

ForumIAS

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Prelims Marathon

7th November to 13th November, 2022

HISTORY

ECONOMICS

POLITY

SCIENCE AND TECHNOLOGY

GEOGRAPHY AND ENVIRONMENT

Economy

Q.1) “The World Employment and Social Outlook” report is released by which of the following institution?

- a) World Bank
- b) World Economic Forum
- c) International Labour Organization
- d) UNESCO

ANS: C

Explanation: The International Labour Organization (ILO) published its flagship report titled, 'World Employment and Social Outlook – Trends (WESO Trends) 2022.

Source: TMH Ramesh Singh

Q.2) Consider the following statements regarding Research and Development (R&D) in India:

1. The Gross domestic expenditure on R&D as the percentage of gross domestic product (GDP) is around 1.2%.
2. India is a low spender in comparison to the developed countries and emerging economic powers of East Asia.

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 Gross domestic expenditure on R&D (GERD) as the percentage of gross domestic product (GDP) is around 0.7%. The percentage expenditure for the last couple of years has shown a downward trend.

1. According to a report (2020) prepared by the Department of Science and Technology (DST); of the funding allocated to R&D in 2017-18, 61.4% of the amount went to DRDO (31.6%), Departments of Space (19%) and Atomic Energy (10.8%) together.
2. Approximately 37% was allocated to the general R&D agencies like the ICAR, CSIR, DST, DBT, ICMR etc. while only 0.9% was allocated to R&D in electronics, IT and renewable energy.
3. India is a low spender (only 0.66% of the GDP) in comparison to the developed countries and emerging economic powers of East Asia. In fact, India's expenditure on R&D is lower than Low and Middle Income Countries.
4. In most of the developed capitalist countries, defense-related R&D is undertaken by the private sector. In India, this expenditure is mostly borne by public funding.

Source: FORUMIAS

Q.3) Which of the following measure/measures is/are taken by government of India to promote research & development?

1. The weighted tax deduction on R&D expenditure.
2. Establishment of the Atal Innovation Mission in the NITI Aayog.
3. Implementation of SETU (Self Employment and Talent Utilization) programme.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The Government of India has taken many initiatives in recent times to promote the R&D sector in India –

1. The weighted tax deduction of 200 per cent for R&D expenditure.
2. Establishment of the AIM (Atal Innovation Mission) in the NITI Aayog. This will be an innovation promotion platform involving academics, entrepreneurs, and researchers and draw upon national and international experiences to foster a culture of innovation, R&D and scientific research in India. The platform will also promote a network of worldclass innovation hubs.
3. SETU (Self Employment and Talent Utilization) programme, aimed at setting up world class technology business incubators to promote startup business in India coupled with Start-up-India, Make in India.
4. IMPRINT (Impacting Research Innovation and Technology), a Pan-IIT and IISc joint initiative to develop a roadmap for research to solve major engineering and technology challenges in ten technology domains relevant to India.

Source: TMH Ramesh Singh

Q.4) The “Baltic Dry Index (BDI)” is often seen in news is related to which of the following?

- a) Crude oil index
- b) Continent shelf measuring index
- c) Precipitation measuring index
- d) Trade and Shipping index

ANS: D

Explanation: The Baltic Dry Index (BDI) is a shipping and trade index created by the London-based Baltic Exchange.

1. It measures changes in the cost of transporting various raw materials, such as coal and steel.
2. Members of the exchange directly contact shipping brokers to assess price levels for given shipping paths, a product to transport, and time to delivery or speed.
3. The Baltic Dry Index is a composite of four sub-indices that measure different sizes of dry bulk carriers or merchant ships: Capesize, Panamax, Supramax, and Handysize.

Source: TMH Ramesh Singh

Q.5) Consider the following statements regarding insurance in India:

1. Oriental Life Insurance Company started by Europeans in Calcutta was the first life insurance company on Indian Soil.
2. Bombay Mutual Life Assurance Society is the first Indian life insurance company.
3. The life insurance company's act was passed in 1912.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Life Insurance in its modern form came to India from England in the year 1818. Oriental Life Insurance Company started by Europeans in Calcutta was the first life insurance company on Indian Soil.

1. However, later with the efforts of eminent people like Babu Muttylal Seal, the foreign life insurance companies started insuring Indian lives.
2. Bombay Mutual Life Assurance Society heralded the birth of first Indian life insurance company in the year 1870, and covered Indian lives at normal rates.
3. The Swadeshi movement of 1905-1907 gave rise to more insurance companies. The United India in Madras, National Indian and National Insurance in Calcutta and the Co-operative Assurance at Lahore were established in 1906.
4. In 1907, Hindustan Co-operative Insurance Company took its birth in one of the rooms of the Jorasanko, house of the great poet Rabindranath Tagore, in Calcutta.
5. The Indian Mercantile, General Assurance and Swadeshi Life (later Bombay Life) were some of the companies established during the same period.
6. Prior to 1912 India had no legislation to regulate insurance business. In the year 1912, the Life Insurance Companies Act, and the Provident Fund Act were passed.
7. The Life Insurance Companies Act, 1912 made it necessary that the premium rate tables and periodical valuations of companies should be certified by an actuary. But the Act discriminated between foreign and Indian companies on many accounts, putting the Indian companies at a disadvantage.
8. The first two decades of the twentieth century saw lot of growth in insurance business. From 44 companies with total business-in-force as Rs.22.44 crore, it rose to 176 companies with total business-in-force as Rs.298 crore in 1938.
9. The Insurance Act 1938 was the first legislation governing not only life insurance but also non-life insurance to provide strict state control over insurance business.
10. The demand for nationalization of life insurance industry was made repeatedly in the past but it gathered momentum in 1944 when a bill to amend the Life Insurance Act 1938 was introduced in the Legislative Assembly.
11. However, it was much later on the 19th of January, 1956, that life insurance in India was nationalized.

Source: <https://licindia.in/Top-Links/about-us/History>

Q.6) Consider the following statements regarding “Agriculture Insurance Company of India Limited (AICIL)”:

1. It was responsible to look after the National Agriculture Insurance Scheme (NAIS).
2. It is jointly promoted by public sector insurance companies and development financial institutions.

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: The public sector insurance company, Agriculture Insurance Company of India Limited (AICIL) was set up by the Government of India in December 2002 (commenced its business in April 2003).

1. This is a dedicated agri-insurance company and aims “to serve the needs of farmers better and to move towards a sustainable actuarial regime”.
2. This company was responsible to look after the National Agriculture Insurance Scheme (NAIS) which was launched in 1999.
3. Since January 2016, the company is looking after the newly launched PMFBY (Prime Minister Fasal Bima Yojana) which subsumed the existing agri-insurance schemes— the NAIS and the Modified NAIS (of 2010).
4. Till the AICIL was not set up, the agri-insurance responsibility of the government was being looked after by the General Insurance Corporation (GIC).
5. AICIL is jointly promoted by public sector insurance companies and development financial institutions—majority shares owned by the GIC (35 per cent) and NABARD (30 per cent) while the four public sectors general insurance companies own 8.75 per cent each in it.

Source: TMH Ramesh Singh

Q.7) “R. N. Malhotra committee” is related to which of the following?

- a) Insurance sector
- b) Tourism sector
- c) Aviation sector
- d) Pension sector

ANS: A

Explanation: Under the process of economic reforms an Insurance Reforms Committee (IRC) was set up in April 1993 under the chairmanship of the ex-RBI Governor R. N. Malhotra. The committee handed over its report (January 1994) with the following major suggestions:

1. Decontrolling insurance sector, i.e., allowing Indian as well as foreign private sector insurance companies to enter the sector (the government did it in 1999 passing the IRDA Act).
2. Restructuring the LIC and the GIC and cutting down the government’s holding in them to 50 per cent (no follow up still, but the private insurance companies demanding it anxiously. The NDA government had taken steps in this area, but the UPA government has no such plans.) Late 2012, the government started sale of the LIC shares but to public sector undertakings—seen as a welcome move.
3. Delinking GIC and its four subsidiaries (which were done in 2000).
4. Discarding the system of licensing of surveyors by the controller of Insurance.

5. Restructuring the Tariff Advisory Committee.
6. Setting up a regulatory authority for the insurance industry (the IRDA set up in 2000).

Source: TMH Ramesh Singh

Q.8) Consider the following statements regarding PMFBY (Pradhan Mantri Fasal Bima Yojana):

1. It provides financial support to farmers suffering crop loss or damage arising out of unforeseen events.
2. All farmers including share croppers and tenant farmers are eligible for this scheme.

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: PMFBY aims at supporting sustainable production in agriculture sector by way of:

1. Providing financial support to farmers suffering crop loss/damage arising out of unforeseen events.
2. Stabilizing the income of farmers to ensure their continuance in farming.
3. Encouraging farmers to adopt innovative and modern agricultural practices.
4. Ensuring credit worthiness of the farmers, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting the farmers from production risks.

All farmers including sharecroppers and tenant farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible. Initially, it was compulsory for loanee farmers. However, now it has been made voluntary for all farmers, including loanee farmers.

Source: TMH Ramesh Singh

Q.9) Consider the following statements regarding pradhan mantri kisan maan-dhan yojana (PM-KMY):

1. It covers all types of farmers.
2. The entry age for yojana is 18 to 50 years.

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: pradhan mantri kisan maan-dhan yojana (PM-KMY) objective is to provide social security to Small and Marginal Farmers in their old age when they have no means of livelihood and minimal or no savings to take care of their expenses.

Beneficiaries:

1. Small and Marginal Farmers (Cultivable land up to 2 hectares as per land records of the concerned State/UT)
2. Entry Age between 18 to 40 years
3. Exclusions: Few categories of beneficiaries of higher economic status; Small and Marginal Farmers covered under any other statutory social security schemes such as National Pension

Scheme (NPS), Employees' State Insurance Corporation scheme, Pradhan Mantri Shram Yogi Maan Dhan Yojana (PM-SYM), etc.

Source: TMH Ramesh Singh

Q.10) Consider the following statements regarding pilgrimage rejuvenation and spiritual augmentation drive (PRASAD) scheme:

1. It is a central sponsored scheme.
2. It aims to promote local art, culture, handicraft, cuisine, etc.

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: pilgrimage rejuvenation and spiritual augmentation drive (PRASAD) scheme objectives:

1. Integrated development of pilgrimage destinations in a planned, prioritized and sustainable manner to provide complete religious tourism experience.
2. Harness pilgrimage tourism for its direct and multiplier effect upon employment generation and economic development.
3. Enhancing the tourist attractiveness in a sustainable manner by developing world class infrastructure in the religious destinations.
4. Promote local art, culture, handicraft, cuisine, etc.

It is a Central Sector Scheme. The scheme aims at infrastructure development such as entry points (road, rail and water transport), last mile connectivity, basic tourism facilities like Information/ Interpretation Centers, ATM/ money exchange, eco-friendly modes of transport etc.

1. For components within public funding, Central Government will provide 100% fund. For improved sustainability of the project, efforts shall be made to involve PPP and CSR as well.
2. Centre has included Gangotri and Yamunotri in Uttarakhand, Amarkantak in Madhya Pradesh and Parasnath in Jharkhand in the scheme

Source: FORUMIAS

Economy-Infrastructure and Communication

Q.1) Which of the following measure/measures is/are attract the private sector investment in Infrastructure?

1. Bundling an infrastructure project.
2. Simplification and transparency in the clearance procedures.
3. Providing credible and independent regulatory framework.

Choose the correct answer from below given codes:

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

ANS: C

Explanation: Experts have suggested for expanding public investment in the sector supplemented duly by a vigorous effort of attracting private investment (domestic as well as foreign).

Creating the conducive environment to attract private investment in infrastructure should include:

1. Simplification and transparency in the clearance procedures;
2. Unbundling an infrastructure project so that the private sector may go for only those unbundled segment of the project whose they are able to bear; and
3. Providing credible and independent regulatory framework so that the private players get fair treatment.

Source: TMH Ramesh Singh

Q.2) Which of the following difficulty/difficulties faced by the government sector while provision of Infrastructure services?

1. Adequate scale of investment
2. Technical efficiency
3. Competitive market structure

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Putting in place the quality and efficient infrastructure services is essential to realize the full potential of the growth impulses surging through the Indian economy.

1. There is now a widespread consensus (now clearly accepted by the Planning Commission) that exclusive dependence on the government for the provision of all infrastructure services introduces difficulties concerning adequate scale of investment, technical efficiency, proper enforcement of user charges, and competitive market structure.
2. At the same time, complete reliance on private production, particularly without appropriate regulation, is also not likely to produce optimal outcomes.

Source: TMH Ramesh Singh

Q.3) Which of the following is/are components of “Integrated Power Development Scheme”?

1. Strengthening of sub-transmission and distribution networks in the urban areas
2. Underground cabling
3. Schemes for Enterprise Resource Planning (ERP) and IT enablement of balance urban towns are included under IPDS

Choose the correct answer from below given codes:

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

ANS: D

Explanation: In December 2014, the GoI launched a new programme – IPDS (Integrated Power Development Scheme) – a centrally sponsored scheme (CSS) with a Central grant between 60 to 85 per cent.

1. Strengthening of sub-transmission and distribution networks in the urban areas.
2. Metering of distribution transformers / feeders / consumers in the urban areas.
3. IT enablement of distribution sector and strengthening of distribution network under R-APDRP for 12th and 13th Plans by carrying forward the approved outlay for R-APDRP to IPDS.
4. Schemes for Enterprise Resource Planning (ERP) and IT enablement of balance urban towns are also included under IPDS. Scope of IT enablement has been extended to all 4041 towns as per Census 2011.
5. Underground cabling to include additional demand of States and smart metering solution for performing UDAY States and Solar panels on Govt. buildings with net-metering are also permissible under the scheme.

Source: TMH Ramesh Singh

Q.4) “Parichaalan” app is related to which of the following?

- a) Airways
- b) Roads
- c) Railways
- d) Shipping

ANS: C

Explanation: Minister of Railways, Shri Suresh Prabhakar Prabhu today launched Parichaalan – a Mobile Application for Railway Freight Operations developed by Centre for Railway Information Systems (CRIS) the IT arm of Ministry of Railways.

1. ‘Parichaalan’ is a mobile application conceptualized and developed by CRIS to make decision making on freight operations absolutely easy and user friendly.
2. The application is a powerful tool as it not only represents data in a pictorial and graphical manner that is easily comprehensible but also makes the information dynamic and current in nature.
3. Instead of focusing on post-mortems, Parichaalan moves operations management systems to a higher level of real time decision making.

Source: TMH Ramesh Singh

Q.5) Consider the following statements regarding national highways:

1. National highways consist of 4 percent of road network
2. National highways carry 40 percent of road traffic
3. National Highways Authority of India is mandated to implement National Highways Development Project (NHDP)

Choose the correct answer from below given codes:

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

ANS: C

Explanation: National Highways Authority of India is mandated to implement National Highways Development Project (NHDP) which is India's largest ever Highways Project in a phased manner.

1. The National Highways have a total length of 72,000 (approx) km to serve as the arterial network of the country.
2. Although National Highways constitute only about 2 per cent of the road network, it carries 40 per cent of the total road traffic.
3. Rapid expansion of passenger and freight traffic makes it imperative to improve the road network in the country.
4. Accordingly, Government of India launched major initiatives to upgrade and strengthen National Highways through various phases of National Highways Development Project (NHDP).

Source: <https://nhai.gov.in/#/about-nhdp>

Q.6) Consider the following statements regarding "Heli Sewa" portal:

1. It is an initiative of NITI Aayog to create an ecosystem between the helicopter operators and the district authorities to promote travel, tourism and enhance last mile connectivity.
2. It will facilitate the helicopter operators to obtain permissions, approvals and clearances, etc. within 48 hours and will thus reduce the hurdles of obtaining permissions in physical format.

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 Heli Sewa Portal is an initiative of Ministry of Civil Aviation and a platform to create an ecosystem between the helicopter operators and the district authorities to promote travel, tourism and enhance last mile connectivity. It will further boost the helicopter industry and economy on national level.

1. The Heli Sewa platform will facilitate operators to file their landing requests and intimate the district authorities' online using digital platform to undertake commitments at short notice for the corporate, charter, VIP flying, HEMS, Medical sorties, etc.
2. This platform will facilitate the helicopter operators to obtain permissions, approvals and clearances, etc. within 48 hours and will thus reduce the hurdles of obtaining permissions in physical format.
3. The Heli Sewa is a dynamic portal and will also act as a ready reckoner for the operators and district authorities with an option to update new helipads being developed over a period of time.

4. The district authorities have the facility to upload/ update helipad details in their respective districts specifying the available infrastructure at the respective helipads for the convenience of the helicopter operators.

Source: TMH Ramesh Singh

Q.7) Consider the following statements regarding “Smart city mission”:

1. It is operated as central sponsored scheme.
2. 100crore per city per year funding provided under the mission.

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 Smart City Mission will be operated as a Centrally Sponsored Scheme (CSS) and the central government proposes to give it financial support to the extent of Rs. 48,000 crore over five years, i.e. on an average Rs. 100 crore per city per year.

1. An equal amount, on a matching basis, will have to be contributed by the state/ULB; therefore, nearly one lakh crore of government/ULB funds will be available for smart cities development.
2. In the first phase of implementation, twenty cities have been shortlisted to roll out the programme.

Source: TMH Ramesh Singh

Q.8) Consider the following statements regarding the “Petroleum and Natural Gas Regulatory Board”:

1. It is established under executive resolution in 2006.
2. It regulates production of crude oil and natural gas.

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: The Petroleum and Natural Gas Regulatory Board (PNGRB) was constituted under The Petroleum and Natural Gas Regulatory Board Act, 2006 (NO. 19 OF 2006) notified via Gazette Notification dated 31st March, 2006.

1. The Act provide for the establishment of Petroleum and Natural Gas Regulatory Board to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to promote competitive markets and for matters connected therewith or incidental thereto.
2. Further as enshrined in the act, the board has also been mandated to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as and to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country.

Source: <https://pngrb.gov.in/eng-web/story.html>

Q.9) “The law which says that people generally spend a smaller part of their budget on food as their income rises” is related to which of the following?

- a) Law of self interest
- b) Greesham’s law
- c) Goodhart’s law
- d) Engel’s law

ANS: D

Explanation: The Engel’s law which says that people generally spend a smaller part of their budget on food as their income rises. The idea was suggested by Ernst Engel, a Russian statistician in 1857.

Source: TMH Ramesh Singh

Q.10) Which of the following are international credit rating agencies?

- 1. Standard and Poor’s (S&P)
- 2. Moody’s Investor Services
- 3. FITCH
- 4. Dominion Bond Rating Service (DBRS)

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Presently, India is rated by six international credit rating agencies, namely Standard and Poor’s (S&P), Moody’s Investor Services, FITCH, Dominion Bond Rating Service (DBRS), the Japanese Credit Rating Agency (JCRA), and the Rating and Investment Information Inc., Tokyo(R&I). Information flow to these credit rating agencies has been streamlined.

Source: TMH Ramesh Singh

Economy-IPRs and Indian IPR battles

Q.1) Consider the following statements regarding “World Intellectual Property Organization”:

1. It is the global forum for intellectual property (IP) services, policy, information and cooperation.
2. It is a self-funding agency of the United Nations, with 193 member states.

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: WIPO is the global forum for intellectual property (IP) services, policy, information and cooperation. We are a self-funding agency of the United Nations, with 193 member states. Our mission is to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all.

Source: <https://www.wipo.int/about-wipo/en/>

Q.2) On which of the following date world intellectual property day is observed annually?

- a) February 28
- b) March 21
- c) April 26
- d) May 14

ANS: C

Explanation: Every April 26, we celebrate World Intellectual Property Day to learn about the role that intellectual property (IP) rights play in encouraging innovation and creativity.

1. World Intellectual Property 2022 recognizes the huge potential of young people to find new and better solutions that support the transition to a sustainable future.
2. Across the globe, young people are stepping up to innovation challenges, using their energy and ingenuity, curiosity and creativity to steer a course towards a better future.
3. Innovative, energetic and creative minds are helping to drive the changes we need to move to a more sustainable future. Discover how intellectual property rights can support the youth of tomorrow to create a better future.
4. This year the theme of World Intellectual Property Day is “IP and Youth: Innovating for a Better Future” and celebrates youth-led innovation and creativity.

Source: <https://www.wipo.int/ip-outreach/en/ipday/2022/about.html>

Q.3) Which of the following works are protected under copyright throughout the world?

1. Films
2. Plays
3. Mathematical concepts

Choose the correct answer from below given codes:

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

ANS: B

Explanation: Exhaustive lists of works covered by copyright are usually not to be found in legislation. Nonetheless, broadly speaking, works commonly protected by copyright throughout the world include:

1. literary works such as novels, poems, plays, reference works, newspaper articles;
2. computer programs, databases;
3. films, musical compositions, and choreography;
4. artistic works such as paintings, drawings, photographs, and sculpture;
5. architecture; and
6. Advertisements, maps, and technical drawings.

Copyright protection extends only to expressions and not to ideas, procedures, and methods of operation or mathematical concepts as such.

Source: <https://www.wipo.int/copyright/en/>

Q.4) “Berne Convention” is related to which of the following?

- a) Copy right
- b) Patents
- c) Industrial designs
- d) Trade marks

ANS: A

Explanation: The Berne Convention for the Protection of Literary and Artistic Works, usually known as the Berne Convention, is an international agreement governing copyright, which was first accepted in Berne, Switzerland, in 1886.

Source: <https://www.wipo.int/treaties/en/ip/berne/>

Q.5) Consider the following statements regarding patents:

1. It is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.
2. To get a patent, technical information about the invention must be disclosed to the public in a patent application.

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: A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

To get a patent, technical information about the invention must be disclosed to the public in a patent application.

Source: <https://www.wipo.int/patents/en/>

Q.6) Consider the following statements regarding industrial designs:

1. Industrial designs are applied to products of industry and handicraft items.
2. The duration of the protection of industrial designs is at least to 10 years.

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: In principle, the owner of a registered industrial design or of a design patent has the right to prevent third parties from making, selling or importing articles bearing or embodying a design which is a copy, or substantially a copy, of the protected design, when such acts are undertaken for commercial purposes.

1. Industrial designs are applied to a wide variety of products of industry and handicraft items: from packages and containers to furnishing and household goods, from lighting equipment to jewelry, and from electronic devices to textiles.
2. Industrial designs may also be relevant to graphic symbols, graphical user interfaces (GUI), and logos. Industrial design rights are granted for a limited period.
3. The duration of the protection of industrial designs varies from country to country, but it amounts at least to 10 years.
4. In many countries, the total duration of protection is divided into successive renewable periods.

Source: https://www.wipo.int/designs/en/faq_industrialdesigns.html

Q.7) Consider the following statements regarding “Rajiv Gandhi National Institute of Intellectual Property Management”:

1. It is located at Chennai.
2. It is a centre of excellence.
3. It conducts research in IP and prepares study reports and policy analysis papers on subject of current relevance for policy and lawmakers.

Choose the correct answer from below given codes:

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

ANS: C

Explanation: The Rajiv Gandhi National Institute of Intellectual Property Management has been established at Nagpur as a National center of excellence for training, management, research, education in the field of Intellectual Property (IP) Rights.

1. The main objectives of this institute is to cater to the need of training of Examiners of Patents, Designs, Trademarks and Geographical Indications, IP professionals, IP managers, imparting basic education to user communities, government functionaries and stake holders involved in creation, commercialization and management of intellectual property rights, facilitate research on IP related issues including preparation of study reports and policy analysis of relevance to Government.
2. Apart from this, Rajiv Gandhi NIIPM address the needs of increasing the general awareness and understanding of Government officers and users of IP systems including in universities and other educational institutions.
3. It will also conduct research in IP and prepare study reports and policy analysis papers on subject of current relevance for policy and lawmakers.

Source: <https://ipindia.gov.in/about-us-rg.htm>

Q.8) Consider the following statements regarding Indian Patent System:

1. The first legislation in India relating to patents was the Act VI of 1856.
2. The Indian Patents and Designs Act, 1911, brought patent administration under the management of Controller of Patents for the first time.
3. After Independence, Government of India constituted a committee under the Chairmanship of Justice Bakshi Tek Chand, in 1949 to review the patent law in India.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The first legislation in India relating to patents was the Act VI of 1856. The objective of this legislation was to encourage inventions of new and useful manufactures and to induce inventors to disclose secret of their inventions.

1. The Act was subsequently repealed by Act IX of 1857 since it had been enacted without the approval of the British Crown. Fresh legislation for granting ‘exclusive privileges’ was introduced in 1859 as Act XV of 1859.
2. This legislation contained certain modifications of the earlier legislation, namely, grant of exclusive privileges to useful inventions only and extension of priority period from 6 months to 12 months. This Act excluded importers from the definition of inventor.

3. This Act was based on the United Kingdom Act of 1852 with certain departures which include allowing assignees to make application in India and also taking prior public use or publication in India or United Kingdom for the purpose of ascertaining novelty.
4. The Indian Patents and Designs Act, 1911, (Act II of 1911) replaced all the previous Acts. This Act brought patent administration under the management of Controller of Patents for the first time. This Act was further amended in 1920 to enter into reciprocal arrangements with UK and other countries for securing priority.
5. In 1930, further amendments were made to incorporate, inter-alia, provisions relating to grant of secret patents, patent of addition, use of invention by Government, powers of the Controller to rectify register of patent and increase of term of the patent from 14 years to 16 years.
6. In 1945, an amendment was made to provide for filing of provisional specification and submission of complete specification within nine months.
7. After Independence, it was felt that the Indian Patents & Designs Act, 1911 was not fulfilling its objective. It was found desirable to enact comprehensive patent law owing to substantial changes in political and economic conditions in the country.

Accordingly, the Government of India constituted a committee under the Chairmanship of Justice (Dr.) Bakshi Tek Chand, a retired Judge of Lahore High Court, in 1949 to review the patent law in India in order to ensure that the patent system is conducive to the national interest.

Source: <https://ipindia.gov.in/history-of-indian-patent-system.htm>

Q.9) “The Dindigul lock and the Kandangi saree” recently awarded GI tags related to which of the following state?

- a) Tamil Nadu
- b) Andhra Pradesh
- c) Kerala
- d) Karnataka

ANS: A

Explanation: The products — the Dindigul lock and the Kandangi saree — were given the GI tag by the Geographical Indications Registry in Chennai.

While the application for the lock was made by the Dindigul Lock, Hardware and Steel Furniture Workers Industrial Co-operative Society Limited, the Amarar Rajeev Gandhi Handloom Weavers Co-operative Production and Sales Society Limited filed the application for the Kandangi saree.

Source: <https://www.thehindu.com/news/national/tamil-nadu/dindigul-lock-kandangi-saree-get-gi-tag>

Q.10) The validity term of a registered trademark in India is?

- a) 10 years
- b) 20 years
- c) 40 years
- d) Unlimited time

ANS: A

Explanation: The validity term of a registered trademark in India is ten years from the date of filing, renewable an unlimited number of times for a period of ten years.

1. A request to renew a trademark may be submitted within one year before the expiration of a trademark or 6 months after the expiration thereof upon payment of the surcharge.
2. A request for restoration of the mark can be filed within one year from the date of expiry of the validity term on payment of additional fees.

Source: TMH Ramesh Singh

Economy- Environment and Ecology

Q.1) “It is a system formed by the interaction of all living organisms with each other and with the physical and chemical factors of the environment in which they live, all linked by transfer of energy and material” is?

- a) Biotic system
- b) Abiotic system
- c) Ecosystem
- d) Hydrosphere

ANS: C

Explanation: All plants, animals and human beings depend on their immediate surroundings. Often they are also interdependent on each other.

1. This relation between the living organisms, as well as the relation between the organisms and their surroundings forms an ecosystem.
2. There could be an ecosystem of large rain forest, grassland, desert, mountains, lake, river, ocean and even a small pond.

Source: NCERT - Our Environment

Q.2) Consider the following statements regarding flora and fauna of Ladakh:

1. Groves of willows and poplars are seen in the valleys of Ladakh.
2. Robins, redstarts, Tibetan snowcock, raven and hoopoe are commonly found birds in Ladakh.

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: Due to high aridity, the vegetation is sparse. There are scanty patches of grasses and shrubs for animals to graze. Groves of willows and poplars are seen in the valleys.

1. During the summers, fruit trees such as apples, apricots and walnuts bloom. Several species of birds are sighted in Ladakh. Robins, redstarts, Tibetan snowcock, raven and hoopoe are common.
2. Some of these are migratory birds. The animals of Ladakh are wild goats, wild sheep, yak and special kinds of dogs.
3. The animals are reared to provide for the milk, meat and hides. Yak's milk is used to make cheese and butter. The hair of the sheep and goat is used to make woollens.

Source: NCERT – Our Environment

Q.3) Consider the following statements regarding “Amazon vegetation”:

1. The forests of Amazon are so thick that the dense “roof” created by leaves and branches does not allow the sunlight to reach the ground.
2. Orchids, bromeliads grow as plant parasites in Amazon forests.

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: Amazon Rainforests: As it rains heavily in this region, thick forests grow.

1. The forests are in fact so thick that the dense “roof” created by leaves and branches does not allow the sunlight to reach the ground.
2. The ground remains dark and damp. Only shade tolerant vegetation may grow here. Orchids, bromeliads grow as plant parasites.

Source: NCERT – Our Environment

Q.4) Which of the following tree/trees is/are found in tropical rain forests?

1. Ebony
2. Mahogany
3. Rosewood

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Tropical Evergreen Forests: These forests are also called tropical rainforests. These thick forests occur in the regions near the equator and close to the tropics.

1. These regions are hot and receive heavy rainfall throughout the year. As there is no particular dry season, the trees do not shed their leaves altogether. This is the reason they are called evergreen.
2. The thick canopies of the closely spaced trees do not allow the sunlight to penetrate inside the forest even in the day time. Hardwood trees like rosewood, ebony, and mahogany are common here.

Source: NCERT – Our Environment

Q.5) In which of the following place/places the tropical deciduous forest is/are found?

1. India
2. Northern Australia
3. Central America

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Tropical deciduous are the monsoon forests found in the large part of India, northern Australia and in Central America. These regions experience seasonal changes.

1. Trees shed their leaves in the dry season to conserve water. The hardwood trees found in these forests are sal, teak, neem and shisham.
2. Hardwood trees are extremely useful for making furniture, transport and constructional materials. Tigers, lions, elephants, langurs and monkeys are the common animals of these regions.

Source: NCERT – Our Environment

Q.6) Consider the following statements regarding “Mediterranean vegetation”:

1. Mediterranean trees adapt themselves to dry summers with the help of their thick barks and wax coated leaves which help them reduce transpiration.
2. Mediterranean regions are known as ‘Orchards of the world’ for their fruit cultivation.

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: D

Explanation: That most of the east and north east margins of the continents are covered by temperate evergreen and deciduous trees.

1. The west and south west margins of the continents are different. They have Mediterranean vegetation.
2. It is mostly found in the areas around the Mediterranean Sea in Europe, Africa and Asia, hence the name.
3. Mediterranean trees adapt themselves to dry summers with the help of their thick barks and wax coated leaves which help them reduce transpiration.
4. Mediterranean regions are known as ‘Orchards of the world’ for their fruit cultivation.

Source: NCERT – Our Environment

Q.7) Consider the following statements regarding tropical grasslands:

1. These occur on either side of the equator and extend till the tropics.
2. The grass can grow very tall, about 3 to 4 metres in height.

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: Tropical grasslands: These occur on either side of the equator and extend till the tropics. This vegetation grows in the areas of moderate to low amount of rainfall.

1. The grass can grow very tall, about 3 to 4 metres in height. Savannah grasslands of Africa are of this type.
2. Elephants, zebras, giraffes, deer, leopards are common in tropical grasslands.

Source: NCERT – Our Environment

Q.8) Which of the following pair/pairs is/are NOT correctly matched?

1. North America – Prairie
2. Brazil – Llanos
3. South Africa – Down

Choose the correct answer from below given codes:

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

ANS: C

Explanation:

Source: NCERT – Our Environment

Q.9) “Great Bear lake and Great Slave lake” are found in which of the following?

- a) South America
- b) North America
- c) Australia
- d) Europe

ANS: B

Explanation:



Source: NCERT – Our Environment

Q.10) Which of the following is celebrated as world water day?

- a) January 22
- b) February 22
- c) March 22
- d) April 22

ANS: C

Explanation: March 22 is celebrated as World Water Day when the need to conserve water is reinforced in different ways.

Source: NCERT – Our Environment

Environment- Protected Areas

Q1. Which of the following is/are marine protected area/areas?

1. Coringa
2. Fudam
3. Khijadia

Choose the correct answer from below given codes:

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

ANS: D

Explanation: A marine protected area (MPA) is essentially a space in the ocean where human activities are more strictly regulated than the surrounding waters - similar to parks we have on land.

These places are given special protections for natural or historic marine resources by local, state, territorial, native, regional, or national authorities.

S.No.	State/UT	Name of MPA	Legal Status	Area	Year of Notificaion
1	Andhra Pradesh	Coringa	Sanctuary	235.70	1978
2	Andhra Pradesh	Krishna	Sanctuary	194.81	1989
3	Andhra Pradesh	Pulicat Lake	Sanctuary	600.00	1980
4	Daman & Diu	Fudam	Sanctuary	2.18	1991
5	Goa	Chorao Island	Sanctuary	1.78	1988
6	Gujarat	Marine (Gulf of Kachchh)	National Park	162.89	1995
7	Gujarat	Marine (Gulf of Kachchh)	Sanctuary	295.03	1980
8	Gujarat	Khijadia	Sanctuary	6.05	1981
9	Kerala	Kadalundi Vallikkunnu	Community Reserve	1.50	2007
10	Maharashtra	Malvan Marine	Sanctuary	29.12	1987
11	Maharashtra	Thane Creek Flamingo	Sanctuary	16.905	2015
12	Odisha	Bhitarkanika	National Park	145.00	1998
13	Odisha	Bhitarkanika	Sanctuary	525.00	1975
14	Odisha	Chilka (Nalaban)	Sanctuary	15.53	1987
15	Odisha	Gahirmatha	Sanctuary	1435.00	1997
16	Odisha	Balukhand Konark	Sanctuary	71.72	1984
17	Tamil Nadu	Gulf of Mannar Marine	National Park	526.02	1980
18	Tamil Nadu	Point Calimere	Sanctuary	17.26	1967
19	Tamil Nadu	Pulicat Lake	Sanctuary	153.67	1980
20	Tamil Nadu	Pulicat Lake Block-A & Block-B	Sanctuary	124.0727	2013
21	West Bengal	Sundarbans	National Park	1330.10	1984
22	West Bengal	West Sundarbans	Sanctuary	556.45	2013
23	West Bengal	Haliday Island	Sanctuary	5.95	1976
24	West Bengal	Sajnakhali	Sanctuary	362.40	1976
25	West Bengal	Lothian Island	Sanctuary	38.00	1976
Total Area				6852.14	

Source: http://www.wiienviis.nic.in/Database/MPA_8098.aspx

Q.2) Consider the following statements regarding National Park:

1. An area, whether within a sanctuary or not, can be notified by the state government to be constituted as a National Park.
2. No human activity is permitted inside the national park except for the ones permitted by the Chief Wildlife Warden of the state.

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: An area, whether within a sanctuary or not, can be notified by the state government to be constituted as a National Park, by reason of its ecological, faunal, floral, geo-morphological, or zoological association or importance, needed to for the purpose of protecting & propagating or developing wildlife therein or its environment.

No human activity is permitted inside the national park except for the ones permitted by the Chief Wildlife Warden of the state under the conditions given in CHAPTER IV, WPA 1972.

Source: http://www.wiienviis.nic.in/Database/npa_8231.aspx

Q.3) Which of the following tiger reserve is NOT related to Karnataka state?

- a) Anshi – Dandeli tiger reserve
- b) Bhadra tiger reserve
- c) Nagarahole tiger reserve
- d) Bandhavgarh tiger reserve

ANS: D

Explanation: Karnataka have five tiger reserves, Nagarahole, Bhadra, and Anshi-Dandeli, apart from Bandipur and BRT Tiger Reserves.

Source: <https://www.thehindu.com/news/national/karnataka/mm-wildlife-sanctuary-to-be-tiger-reserve-soon/article30898527.ece>

Q.4) Which of the following wildlife sanctuary/sanctuaries is/are located in Andhra Pradesh?

1. Gundla Brahmeshwaram
2. Jogimatti
3. Arabhithittu

Choose the correct answer from below given codes:

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

ANS: A

Explanation: Any area other than area comprised with any reserve forest or the territorial waters can be notified by the State Government to constitute as a sanctuary if such area is of adequate ecological, faunal, floral, geo-morphological, natural or zoological significance, for the purpose of protecting, propagating or developing wildlife or its environment.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF NOVEMBER (SECOND WEEK), 2022

Some restricted human activities are allowed inside the Sanctuary area details of which are given in CHAPTER IV, WPA 1972.

S.No	Name of State	S.No.	Name of Protected Area	Year of Notification	Area (in km ²)
1	Andhra Pradesh	1	Coringa	1978	235.7
2		2	Gundla Brahmeswaram	1990	1193.68
3		3	Kambalakonda	2002	71.39
4		4	Koundinya	1990	357.6
5		5	Kolleru	1953	308.55
6		6	Krishna	1989	194.81
7		7	Nagarjuna Sagar-Srisailem	1978	2131.31
8		8	Nellapattu	1976	4.5892
9		9	Pulicat Lake	1976	600
10		10	Rollapadu	1988	6.14
11		11	Sri Lankamalleswara	1988	464.4282
12		12	Sri Penusila Narasimha	1997	1030.85
13		13	Sri Venkateswara	1985	172.35

Source: http://www.wiienviis.nic.in/Database/wls_8230.aspx

Q.5) “Neyyar, Peppara and Shendurney Wildlife Sanctuaries” are part of which of the following?

- a) Agasthyamalai biosphere reserve
- b) Nilgiri biosphere reserve
- c) Seshachalam Hills
- d) Panna biosphere reserve

ANS: A

Explanation: Biosphere reserves are sites established by countries and recognized under UNESCO's Man and the Biosphere (MAB) Programme to promote sustainable development based on local community efforts and sound science. The programme of Biosphere Reserve was initiated by UNESCO in 1971.

The purpose of the formation of the biosphere reserve is to conserve in situ all forms of life, along with its support system, in its totality, so that it could serve as a referral system for monitoring and evaluating changes in natural ecosystems.

Agasthyamalai	12.11.2001	1828	Neyyar, Peppara and Shendurney Wildlife Sanctuaries and their adjoining areas in Kerala.
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Source: http://www.wiienviis.nic.in/Database/br_8225.aspx

Q.6) Which of the following is NOT a Natural World Heritage Site of India?

- a) Western Ghats
- b) Nanda Devi
- c) Panna National Park
- d) Kaziranga National Park

ANS: C

Explanation: A UNESCO World Heritage Site is a place that is listed by the United Nations Educational, Scientific and Cultural Organization as of special cultural or physical significance.

Natural World Heritage Sites in India (As on December, 2020)

Sl. No.	Name of WH Site	State Location	Year of Notification	Area (sq.km)
1	Great Himalayan National Park Conservation Area	Himachal Pradesh	2014	905.4
2	Western Ghats	Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala	2012	7,953.15
3	Nanda Devi and Valley of Flowers National Parks	Uttarakhand	1988	630.00 87.50
4	Sundarbans National Park	West Bengal	1987	1,330.10
5	Kaziranga National Park	Assam	1985	429.96
6	Keoladeo National Park	Rajasthan	1985	28.73
7	Manas Wildlife Sanctuary	Assam	1985	391.00

Source: http://www.wiienviis.nic.in/Database/whs_pas_8227.aspx

Q.7) Which of the following is/are criteria to designate Important Bird Areas (IBA)?

1. Site of one or more globally threatened bird species.
2. Site of biome-restricted species.
3. Have exceptionally large numbers of migratory or congregatory birds.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Birds are excellent indicators of ecosystem health. The IBA programme of Birdlife International aims to identify, monitor and protect a global network of IBAs for conservation of the world's birds and associated biodiversity.

The IBAs serve as conservation areas for protection of birds at the global, regional or sub-regional level. According to Birdlife International, designation of IBAs is based on standardized criteria, namely

1. hold significant numbers of one or more globally threatened bird species,
2. be one of a set of sites that together hold a suite of restricted-range species or biome-restricted species and
3. have exceptionally large numbers of migratory or congregatory birds.

The IBAs contain a range of habitats, such as wetlands, mudflats, microhabitats in biodiversity hotspots, grasslands and scrublands, making them excellent indicators of biodiversity richness (India's 5th National Report to the Convention on Biological Diversity, 2014).

1. The Bombay Natural History Society (BNHS; www.bnhs.org) and Birdlife International have identified 467 IBAs in India (Islam and Rahmani, 2004).
2. Forty percent of these IBAs fall outside the PA network and thus form an important tool for landscape-level conservation planning. BNHS has also prepared a list of 96 new/potential sites which can be designated as IBAs in the future.

Source: http://www.wiienviis.nic.in/Database/IBA_8463.aspx

Q.8) Recently eight cheetahs were landed in Madhya Pradesh's Gwalior is related to which of the following country?

- a) Namibia
- b) South Sudan
- c) Kenya
- d) Zimbabwe

ANS: A

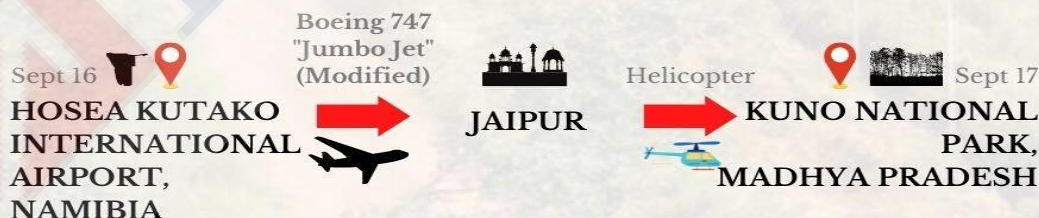
Explanation: Over 70 years after they went extinct, eight cheetahs landed in India from Namibia.

1. The big cats were flown in on a modified passenger B-747 Jumbo Jet, which took off from Hosea Kutako International Airport in Windhoek and landed in Madhya Pradesh's Gwalior.
2. The cheetahs will be released by Prime Minister Narendra Modi, on the occasion of his birthday today, at Kuno National Park. On board the jet were eight Namibian wild cheetahs, five females and three males.

Reintroducing cheetahs

- **8** African cheetahs
3 males and **5** females
will arrive this week!

- India had declared cheetahs extinct in **1952**



Source: <https://indianexpress.com/article/explained/cheetah-india-relocation-project-narendra-modi-big-cats-kuno-national-park-8156455/>

Q.9) Consider the following statements regarding “Ramsar sites in India”:

1. India has 75 Ramsar Sites.
2. Uttar Pradesh has maximum number of sites.
3. Hygam Wetland Conservation Reserve and Shallbugh Wetland Conservation Reserve sites are located in Nagaland.

Choose the correct answer from below given codes:

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

ANS: A

Explanation: India adds 11 more wetlands to the list of Ramsar sites to make total 75 Ramsar sites covering an area of 13,26,677 ha in the country in the 75th year of Independence.

1. The 11 new sites include: Four (4) sites in Tamil Nadu, Three (3) in Odisha, Two (2) in Jammu & Kashmir and One (1) each in Madhya Pradesh and Maharashtra.
2. Designation of these sites would help in conservation and management of wetlands and wise use of their resources. India is one of the Contracting Parties to Ramsar Convention, signed in Ramsar, Iran, in 1971.
3. India signed it on 1st Feb 1982. During 1982 to 2013, a total of 26 sites were added to the list of Ramsar sites, however, during 2014 to 2022, the country has added 49 new wetlands to the list of Ramsar sites.
4. During this year itself (2022) a total of 28 sites have been declared as Ramsar sites. Based on the date of designation mentioned on Ramsar Certificate, the number is 19 for this year (2022) and 14 for previous year (2021).
5. Tamil Nadu has maximum no. of Ramsar sites (14 nos), followed by UP which has 10 nos. of Ramsar sites.
6. Hygam Wetland Conservation Reserve and Shallbugh Wetland Conservation Reserve sites are located in Jammu & Kashmir.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1851484>

Q.10) “Mollem” national park is located in which of the following state?

- a) Jharkhand
- b) Goa
- c) Tamil Nadu
- d) Kerala

ANS: B

Explanation: Spread over 240 sq km in the Western Ghats, Mollem National Park is located in Sanguem taluk in Goa close to the border with Karnataka.

1. The reserve also has several temples dating back to the Kadamba Dynasty. The national park is located near the town of Mollem, 60 km south east from Panaji, and the capital city of Goa.
2. The Mormugao–Londa railway line also passes amidst thick jungles of the national park. The park was earlier known as Mollem game sanctuary.
3. It was declared a wildlife sanctuary in 1969 and renamed Bhagwan Mahaveer Sanctuary. The core area of the sanctuary spread over 107 sq km was named Mollem National Park in 1978.
4. Since then the national park is called Bhagwan Mahaveer Sanctuary and Mollem National Park.
5. Several species of snakes including the King Cobra, Hump-nosed pit viper, Indian rock python and Malabar pit viper are found in the park.

Source: The Hindu

Environment- Bio-Diversity and Conservation

Q.1) Consider the following statements regarding green house gases/effect:

1. Green house gases absorb long wave radiation from the earth and emit it again towards the earth.
2. Without green house effect the average temperature at surface of Earth would have been more than 30 degrees Celsius.

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 greenhouse effect is a naturally occurring phenomenon that is responsible for heating of Earth's surface and atmosphere.

You would be surprised to know that without greenhouse effect the average temperature at surface of Earth would have been a chilly -18°C rather than the present average of 15°C .

Source: NCERT – Environmental Issues

Q.2) Which of the following is/are comes under in-situ conservation measures?

1. National Parks
2. Wildlife sanctuaries
3. Biosphere reserves

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Conserving the animals and plants in their natural habitats is known as in-situ conservation. The established natural habitats are:

1. National parks
2. Sanctuaries
3. Biosphere reserves and
4. Reserved forests
5. Protected forests

Source: Shankar IAS Environment book

Q.3) The “Red Data Book” is often seen in news is related to which of the following?

1. IUCN
2. UNEP
3. WEF
4. UNESCO

ANS: A

Explanation: Species judged as threatened are listed by various agencies as well as by some private organizations. The most cited of these lists is the Red Data Book. It is a loose-leaf volume of information on the status of many kinds of species.

1. This volume is continually updated and is issued by the International Union for Conservation of Nature (IUCN) located in Morges, Switzerland.
2. “Red” of course is symbolic of danger that the species both plants and animals presently experience throughout the globe.
3. The Red Data Book was first issued in 1966 by the IUCN’s Special Survival Commission as a guide for formulation, preservation and management of species listed.
4. In this Book, information for endangered mammals and birds are more extensive than for other groups of animals and plants, coverage is also given to less prominent organisms facing extinction.
5. The pink pages in this publication include the critically endangered species. As the status of the species changes, new pages are sent to the subscribers.

Source: Shankar IAS Environment book

Q.4) “European roller, red-backed shrike and rufous-tailed scrub-robin” are recently seen in news is related to?

- a) Reptiles
- b) Birds
- c) Butterflies
- d) Amphibians

ANS: B

Explanation: Last month, in a first, bird watchers from across the country congregated at Bhuj in Kutch district, Gujarat.

They documented eight birds — European roller, red-backed and red-tailed shrike, spotted flycatcher, rufous-tailed scrub-robin, greater white throat, common cuckoo and blue-cheeked bee-eater — that landed in Gujarat after marathon flights from Central Asia and Europe.

Source: <https://www.thehindu.com/life-and-style/annual-migration-of-birds-across-the-indian-subcontinent-has-begun/>

Q.5) In which of the following hills shoals (tropical grasslands) is/are found?

1. Nilgiri hills
2. Palani hills
3. Anaimalai hills

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Extensive grass lands interspersed with densely forested gorges of evergreen vegetation known as sholas occur in the Nilgiris (an offshoot of Western ghats). Sholas also occur in Anaimalai and Palani hills.

1. The rain forests of the Western ghats have dense and lofty trees with much species diversity. Mosses, ferns, epiphytes, orchids, lianas and vines, herbs, shrubs make diverse habitat.
2. Ebony trees predominate in these forests. A variety of tropical orchids are found. Stratification in rain forests is very distinct three horizontal layers are distinguished.

Source: Shankar IAS Environment book

Q.6) Consider the following statements regarding "lichens":

1. It is a combination of an alga and bacteria.
2. They are found in rivers and ground water.

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: A lichen is a peculiar combination of an alga and a fungus– the two live deriving mutual benefit.

1. They are group of greyish green plants which grow on rocks, tree-trunks, dead wood, etc.
2. The algae manufactures food which becomes available to the fungus, and the absorbs and retains water and thus keeps the algal cells moist. A example of symbiosis.
3. They are most common in wetlands, rare in rivers and streams and are not found in ground water.

Source: Shankar IAS Environment book

Q.7) Consider the following statements regarding “Malabar Civet”:

1. It is endemic to India and was first reported from Kerala.
2. It is nocturnal in nature and found exclusively in the Western Ghats.

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: Malabar Civet is considered to be one of the world’s rarest mammals. It is endemic to India and was first reported from Travancore, Kerala.

1. It is nocturnal in nature and found exclusively in the Western Ghats.
2. Habitat: Wooded plains and hill slopes of evergreen rainforests

Source: Shankar IAS Environment book

Q.8) Which of the following is/are insectivorous plants?

1. Drosera
2. Aldrovanda
3. Nepenthes

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Insectivorous plants of India:

1. **Drosera or Sundew:** inhabiting wet infertile soils or marshy places. The tentacles on the leaves secrete a sticky fluid that shines in the sun like dewdrops. Therefore the Drosera are commonly known as ‘sundews’. When an insect lured by these glistening drops alights on the leaf surface it gets stuck in this fluid and are absorbed and digested.
2. **Aldrovanda:** is a freefloating, rootless aquatic plant, the only species found in India, occurs in the salt marshes of Sunderbans, south of Calcutta. It also grows in fresh water bodies like ponds, tanks and lakes.
3. **Nepenthes:** The members of the family are commonly known as ‘pitcher plants’ because their leaves bear jar-like structures.

Source: Shankar IAS Environment book

Q.9) Consider the following statements regarding “sea grass”:

1. They grow in shallow coastal waters with sandy or muddy bottoms & require comparatively calm areas.
2. Major Sea grass meadows in India occur along the south east coast of Tamil Nadu and in the lagoons of a few Lakshadweep Islands.

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: Sea grasses are (angiosperms) marine flowering plants that resemble grass in appearance. They produce flowers; have strap-like or oval leaves and a root system.

1. They grow in shallow coastal waters with sandy or muddy bottoms & require comparatively calm areas. They are the only group of higher plants adapted to life in the salt water.
2. Major Sea grass meadows in India occur along the south east coast of Tamil Nadu and in the lagoons of a few Lakshadweep Islands. There are few grass beds around Andaman and Nicobar islands also.

Source: Shankar IAS Environment book

Q.10) “Kaziranga national park” often seen in news is related to?

- a) Assam
- b) Arunachal Pradesh
- c) Jharkhand
- d) West Bengal

ANS: A

Explanation: Kaziranga National Park is a protected area in the northeast Indian state of Assam.

1. Spread across the floodplains of the Brahmaputra River, its forests, wetlands and grasslands are home to tigers, elephants and the world’s largest population of Indian one-horned rhinoceroses.
2. Ganges River dolphins swim in the park’s waters. It’s visited by many rare migratory birds, and gray pelicans roost near Kaziranga village.

Source: Shankar IAS Environment book

Revision

Q.1) Consider the following statements regarding “PM – Gati Shakti”:

1. It is a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.
2. It is based on six pillars.

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: Prime Minister launched PM Gati Shakti - National Master Plan for Multi-modal Connectivity, essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.

1. The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.
2. PM Gati Shakti will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc.
3. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
4. It will also leverage technology extensively including spatial planning tools with ISRO (Indian Space Research Organisation) imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics). More details of the Plan can be found here.

PM Gati Shakti is based on six pillars:

1. **Comprehensiveness:** It will include all the existing and planned initiatives of various Ministries and Departments with one centralized portal. Each and every Department will now have visibility of each other's activities providing critical data while planning & execution of projects in a comprehensive manner.
2. **Prioritization:** Through this, different Departments will be able to prioritize their projects through cross-sectoral interactions.
3. **Optimization:** The National Master Plan will assist different ministries in planning for projects after identification of critical gaps. For the transportation of the goods from one place to another, the plan will help in selecting the most optimum route in terms of time and cost.
4. **Synchronization:** Individual Ministries and Departments often work in silos. There is lack of coordination in planning and implementation of the project resulting in delays. PM Gati Shakti will help in synchronizing the activities of each department, as well as of different layers of governance, in a holistic manner by ensuring coordination of work between them.
5. **Analytical:** The plan will provide the entire data at one place with GIS based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.

6. Dynamic: All Ministries and Departments will now be able to visualize, review and monitor the progress of cross-sectoral projects, through the GIS platform, as the satellite imagery will give on-ground progress periodically and progress of the projects will be updated on a regular basis on the portal. It will help in identifying the vital interventions for enhancing and updating the master plan.

Source: <https://www.india.gov.in/spotlight/pm-gati-shakti-national-master-plan-multi-modal-connectivity>

Q.2) Which of the following act is first enacted in India?

- a) The Copyright Act
- b) The Patents Act
- c) The Trademark Act
- d) The Designs Act

ANS: A

Explanation: The Copyright Act, 1957, Patents Act, 1970, Trade Mark Act, 1999, The Designs Act, 2000, The Geographical Indications of Goods (Registration and Protection) Act, 1999, The Protection of Plant Varieties and Farmers' Rights Act, 2001 and The Semi Conductor Integrated Circuits Layout Design Act, 2000.

Source: TMH Ramesh Singh

Q.3) "CIPAM" is often seen in news is related to which of the following?

- 1. Infrastructure
- 2. Intellectual Property Rights
- 3. Sustainable Development
- 4. Financial Inclusion

ANS: B

Explanation: A professional body under the aegis of Department for Promotion of Industry and Internal Trade (DPIIT) which ensures focused action on issues related to IPRs and addresses the 7 identified objectives of the policy.

- 1. CIPAM assists in simplifying and streamlining of IP processes, apart from undertaking steps for furthering IPR awareness, commercialization and enforcement.
- 2. CIPAM in partnership with industry associations has conducted IPR awareness programmes in various states.
- 3. These programs received a very positive feedback from business owners, students, academicians, etc.
- 4. The IPR Awareness Campaign is being conducted in schools, universities and industries across India.

Source: <https://cipam.gov.in/index.php/about/cipam/>

Q.4) Consider the following statements regarding “India State of Forest Report (ISFR):

1. It is an assessment of India’s forests for every five years.
2. It is conducted by Forest Survey of 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: B

Explanation: Minister for Environment, Forest and Climate Change, released the ‘India State of Forest Report 2021’ prepared by the Forest Survey of India (FSI) which has been mandated to assess the forest and tree resources of the country.

1. Sharing the findings, the Minister informed that the total forest and tree cover of the country is 80.9 million hectare which is 24.62 percent of the geographical area of the country.
2. As compared to the assessment of 2019, there is an increase of 2,261 sq km in the total forest and tree cover of the country.
3. The Minister expressed happiness over the fact that the present assessment reveals that 17 states/UTs have above 33 percent of the geographical area under forest cover and stated that the focus of the government under the leadership of Prime Minister Shri Narendra Modi is not just to conserve the forests quantitatively but to enrich it qualitatively.
4. The ISFR-2021 provides information on forest cover, tree cover, mangrove cover, and growing stock, carbon stock in India’s forests, forest fire monitoring, and forest cover in tiger reserve areas, above ground estimates of biomass using SAR data & climate change hotspots in Indian forests.
5. In tune with the Government of India’s vision of digital India and the need for integration of digital data sets, FSI has adopted using the vector boundary layers of various administrative units up to districts level as provided by Survey of India along with digital open series topo sheets, in order to ensure comprehensive compatibility with the geographical areas as reported in Census, 2011.
6. The **biennial assessment of forest cover** of the country using mid-resolution Satellite data is based on interpretation of LISS-III data from Indian Remote Sensing satellite data (Resourcesat-II) with a spatial resolution of 23.5 meters with the scale of interpretation 1:50,000 to monitor forest cover and forest cover changes at District, State and National level.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1789635>

Q.5) Consider the following statements regarding Vande Bharat Trains:

1. It is an indigenously designed and manufactured semi high speed and self-propelled train.
2. The first Vande Bharat was manufactured by the Integral Coach Factory (ICF), Chennai as part of the ‘Make in India’ programme, at a cost of about Rs. 1000crore.

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: Vande Bharat Trains is an indigenously designed and manufactured semi high speed, self-propelled train that is touted as the next major leap for the Indian Railways in terms of speed and passenger convenience since the introduction of Rajdhani trains.

1. The first Vande Bharat was manufactured by the Integral Coach Factory (ICF), Chennai as part of the 'Make in India' programme, at a cost of about Rs. 100 crore.
2. The Vande Bharat was India's first attempt at adaptation of the train set technology compared with conventional systems of passenger coaches hauled by separate locomotives.
3. The train set configuration, though complex, is faster, easier to maintain, consumes less energy, and has greater flexibility in train operation.

Source: PIB

Q.6) "Abohar Wildlife Sanctuary" is often seen in news is related to which of the following state?

- a) Gujarat
- b) Punjab
- c) Maharashtra
- d) Himachal Pradesh

ANS: B

Explanation: Threatened by untamed dogs and stray cattle, the blackbuck, Punjab's State animal, is fighting for survival at the Abohar Wildlife Sanctuary in the Fazilka district.

Change in land use and cropping patterns across the region over the years has also disturbed the natural habitat and consequent fall in the population of this majestic species.

Source: <https://www.thehindu.com/news/national/blackbucks-are-fighting-for-survival-in-punjab/article30558658.ece>

Q.7) "Velavedar Blackbuck national park" is often seen in news is located in which of the following state?

- a) Gujarat
- b) Madhya Pradesh
- c) Tamil Nadu
- d) Karnataka

ANS: A

Explanation: This beautiful (Velavedar Blackbuck national park), 34-sq-km park that is an hour's drive north of Bhavnagar (Gujarat), encompasses large areas of pale, custard-coloured grassland stretching between two seasonal rivers and is famous for its blackbucks – beautiful, fast antelope that sport elegant spiraling horns as long as 65cm in mature males.

1. Some 1800 inhabit the park, alongside blue bulls (India's largest antelope) and birds such as wintering harriers from Siberia (about 2000 of them most years).
2. There are over 120 species of birds that can be found in the park and around. If you're lucky, you may even spot wolves! The best time to visit the sanctuary is early in the morning when chances of seeing the wolves are a lot more.
3. The sanctuary was established in July 1976, as an initial protected area of about 18 sq km. In 1980, another 16 sq km were added to increase the total area to 34 sq km.
4. Even though this is one of the smallest national parks of the country, it packs in a robust amount of species for the wildlife lover.

Source: SHANKAR IAS Environment

Q.8) What is the term of a patent in the Indian system?

- a) 10 years
- b) 20 years
- c) 30 years
- d) Unlimited period

ANS: B

Explanation: A Patent is a statutory right for an invention granted for a limited period of time to the patentee by the Government, in exchange of full disclosure of his invention for excluding others, from making, using, selling, importing the patented product or process for producing that product for those purposes without his consent.

The term of every patent granted is 20 years from the date of filing of application. However, for application filed under national phase under Patent Cooperation Treaty (PCT), the term of patent will be 20 years from the international filing date accorded under PCT.

Source:https://ipindia.gov.in/writereaddata/Portal/Images/pdf/Final_FREQUENTLY_ASKED_QUESTIONS_

Q.9) Which of the following is/are criteria of invention to grant as patent?

- 1. It should be novel.
- 2. It should be non – obvious.
- 3. It should be capable of Industrial application.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: An invention is patentable subject matter if it meets the following criteria –

- 1. It should be novel.
- 2. It should have inventive step or it must be non-obvious
- 3. It should be capable of Industrial application.
- 4. It should not attract the provisions of section 3 and 4 of the Patents Act 1970.

Source:https://ipindia.gov.in/writereaddata/Portal/Images/pdf/Final_FREQUENTLY_ASKED_QUESTIONS_-PATENT.pdf

Q.10 “Manas wildlife sanctuary” is located in which of the following state?

- a) Arunachal Pradesh
- b) Assam
- c) Tripura
- d) Manipur

ANS: B

Explanation: Manas Wildlife Sanctuary is located in the State of Assam in North-East India, a biodiversity hotspot. Covering an area of 39,100 hectares, it spans the Manas River and is bounded to the north by the forests of Bhutan.

- 1. The Manas Wildlife Sanctuary is part of the core zone of the 283,700 hectares Manas Tiger Reserve, and lies alongside the shifting river channels of the Manas River.

2. The site's scenic beauty includes a range of forested hills, alluvial grasslands and tropical evergreen forests.
3. The site provides critical and viable habitats for rare and endangered species, including tiger, greater one-horned rhino, swamp deer, pygmy hog and Bengal florican.
4. Manas have exceptional importance within the Indian sub-continent's protected areas, as one of the most significant remaining natural areas in the region, where sizeable populations of a large number of threatened species continue to survive.

Source: <https://whc.unesco.org/en/list/338/>