- 12. Legislative competence of the Centre and States on the subject of natural gas and liquefied natural gas in 2001
- 13. The constitutional validity of the Election Commission's decision on deferring the Gujarat Assembly Elections in 2002
- 14. Punjab Termination of Agreements Act in 2004

15. 2G spectrum case verdict and the mandatory auctioning of natural resources across all sectors in 2012

It is interesting to know that no judge of the Supreme Court has been impeached so far. The first and the only case of impeachment is that of Justice V Ramaswami of the Supreme Court (1991–1993). Though the enquiry Committee found him guilty of misbehavior, he could not be removed as the impeachment motion was defeated in the Lok Sabha. The Congress Party abstained from voting.

Source: Laxmikanth

Q.4) Consider the following statement:

1. The writ jurisdiction of the high court is wider than that of Supreme Court.
2. Like Supreme Court, high court also enjoys advisory jurisdiction.

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:

At present, a high court enjoys the following jurisdiction and powers:

1. Original jurisdiction.
2. Writ jurisdiction.
3. Appellate jurisdiction.
4. Supervisory jurisdiction.
5. Control over subordinate courts.
6. A court of record.
7. Power of judicial review.

The writ jurisdiction of the high court (under Article 226) is not exclusive but concurrent with the writ jurisdiction of the Supreme Court (under Article 32). It means, when the fundamental rights of a citizen are violated, the aggrieved party has the option of moving either the high court or the Supreme Court directly. However, the writ jurisdiction of the high court is wider than that of the Supreme Court. This is because, the Supreme Court can issue writs only for the enforcement of fundamental rights and not for any other purpose, that is, it does not extend to a case where the breach of an ordinary legal right is alleged.

Source: Laxmikanth

Q.5) The judges of high court are appointed by who among the following?

- a) The chief justice of India
- b) The Governor of concerned states
- c) The union minister of law
- d) The President

ANS: D

Explanation: Appointment of Judges:

The judges of a high court are appointed by the President. The chief justice is appointed by the President after consultation with the chief justice of India and the governor of the state concerned. For appointment of other judges, the chief justice of the concerned high court is

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also consulted. In case of a common high court for two or more states, the governors of all the states concerned are consulted by the president.

Source: Laxmikanth

Q.6) Which of the following High courts has the largest no. of benches?

- a) MP High Court
- b) Kolkata High Court
- c) Bombay High Court
- d) Delhi High Court

ANS: C

Explanation:

Name	Year of establishment	Territorial Jurisdiction	Seat
1. Allahabad	1866	Uttar Pradesh	Allahabad (Bench at Lucknow)
2. Hyderabad ¹⁷	1954	Andhra Pradesh and Telangana	Hyderabad
3. Bombay ¹³	1862	Maharashtra, Goa, Dadra and Nagar Haveli and Daman and Diu	Mumbai (Benches at Nagpur, Panaji and Aurangabad)
4. Calcutta ¹³	1862	West Bengal and Andaman and Nicobar Islands	Kolkata (Circuit Bench at Port Blair)
5. Chhattisgarh	2000	Chhattisgarh	Bilaspur
6. Delhi	1966	Delhi	Delhi
7. Guwahati	1948 ¹⁰	Assam, Nagaland, Mizoram and Arunachal Pradesh ¹⁴	Guwahati (Benches at Kohima, Aizawl and Itanagar)
8. Gujarat	1960	Gujarat	Ahmedabad
9. Himachal Pradesh	1971	Himachal Pradesh	Simla
10. Jammu and Kashmir	1928	Jammu and Kashmir	Srinagar and Jammu
11. Jharkhand	2000	Jharkhand	Ranchi
12. Karnataka	1884 ¹¹	Karnataka	Bengaluru
13. Kerala	1958	Kerala and Lakshadweep	Ernakulam
14. Madhya Pradesh	1956	Madhya Pradesh	Jabalpur (Benches at Gwalior and Indore)
15. Madras ¹³	1862	Tamil Nadu and Puducherry	Chennai
16. Manipur ¹⁵	2013	Manipur	Imphal
17. Meghalaya ¹⁵	2013	Meghalaya	Shillong
18. Orissa ¹⁶	1948	Odisha	Cuttack

Source: Laxmikanth

Q.7) Public Interest Litigation falls within the jurisdiction of the High Court provided certain conditions are fulfilled.

Which one among the following conditions is not accepted by the courts?

- a) Public is interested in vindication of some rights
- b) Enforcement of public duty
- c) Courts can examine previous records of public servants
- d) Personal injury or loss is an essential element

ANS: D

Explanation:

- The expression 'Public Interest Litigation' has been borrowed from American jurisprudence, where it was designed to provide legal representation to previously unrepresented groups like the poor, the racial minorities, unorganised consumers, citizens who were passionate about the environmental issues, etc.
- Public interest Litigation (PIL) means litigation filed in a court of law, for the protection of "Public Interest", such as Pollution, Terrorism, Road safety, Constructional hazards etc. Any matter where the interest of public at large is affected can be redressed by filing a Public Interest Litigation in a court of law.
- Public interest litigation is not defined in any statute or in any act. It has been interpreted by judges to consider the intent of public at large.
- Public interest litigation is the power given to the public by courts through judicial activism. However, the person filing the petition must prove to the satisfaction of the court that the petition is being filed for a public interest and not just as a frivolous litigation by a busy body.
- The court can itself take cognizance of the matter and proceed suo motu or cases can commence on the petition of any public spirited individual.

Source: Laxmikanth

Q.8) Which one of the following jurisdictions of the Indian Judiciary covers Public Interest Litigation?

- a) Original Jurisdiction
- b) Appellate Jurisdiction
- c) Epistolary Jurisdiction
- d) Advisory Jurisdiction

ANS: C

Explanation:

Epistolary jurisdiction means the power of court i.e., the Supreme Court to convert any letter addressed to it by anybody into a writ and hear the matter. This concept gave rise to the Public Interest Litigation when the judicial activism came into prominence in India during the second half of the 20th Century. It can be said to be a judicial innovation.

Source: Laxmikanth

Q.9) What is the meaning of “Public Interest Litigation”?

- a) Anything of public interest
- b) A case brought by victim to court, involving public interest
- c) A case brought by anyone to court involving public interest
- d) A directive issued by Supreme Court involving public interest

ANS: C

Explanation:

The introduction of PIL in India was facilitated by the relaxation of the traditional rule of ‘locus standi’. According to this rule, only that person whose rights are infringed alone can move the court for the remedies, whereas, the PIL is an exception to this traditional rule. Under the PIL, any public-spirited citizen or a social organisation can move the court for the enforcement of the rights of any person or group of persons who because of their poverty or ignorance or socially or economically disadvantaged position are themselves unable to approach the court for the remedies. Thus, in a PIL, any member of the public having ‘sufficient interest’ can approach the court for enforcing the rights of other persons and redressal of a common grievance.

Source: Laxmikanth

Q.10) Which one of the following does not fall under the jurisdiction of the apex court of India?

- a) Original Jurisdiction
- b) Appellate Jurisdiction
- c) Collegiate Jurisdiction
- d) Advisory Jurisdiction

ANS: C

Explanation:

The Constitution has conferred a very extensive jurisdiction and vast powers on the Supreme Court. It is not only a Federal Court like the American Supreme Court but also a final court of appeal like the British House of Lords (the Upper House of the British Parliament). It is also the final interpreter and guardian of the Constitution and guarantor of the fundamental rights of the citizens. Further, it has advisory and supervisory powers.

Therefore, Alladi Krishnaswamy Ayyar, a member of the Drafting Committee of the Constitution, rightly remarked:

“The Supreme Court of India has more powers than any other Supreme Court in any part of the world.”

“The jurisdiction and powers of the Supreme Court can be classified into the following:

1. Original Jurisdiction.
2. Writ Jurisdiction.
3. Appellate Jurisdiction.
4. Advisory Jurisdiction.
5. A Court of Record.
6. Power of Judicial Review.
7. Other Powers.

Source: Laxmikanth

Geography

Q.1) What are phytoplanktons?

- a) Microscopic animal life that floats freely in the sunlit surface waters
- b) Pollen floating freely in the lighted surface waters
- c) Microscopic plant life that floats freely in the sunlit surface waters
- d) Microscopic plant life that is found on the ocean's floor

ANS: C

Explanation: Phytoplankton, microscopic plant life that floats freely in the lighted surface waters, may alter the color of the water. When a great number of the microscopic plants are concentrated in an area, the color of the ocean surface will change. This is called a "bloom." This photograph shows such a change in color. It was taken by astronauts aboard the space shuttle looking down at the coast of Angola.

Microscopic plant life is at the base of the marine food web and is the primary food and energy source for the ocean ecosystem. Phytoplankton convert nutrients into plant material by using sunlight with the help of the green pigment chlorophyll. The chlorophyll pigments in the plants absorb light, and the plants themselves scatter light. Together, these processes change the color of the ocean as seen by an observer looking downward into the sea. Very productive water with a lot of plankton appears blue-green. Very pure water appears deep-blue, almost black.

Source: NCERT

Q.2) The substances in seawater, which most affect the colour reflected, are?

- a) Phytoplankton
- b) Zooplankton
- c) Salt
- d) Trace metals

ANS: A

Explanation: What is ocean color?

The "color" of the ocean is determined by the interactions of light with the water. We see color when light is reflected by objects around us. White light is made up of a spectrum or combination of colors, which are broken apart by water droplets in a rainbow. When light hits the surface of an object, the different colors can be absorbed, transmitted, scattered, or reflected in differing intensities. The color we see depends on which colors are reflected. For example, a book that appears red to us absorbs more of the green and blue parts of the white light shining on it, and reflects the red parts. The light which is scattered or transmitted by most objects is usually not apparent to our eyes.

The substances in seawater which most affect the color reflected are, phytoplankton, inorganic particles, dissolved organic chemicals, and the water itself. Phytoplankton contain chlorophyll, which absorbs red and blue light and reflects green light. Particles can reflect and absorb light, which reduces the clarity (light transmission) of the water. Dissolved organic matter strongly absorbs blue light, and its presence can interfere with measurements of chlorophyll.

Source: NCERT

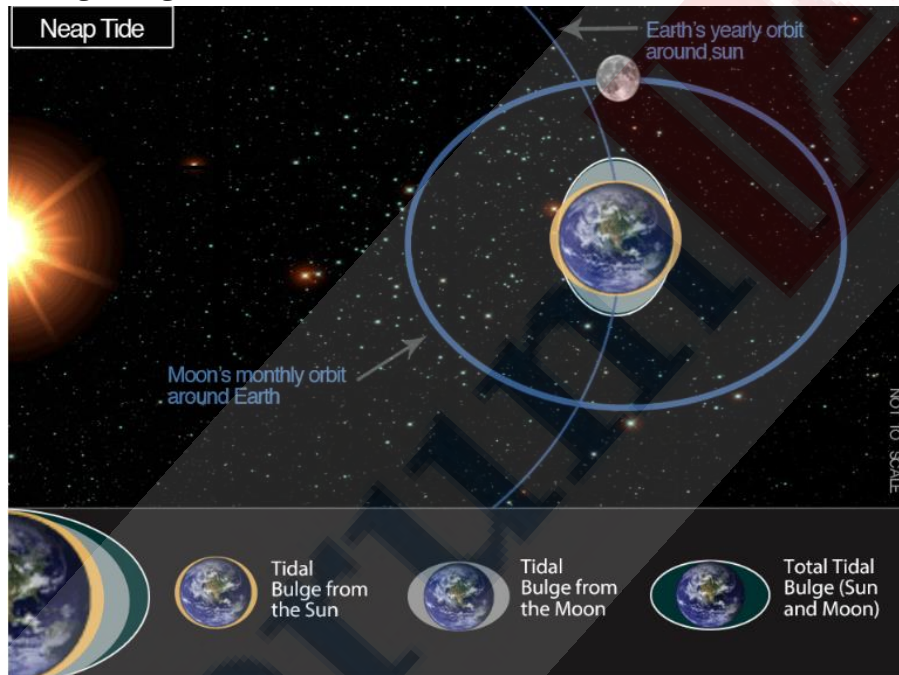
Q.3) Neap tides occur when the earth, sun and moon forms at which of the following angle?

- a) 60°
- b) 90°
- c) 120°
- d) 180°

ANS: B

Explanation: A spring tide—popularly known as a "King Tide"—refers to the 'springing forth' of the tide during new and full moon.

A neap tide—seven days after a spring tide—refers to a period of moderate tides when the sun and moon are at right angles to each other.



Source: NCERT

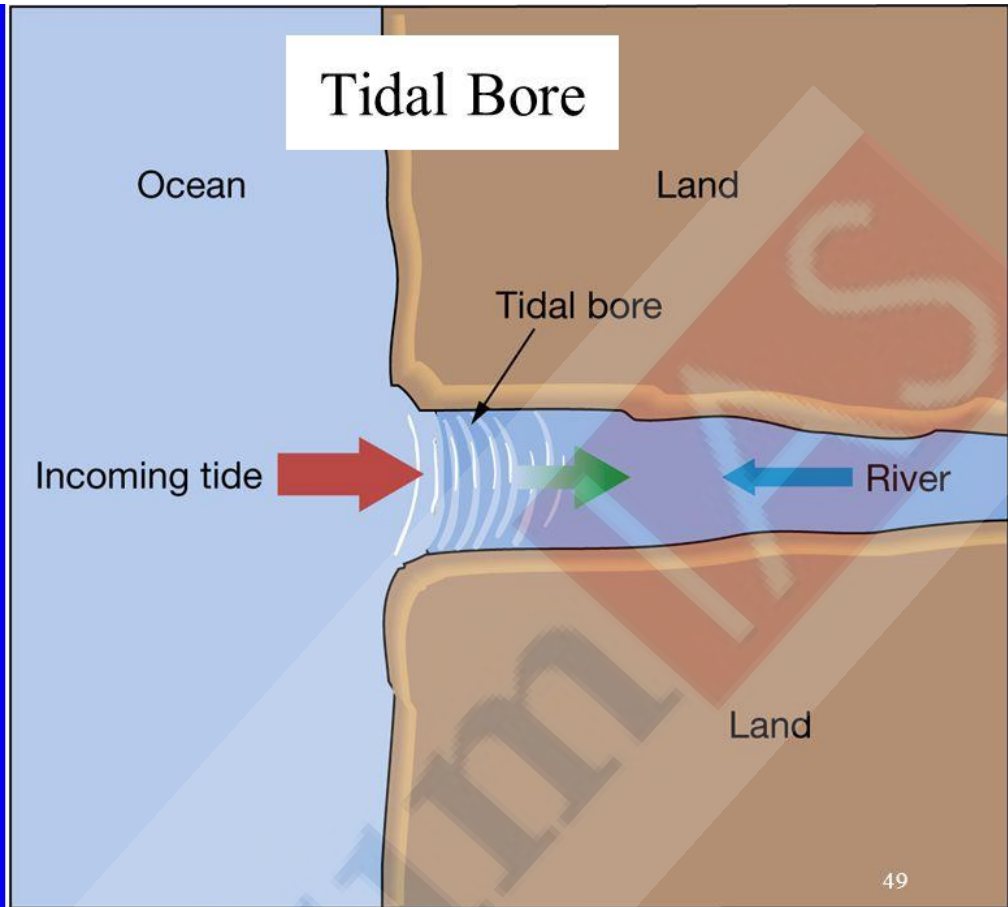
Q.4) Tidal bores are found in which of the following countries?

- a) China
- b) India
- c) Bangladesh
- d) Iran

ANS: A

Explanation: Tidal bore, also called bore, body of water that, during exceptionally high sea tides, rushes up some rivers and estuaries near a coast where there is a large tidal range and the incoming tide is confined to a narrow channel. Traveling upstream about two or three times as fast as the normal tidal current, a bore usually is characterized by a well-defined front of one or several waves, often breaking, followed by the bore's main body, which rises higher than the water level at its front. The height of the bore is greater near the banks of a river than at midstream. Because of momentum, some bores continue to move upstream for about one-half hour after high water. Bores occur at spring tides and at several tides preceding and following spring tides but never at neap tides.

A tidal bore is a wall of water that surges upriver with the advancing high tide.



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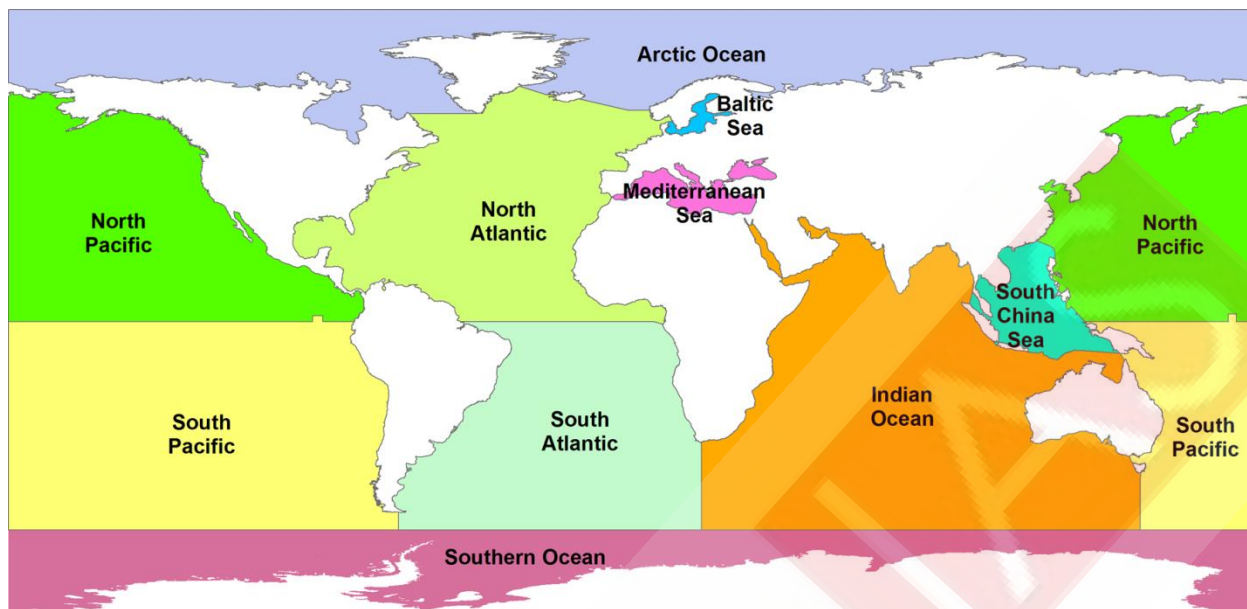
Source: G. C Leong

Q.5) What is the correct sequence of the following oceans in descending order of their areas?

- a) Indian Ocean, Arctic Ocean, Atlantic Ocean and Pacific Ocean
- b) Arctic Ocean, Atlantic Ocean, Indian Ocean and Pacific Ocean
- c) Atlantic Ocean, Pacific Ocean, Arctic Ocean and Indian Ocean
- d) Pacific Ocean, Atlantic Ocean, Indian Ocean and Arctic Ocean

ANS: D

Explanation: Pacific Ocean is the largest ocean in the world with a total area of 155,557,000 sq km. This is followed by Atlantic Ocean (76,762,000 sq.km.), Indian Ocean (68,556,000 sq.km.) and Arctic Ocean (14,056,000 sq.km.).



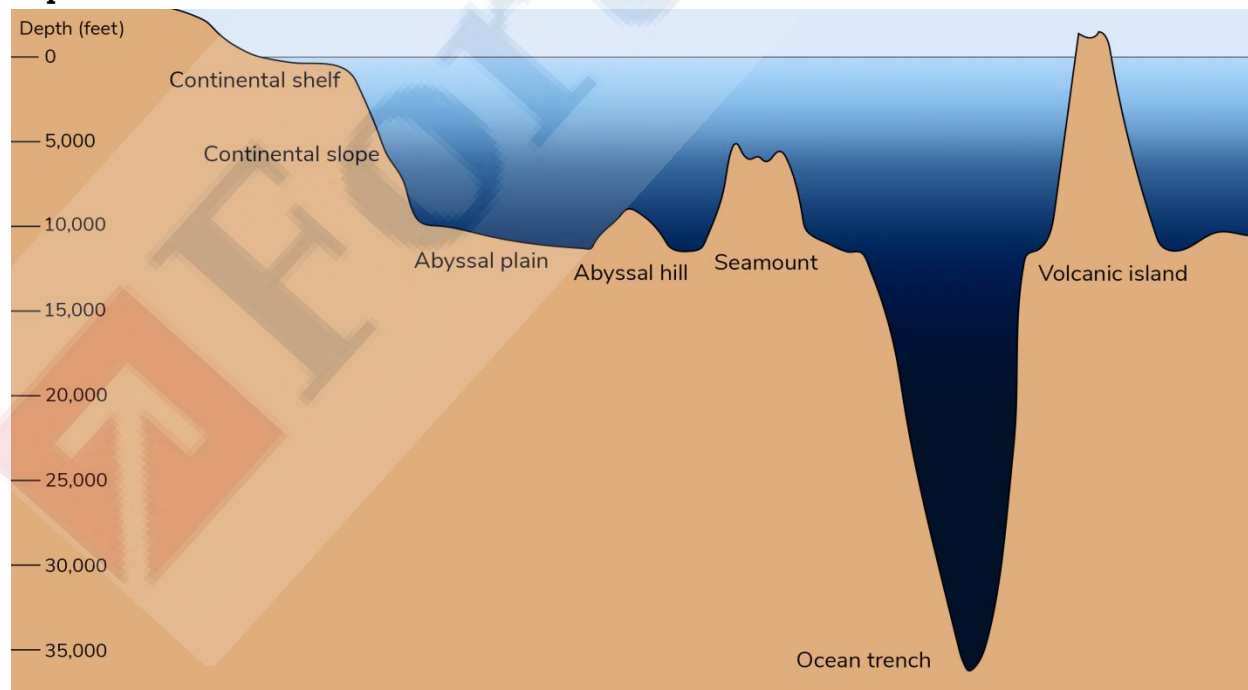
Source: NCERT

Q6) What is the correct sequence of features on the sea floor starting from the coast to greater depths?

- a) Continental shelf, continental slope, continental rise, abyssal plain
- b) Abyssal plain, continental rise, continental slope, continental shelf
- c) Continental slope, continental rise, abyssal plain, continental shelf
- d) Continental rise, continental slope, continental shelf, abyssal plain

ANS: A

Explanation:



Source: NCERT

Q.7) Consider the following pairs:

Sea	Ocean
1. Kara Sea	Atlantic Ocean
2. Baltic Sea	Arctic Ocean
3. Weddell Sea	Southern Ocean
4. Coral Sea	Pacific Ocean

How many of the above pairs are correctly matched?

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

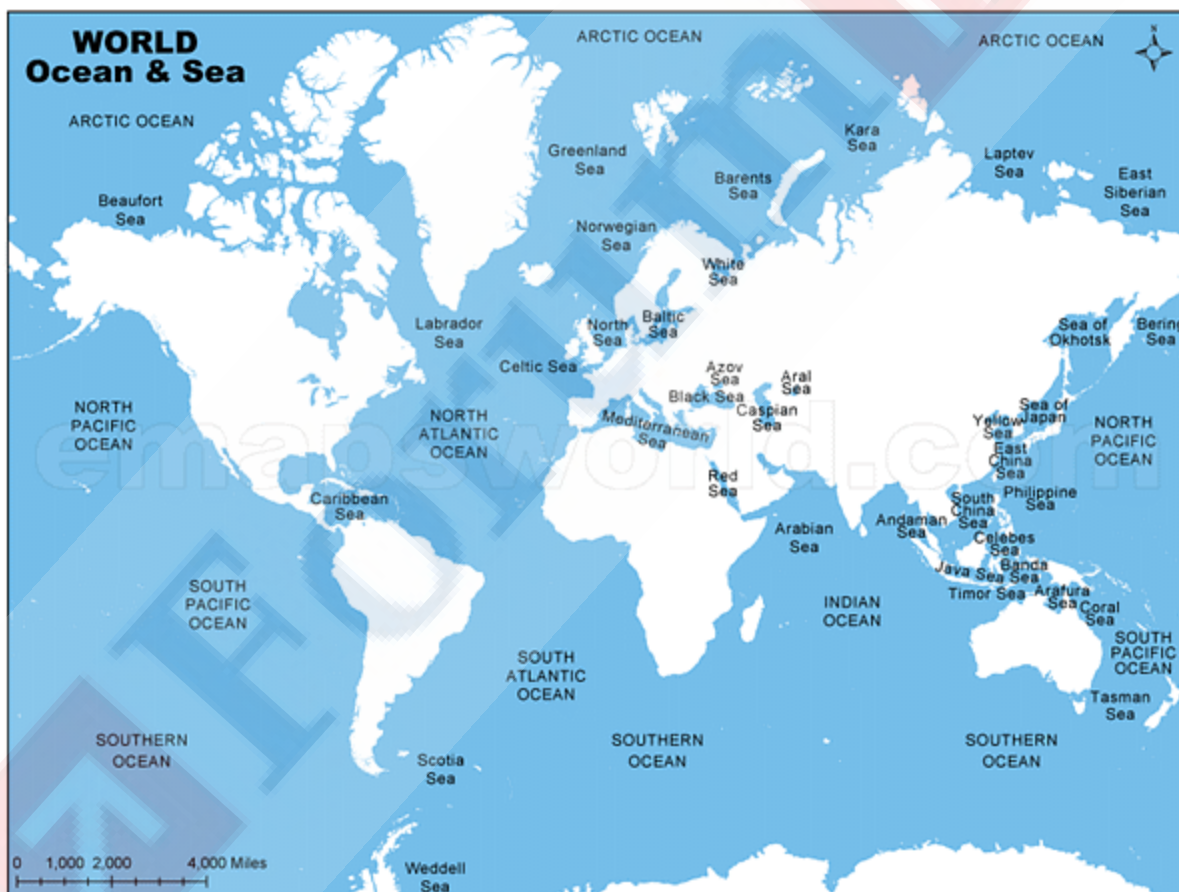
ANS: B

Explanation: Kara Sea: Arctic Ocean on the Russian coast

Baltic Sea: Atlantic Ocean on the West European coast

Weddell Sea: Southern Ocean on the Antarctic coast

Coral Sea: Pacific Ocean off the coast of Queensland (Australia)



Source: School Atlas

Q.8) Consider the following statements regarding continental shelves:

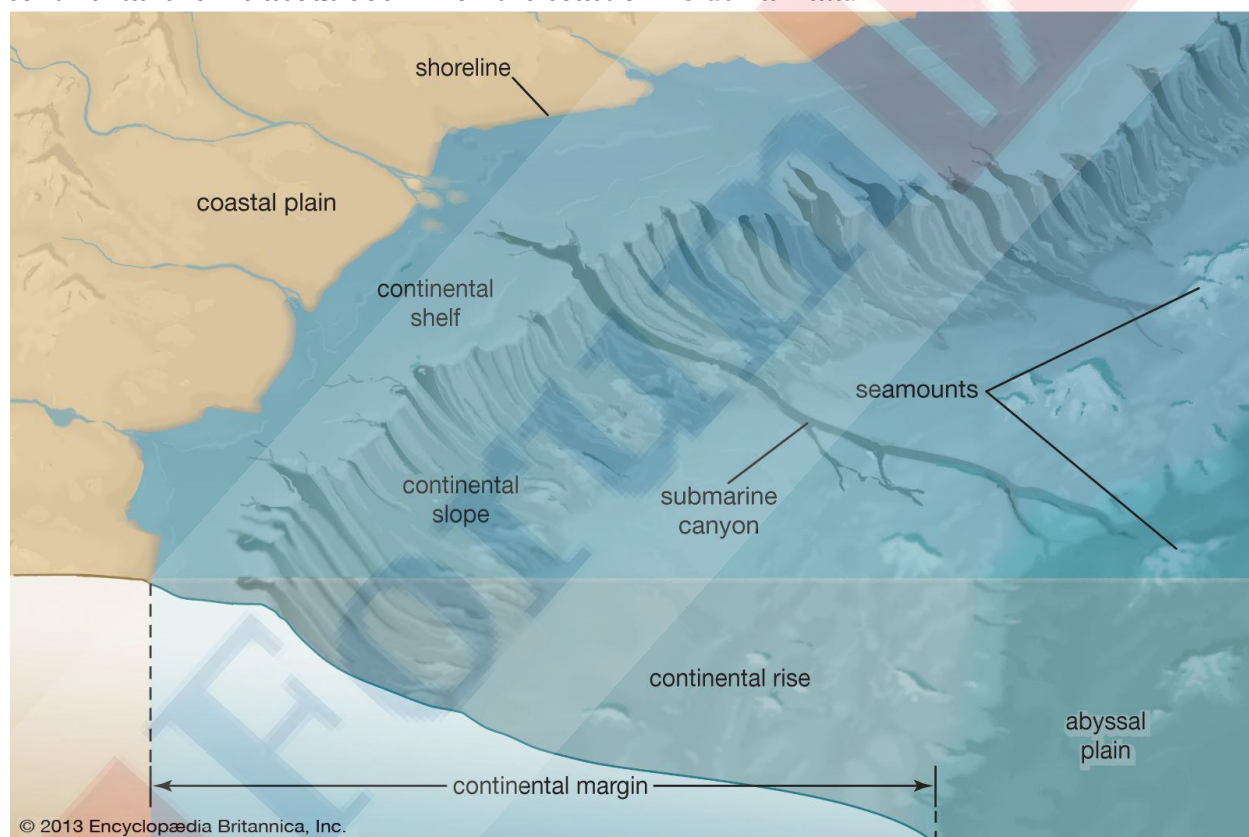
1. They have gentle slope and they extend up to 200m depth.
2. The widest continental is off the Arctic coast of Siberia.

Which of the above given statement is/are correct?

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

ANS: C

Explanation: Continental shelves are narrow where high mountains are close and parallel to the coast. For example, off the west coast of South America where the Andes Mountains are very close and parallel to the coast, the shelf is only a few hundred metres wide. Continental shelves are quite wide where there are wide plains near the coast. For example the width of the continental shelf is about 560 km off the coast of Rio de La Plata.



Source: NCERT

Q.9) Consider in following statements regarding continental slope:

1. It is an area of steep slope between continental shelf and deep sea plain
2. It is a part of the continental margin covered by the ocean water.
3. Continental slopes may have deep sea fan at its base.

Which of the above given statements is/are correct?

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

ANS: D

Explanation: Continental Slope

- A continental slope is the slope between the outer edge of the continental shelf and the deep ocean floor. The continental slope is cut by submarine canyons in many locations. The continental slope marks the seaward edge of the continental shelf.
- Continental slopes are cut by submarine canyons. The dominant process influencing slopes are sediment deposition and erosion by turbidity currents.
- The gradient of the slope is lowest off stable coasts without major rivers and highest off coasts with young mountain ranges and narrow continental shelves. Most Pacific slopes are steeper than Atlantic slopes.
- Gradients are flattest in the Indian Ocean. About one-half of all continental slopes descend into deep-sea trenches or shallower depressions, and most of the remainder terminate in fans of marine sediment or in continental rises.
- The transition from continental crust to oceanic crust usually occurs below the continental slope.

Source: NCERT

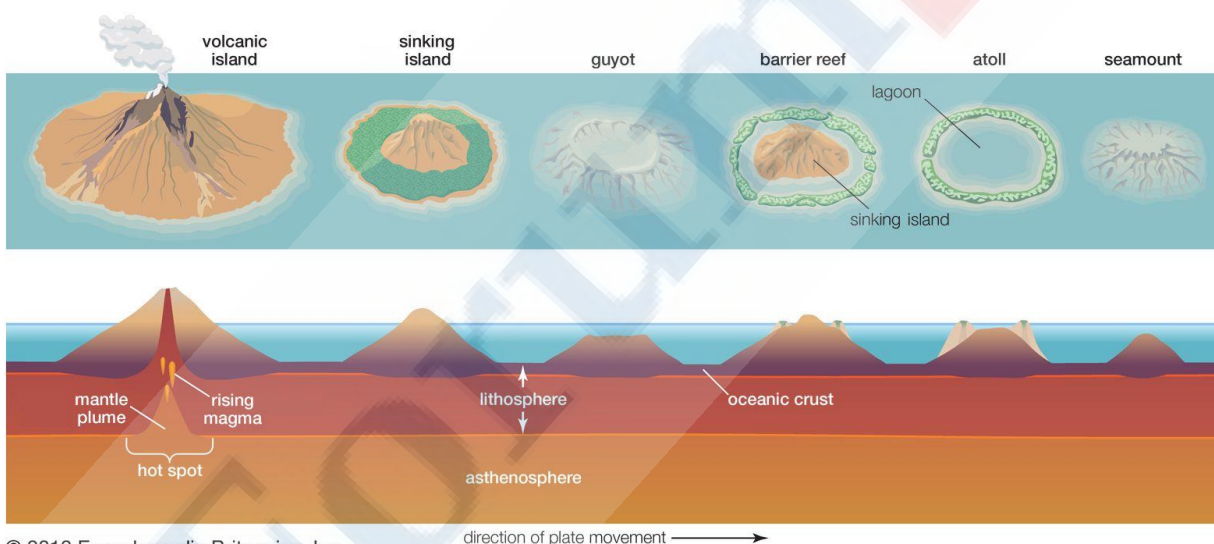
Q.10) Which of the following statements is incorrect?

- a) Seamounts are isolated volcanic hills on the sea floor
- b) Guyots are flat topped hills
- c) Deep sea plains cover the maximum area of the ocean floors
- d) The largest number of islands is found in the Atlantic Ocean

ANS: D

Explanation: A seamount is a mountain that rises from the ocean floor; a submerged flat-topped seamount is termed a guyot. By arbitrary definition, seamounts must be at least 3000 ft (about 900 m) high, but in fact there is a continuum of smaller undersea mounts, down to heights of only about 300 ft (100 m). Some seamounts are high enough temporarily to form oceanic islands, which ultimately subside beneath sea level. There are on the order of 10,000 seamounts in the world ocean, arranged in chains (for example, the Hawaiian chain in the North Pacific) or as isolated features. In some chains, seamounts are packed closely to form ridges (for example, the Walvis Ridge in the South Atlantic). Very large oceanic volcanic constructions, hundreds of kilometers across, are called oceanic plateaus (for example, the Manihiki Plateau in the South Pacific).

The largest number of islands is found in the Pacific Ocean. This ocean has about 20,000 islands.



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Source: NCERT

Environment

Q.1) Rachel Carson's famous book "Silent Spring" is related to

- a) Population explosion
- b) Ecosystem management
- c) Pesticide pollution
- d) Noise pollution

ANS: B

Explanation: Silent spring is an environmental science book written by Rachel Carson. The book documents the detrimental effects on environment, particularly on birds, of the indiscriminate use of pesticides.

Source: ForumIAS

Q.2) Which method of water purification does not kill microorganisms?

- a) Boiling
- b) Filtration
- c) Chlorination
- d) Distillation

ANS: B

Explanation:

- Filtration is a physical method that can only separate the pathogens and other contaminants from water but cannot kill microorganism.
- Boiling kills all the pathogens at boiling temperature.
- Chlorine kills pathogens such as bacteria and viruses by breaking the chemical bonds in their molecules.
- Distillation relies on evaporation to purify water. Contaminated water is heated to form steam. The boiling process kills microorganisms such as bacteria and some viruses.

Source: ForumIAS

Q.3) Biodiversity is richer in which of the following?

- a) Tropical Region
- b) Polar Region
- c) Temperate Region
- d) Ocean

ANS: A

Explanation:

- Biodiversity describes the richness and variety of life on earth. It is the most complex and important feature of our planet. Without biodiversity, life would not sustain.
- The term biodiversity was coined in 1985. It is important in natural as well as artificial ecosystems. It deals with nature's variety, the biosphere. It refers to variabilities among plants, animals and microorganism species.
- Biodiversity includes the number of different organisms and their relative frequencies in an ecosystem. It also reflects the organization of organisms at different levels.

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- Biodiversity holds ecological and economic significance. It provides us with nourishment, housing, fuel, clothing and several other resources. It also extracts monetary benefits through tourism. Therefore, it is very important to have a good knowledge of biodiversity for a sustainable livelihood.
- Biodiversity is richer in tropical region.

Source: ForumIAS

Q.4) Among the following animals, choose the one having three pairs of legs?

- a) Spider
- b) Scorpion
- c) Bug
- d) Mite

ANS: C

Explanation:

An insect has three pairs of legs and a body divided into three parts. These parts are called the head, thorax and abdomen. Each part of the insect's body has special features. On the head is a pair of feelers called antennae.

Source: ForumIAS

Q.5) Which one among the following statement is not correct for mammals?

- a) They possess hairs on the body
- b) Some of them lay eggs
- c) Their heart is three chambered
- d) Some are aquatic

ANS: C

Explanation:

- External ear (pinna) is not present in all mammals. It is absent in egg-laying mammals.
- The presence of teeth in the sockets of the jawbone is a characteristic seen in all mammals.
- The most advanced mammals are the primates. Primates include monkeys, apes and humans.
- Primates have a well developed brain and improved vision.
- All mammals are not viviparous. The duck-billed platypus is an oviparous mammal or an egg-laying mammal.
- In viviparity, eggs are developed inside the reproductive tract of females where the development takes place and young ones are born.

Source: ForumIAS

Q.6) Consider the following pairs:

Plant	Natural Vegetation Type
1. Ebony	Moist deciduous
2. Shisham	Himalayan moist
3. Walnut	Alpine

How many pairs is/are correctly matched?

- a) One pair only
- b) Two pairs only
- c) Three pairs only
- d) None

ANS: D

Explanation:

Tropical Evergreen Forest Regions:

- These forests are found in the western slope of the Western Ghats, hills of the north-eastern region and the Andaman and Nicobar Islands.
- Climatic Conditions: They are found in warm and humid areas with annual precipitation of over 200 cm and a mean annual temperature above 22°C.
- Tree Species: Rosewood, mahogany, aini, ebony, etc.

Himalayan Moist Temperate Vegetation

- Distribution: In the western Himalayas between 1500m and 3000m.
- Characteristic Features: The trees are 30 to 50m tall and undergrowth is mostly evergreen. Mosses and ferns grow freely on trees.
- Important Species: Deodar, Spruce, Maple, Walnut, Poplar, Cedar, Chestnut, Birch, Oak etc.

Source: ForumIAS

Q.7) Consider the following statements and select the correct answer using the code given below:

- 1. Flora refers to plants of a particular region or period listed by species.
 - 2. Most of the Himalayan areas are covered by indigenous or endemic flora
 - 3. The Thar Desert of India contain exotic species or plant species that have come from outside.
- a) 1 and 2 are correct
 - b) 1 and 3 are correct
 - c) 2 and 3 are correct
 - d) 1, 2 and 3 are correct

ANS: D

Explanation:

The term flora in Latin means "Goddess of the Flower." Flora is a collective term for a group of plant life found in a particular region. The whole plant kingdom is represented by this name.

Flora is classified and differentiated based on many factors. The best one among them is the area in which they grow or are found. Some grow in desert regions or in water, some are found in hilly areas while some are endemic to a specific geographic location.

Thar Desert, also called Great Indian Desert, arid region of rolling sand hills on the Indian subcontinent. It is located partly in Rajasthan state, northwestern India, and partly in Punjab and Sindh (Sind) provinces, eastern Pakistan.

The desert vegetation is mostly herbaceous or stunted scrub; drought-resistant trees occasionally dot the landscape, especially in the east. On the hills, gum arabic acacia and euphorbia may be found. The khajri (or khejri) tree (*Prosopis cineraria*) grows throughout the plains.

Source: ForumIAS

Q.8) Which one of the following is most sensitive to environmental change?

- a) Amphibian
- b) Reptile
- c) Mammal
- d) Insect

ANS: A

Explanation:

Amphibians are sometimes called "indicators." They are called indicators because they are very sensitive to change in their environment.

They breathe through their skin and breathe toxic and non-toxic components with it too.

Nearly 33% of the amphibian species of the world are categorized as threatened on the Red List.

Amphibians are dependent for their survival on a plentiful supply of fresh water that is free of chemical contaminants and harmful microbes

Source: ForumIAS

Q.9) The germplasm is required for the propagation of plants and animals. Germplasm is the:

- 1. Genetic resources
- 2. Seeds or tissues for breeding
- 3. Egg and sperm repository
- 4. A germ cells determining zone

Select the correct answer using the codes given below:

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

ANS: B

Explanation:

Germplasm is the term used to describe the seeds, plants, or plant parts useful in crop breeding, research, and conservation efforts. Plants, seed, or cultures are germplasm when maintained for the purposes of studying, managing, or using the genetic information they possess. Thus, seed of an old, heirloom tomato variety is just seed when produced by a gardener or seed company, but it is germplasm when part of a collection gathered to conserve the genetic diversity of tomatoes or to develop a breeding program for new tomato varieties, or even for the purpose of preserving particular genetically controlled traits.

Some germplasm needs little or no breeding to be useful. Many commonly used ornamental, medicinal, and herbal plants have been changed little from their wild progenitors.

Source: ForumIAS

Q.10) Tropical evergreen rain forest biome provides optimum environmental condition for growth of plants and animals.

- a) It has heavy rainfall and high temperature throughout the year.
- b) This biome is also called mega thermal biome.
- c) The evergreen rain forest biome extends between 10° N and 10° S latitudes
- d) The maximum development of this biome has taken place in central and southern California, and north-western coastal lands of Africa

ANS: D

Explanation:

The maximum development of this biome has taken place in central and southern California, and north-western coastal lands of Africa.

Source: ForumIAS

Indian History

Q.1) Which of the following was probably the weakest link in the chain of leadership of the Revolt of 1857?

- a) Bahadur Shah II
- b) Kunwar Singh
- c) Nana Sahib
- d) None of these

ANS: A

Explanation:

The Sepoy's of Meerut reached Delhi and killed the European officers and entered the red fort. They urged the Mughal Emperor Bahadur shah [a pensioner for the east India Company] to become their leader and give legitimacy to their cause. The Mughal emperor was initially reluctant but gave in and was declared Shahenshah of Hindustan. Capture of Delhi provided a rallying point to the movement. The revolt of the sepoys was accompanied by a rebellion of the civil population, particularly in the north-western provinces and Awadh. Their accumulated grievances found immediate expression and they rose en masse to give vent to their opposition to British rule. Emperor Bahadur Shah was perhaps the weakest link in the chain of leadership of the revolt. His weak personality, old age and lack of leadership qualities created political weakness at the nerve centre of the revolt and did incalculable damage to it.

Source: NCERT

Q.2) What causes were responsible for the failure of the Revolt of 1857?

1. The rebels lacked a supreme head.
2. The rebels had negligible communication resources.

Select the correct answers using the codes given below:

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

ANS: C

Explanation: The main reasons behind the failure of the Revolt of 1857 were :

- Lack of Planning and Co-ordination.
- Weak Leadership of the 1857 Mutiny.
- Superior British Army.
- Limited Supplies and Lack of Modern Communication.
- Lack of Societal Alternative.
- The Princes and Educated Classes did not participate.
- Limited Spread of the Revolt.

Source: NCERT

Q.3) How did the international situation favour the British during the Revolt of 1857?

- a) The Crimean War and the trouble in Persia were over.
- b) The British could delay the war in China.
- c) The Indian Army sent for service abroad was called back quickly by the British.
- d) All of the above.

ANS: D

Explanation: The Indian Rebellion of 1857 was a major, but ultimately unsuccessful, uprising in India in 1857–58 against the rule of the British East India Company, which functioned as a sovereign power on behalf of the British Crown. The rebellion began on 10 May 1857 in the form of a mutiny of sepoys of the Company's army in the garrison town of Meerut, 40 mi (64 km) northeast of Delhi (now Old Delhi).

- The Crimean War and the trouble in Persia were over.
- The British could delay the war in China.
- The Indian Army sent for service abroad was called back quickly by the British.

Source: NCERT

Q.4) The selfishness and the tendency on the part of the leaders to form cliques made the Revolt loss its vitality. Azimullah asked his leader not to visit Delhi lest he be overshadowed by the Emperor Bahadur Shah II. Azimullah was the political advisor of

- a) Tantia Tope
- b) Nana Sahib
- c) Sir John Kaye
- d) Khan Bahadur Khan

ANS: B

Explanation: The selfishness and the tendency on the part of the leaders to form cliques made the Revolt loss its vitality. Azimullah asked his leader not to visit Delhi lest he be overshadowed by the Emperor Bahadur Shah II. Azimullah was the political advisor of NANA SAHIB.

Source: NCERT

Q.5) Before the outbreak of the revolt of 1857 at Meerut Mangal Pandey had become a martyr on 29 March 1857. At which of the following places, he was hanged?

- a) Lucknow
- b) Faizabad
- c) Bhagalpur
- d) Barrackpore

ANS: D

Explanation: Mangal Pandey was arrested and sentenced to death after he attacked British officers in Barrackpore on March 29, 1857. Anticipating a revolt, British authorities moved up his initial execution date from April 18 to April 8, when he was hanged.

Source: NCERT

Q.6) A sepoy mutiny had broken out in Bengal as early as

- a) 1757
- b) 1764
- c) 1773
- d) 1784

ANS: B

Explanation: A sepoy mutiny had broken out in Bengal as early as 1764. The authorities had suppressed it by blowing away 30 sepoys. In 1806, the sepoys at Vellore mutinied but were crushed with terrible violence. In 1824, the 47th Regiment of sepoys at Barrackpore refused to go to Burma by the sea-route.

Source: NCERT

Q.7) Consider the following pairs:

- | | |
|-----------------------|----------|
| 1. Rani laxmi Bai | Jhansi |
| 2. Bahardur Shah II | Bareilly |
| 3. Begum Hazrat Mahal | Lucknow |

How many pairs is/are correctly matched?

- a) One pair only
- b) Two pairs only
- c) Three pairs only
- d) None

ANS: B

Explanation:

Jhansi was a Maratha-ruled princely state in Bundelkhand. When the Raja of Jhansi died without a biological male heir in 1853, it was annexed to the British Raj by the Governor-General of India under the doctrine of lapse. His widow, Rani Lakshmi Bai, the Rani of Jhansi protested against the denial of rights of their adopted son. When war broke out, Jhansi quickly became a center of the rebellion.

On 12th May Delhi was seized and Bahadur Shah II was proclaimed the emperor of India. The real command was in the hands of Bakht Khan who had led the revolt at Bareilly and brought the troops to Delhi.

Nana Saheb led the struggle for Independence at Kanpur. The British surrendered in June 1857. A large number of Englishmen, women and children were captured by an infuriated mob. The British defeated Nana Saheb in December, 1857. Nana Saheb fled towards Nepal, where he probably died. His general, Tantia Tope, escaped to Kalpi.

The Revolt of 1857 was a prolonged period of armed uprising as well as rebellions in Northern and Central India against British. It began in Meerut by Indian troops (sepoys) in the service of the British East India Company and later spread to Delhi, Agra, Kanpur, and Lucknow. In Awadh and Lucknow, the mutiny was led by Begum Hazrat Mahal. After a long siege, Lucknow was again re-captured by the British, forcing Hazrat Mahal to retreat in 1858.

Source: NCERT

Q.8) Who can be called the greatest heroes of the Revolt of 1857?

- a) The peasants
- b) The sepoys
- c) Rani Lakshmibai
- d) Nana Sahib

ANS: B

Explanation:

The Indian Rebellion of 1857 occurred as the result of an accumulation of factors over time, rather than any single event. The sepoys were Indian soldiers who were recruited into the Company's army. Just before the rebellion, there were over 300,000 sepoys in the army, compared to about 50,000 British.

Source: NCERT

Q.9) Khan Bahadur Khan took part in the Revolt of 1857 by leading a rebellion in

- a) Allahabad
- b) Bareilly
- c) Satara
- d) Indore

ANS: B

Explanation: Khan Bahadur Khan Rohilla, the grandson of Hafiz Rahmat Khan, set up his own government in Bareilly in the Revolt of 1857 against British. But, the revolt was suppressed by the British forces under the command of Colin Campbell. Khan Bahadur Khan was sentenced to death and hanged in the Kotwali on February 24, 1860.

Source: NCERT

Q.10) Though nearly 80 years old, which leader was perhaps the best military leader and strategist of the Revolt of 1857?

- a) Nana Sahib
- b) Khan Bahadur Khan
- c) Kunwar Singh
- d) Bahadur Shah II

ANS: C

Explanation:

Kunwar Singh, a ruined and discontented zamindar of Jagdishpur near Arrah, was the chief organiser of the revolt in Bihar. Though nearly 80 year old, he was perhaps the most outstanding military leader and strategist of the Revolt.

Source: NCERT