

ForumIAS

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Prelims Marathon

19th to 25th April, 2021

*HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT*

Environmental Organizations

Q.1) CPCB has an automatic monitoring station at ITO Intersection in New Delhi. Which of the following is/are monitored at this station?

1. Resirable Suspended Particulate Matter (RSPM)
2. Carbon Dioxide
3. Benzene

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: A

Explanation: CPCB has an automatic monitoring station at ITO Intersection in New Delhi.

- At this station Resirable Suspended Particulate Matter (RSPM), Carbon Monoxide (CO), Ozone (O₃), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) and Suspended Particulate Matter (SPM) are being monitored regularly.
- This information on Air Quality at ITO is updated every week.

Source: <https://cpcb.nic.in/Introduction/>

Q.2) Consider the following statements regarding The Energy and Resources Institute (TERI):

1. It was founded by Indira Gandhi.
2. It acts as a knowledge center to cultivate action-oriented research in areas of climate change, environment, energy, and sustainable development.

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: Founded in 1974 by Mr Darbari S Seth & Dr R K Pachauri, TERI began as a knowledge center to cultivate action-oriented research in areas of climate change, environment, energy, and sustainable development.

- Over the last 40 years, the organization has worked with the government to create policies for energy conservation.
- On the other hand, it has worked at the grassroots, developing energy efficiency solutions for India's small and medium businesses.
- TERI has also worked intensively towards developing lighting and cooking solutions that have impacted over 4.5 million people in India and Africa.
- It has pioneered the use of biotechnology in the petroleum and agriculture sectors in India.
- It is globally distinguished for hosting the World Sustainable Development Conference, one of the largest international summits dedicated to accelerating the pursuit of sustainable development.

Source: <https://www.teriin.org/history>

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Q.3) Consider the following statements regarding Forest Survey of India (FSI):

1. It was established after enacting the Forest Act, 1927.
2. It is a premier national organization under Ministry of Agriculture.

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: Forest Survey of India (FSI), is a premier national organization under the union Ministry of Environment and Forests, responsible for assessment and monitoring of the forest resources of the country regularly.

- In addition, it is also engaged in providing the services of training, research and extension.
- Established on June 1 - 1981, the Forest Survey of India succeeded the "Preinvestment Survey of Forest Resources" (PISFR), a project initiated in 1965 by Government of India with the sponsorship of FAO and UNDP.
- The main objective of PISFR was to ascertain the availability of raw material for establishment of wood based industries in selected areas of the country.
- In its report in 1976, the National Commission on Agriculture (NCA) recommended for the creation of a National Forest Survey Organization for a regular, periodic and comprehensive forest resources survey of the country leading to creation of FSI.
- After a critical review of activities undertaken by FSI, Government of India redefined the mandate of FSI in 1986 in order to make it more relevant to the rapidly changing needs and aspirations of the country.

Source: <https://fsi.nic.in/brief-history>

Q.4) Consider the following statements regarding the National Biodiversity Authority (NBA):

1. It was established in 2003 by the Central Government to implement India's Biological Diversity Act (2002).
2. Its headquarters is located in Chennai.

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 National Biodiversity Authority (NBA) was established in 2003 by the Central Government to implement India's Biological Diversity Act (2002).

- The NBA is a statutory body and that performs facilitative, regulatory and advisory function for Government of India on issue of Conservation, sustainable use of biological resource and fair equitable sharing of benefits of use.
- The NBA with its Headquarters in Chennai, Tamil Nadu, India delivers its mandate through a structure that comprises of the Authority, secretariat, SBBs, BMCs and Expert Committees.
- Since its establishment, NBA has supported creation of SBBs in 28 States, facilitated establishment of around 2, 05,794 BMCs, and advised notification.

Source: <http://nbaindia.org/content/16/14/1/introduction.html>

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Q.5) Consider the following statements regarding National Tiger Conservation Authority (NTCA):

1. It has been constituted under Forest Conservation Act, 1980.
2. It is headed by Prime Minister 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: D

Explanation: The National Tiger Conservation Authority (NTCA) has been constituted under section 38 L (1) of Wildlife (Protection) Act, 1972.

- Further, as per the section 38 L, sub section 2 of the said Act, the authority consists of the Minister in charge of the Ministry of Environment and Forests (as Chairperson), the Minister of State in the Ministry of Environment and Forests (as Vice-Chairperson), three members of Parliament, Secretary, Ministry of Environment and Forests and other members.
- The authority derives its power from section 38 O (1) of WIPA, 1972 and functions under the guidance of Chairperson, Vice-Chairperson and members.

Source: <https://ntca.gov.in/about-us/#ministers>

Q.6) Consider the following statements regarding National Ganga River Basin Authority (NGRBA):

1. It was constituted under the provisions of the Water (Prevention and Control of Pollution) Act, 1974.
2. National Mission for Clean Ganga (NMCG) acted as implementation arm of NGRBA.

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: National Mission for Clean Ganga(NMCG) was registered as a society on 12th August 2011 under the Societies Registration Act 1860.

- It acted as implementation arm of National Ganga River Basin Authority (NGRBA) which was constituted under the provisions of the Environment (Protection) Act (EPA),1986.
- NGRBA has since been dissolved with effect from the 7th October 2016, consequent to constitution of National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council) vide notification no. S.O. 3187(E) dated 7th October 2016 under EPA 1986. >> (Amendment) Order, 2nd September 2019

Source: https://nmcg.nic.in/about_nmcg.aspx

Q.7) Consider the following statements regarding Animal Welfare Board of India:

1. It was established at the time of Prime Minister Indira Gandhi.
2. It was established through executive resolution.

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

- a) 1 only

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

ANS: C

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: <http://www.awbi.in/about.html>

Q.8) “Central Zoo Authority” was established under which of the following Act?

- a) Wildlife Protection Act, 1972
- b) Forest Conservation Act, 1980
- c) Biological Diversity Act, 2002
- d) National Green Tribunal Act, 2010

ANS: A

Explanation: The Central Zoo Authority has been constituted under the section 38A of Wild Life (Protection) Act 1972.

- The Authority consists of a Chairman, ten members and a Member Secretary.
- The main objective of the authority is to complement the national effort in conservation of wild life.

Source: <http://cza.nic.in/page/en/introduction>

Q.9) Consider the following statements regarding India Biodiversity Awards:

1. It was launched in 2012 to recognize excellence in biodiversity governance across the country.
 2. It was launched by Ministry of Environment with the help of World Bank.
- Which of 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: India is one of the mega-diverse countries in the world and home to nearly eight percent of the world’s total recorded species of plants and animals.

- Across the country, people, communities and governments have played an outstanding and innovative role in conserving India’s rich heritage.
- Government of India, Ministry of Environment, Forest and Climate Change in association with UNDP India, therefore, started the India Biodiversity Awards in 2012, to recognise excellence in biodiversity governance across the country.

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- The first round of Awards was launched in 2012 during India's Presidency of the Eleventh Meeting of Conference of Parties to the Convention on Biological Diversity.
- The award selection process is conducted in partnership with the National Biodiversity Authority of India.

Source: The Hindu

Q.10) Which of the following institution (s) is/are collaborated to establish UN – REDD programme?

1. UNEP
2. IUCN
3. GEF

Select the correct answer using the code given below:

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

ANS: A

Explanation: Three UN Agencies – United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP) and Food and Agriculture Organization of the United Nations (FAO) – have collaborated in the establishment of the UN-REDD programme, a multi-donor trust fund that allows donors to pool resources and provide funding with the aim of significantly reducing global emissions from deforestation and forest degradation in developing countries.

Source: Shankar

Environmental Organizations

Q.1) Consider the following statements regarding “The Indian Network on Climate Change Assessment (INCCA)”:

1. It was launched at CoP – 21 of UNFCCC in 2019.
2. It was launched to assist the developing countries who are willing to join International Solar Alliance (ISA).

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 Indian Network on Climate Change Assessment (INCCA) was launched in October 2009 by the Ministry of Environment and Forests (MoEF) in an effort to promote domestic research on climate change, and build on the country’s climate change expertise.

- INCCA is a network-based programme of the MoEF, which consists of over 120 institutions and over 250 scientists country wide is aimed at bringing in more science-based policy-making, based on measurements, monitoring and modeling.
- Reports prepared by the INCCA will form a part of India’s National Communication (Nat Com) to the United Nations Framework Convention on Climate Change (UNFCCC).

Source: Shankar

Q.2) Indian government created National Communications (NATCOM) to implement the provisions of which of the following?

- a) UNFCCC
- b) UNCBD
- c) Aichi targets
- d) Kyoto protocol

ANS: A

Explanation: In pursuance of the implementation of the provisions of the Convention, India’s Initial National Communication (NATCOM) to the UNFCCC has been initiated in 2002 funded by the Global Environment Facility under its enabling activities programme through the United Nations Development Programme, New Delhi.

Source: Shankar

Q.3) “Emission Trading and Clean Development Mechanism” are often seen in news is related to which of the following?

- a) UNCCD
- b) Kyoto Protocol
- c) UNDP
- d) GEF

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ANS: B

Explanation: The Kyoto Protocol is made up of essential architecture that has been built and shaped over almost two decades of experience, hard work and political will. The beating heart of KP is made up of:

1. Reporting and verification procedures;
2. Flexible market-based mechanisms, which in turn have their own governance procedures; and
3. A compliance system.

The Kyoto Flexible Market Protocol mechanisms:

- Joint Implementation (JI)
- The Clean Development Mechanism (CDM)
- Emission Trading

Source: Shankar

Q.4) Consider the following statements regarding “Global Environment Facility (GEF)”:

1. It was established to provide funding to protect the global environment.
2. It was established by World Bank in consultation with UNFCCC and UNCBD.

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 GEF was established in 1991 by the World Bank in consultation with the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), to provide funding to protect the global environment.

Source: GEF

Q.5) Which of the following famous organization logo is a Giant Panda?

- a) World Wildlife Fund or World Wide Fund for Nature (WWF)
- b) International Union for Conservation of Nature and Natural Resources (IUCN)
- c) United Nations Educational, Scientific and Cultural Organization (UNESCO)
- d) United Nations Environment Programme (UNEP)

ANS: A

Explanation: The inspiration came from Chi-Chi: a giant panda that had arrived at the London Zoo in the year 1961, when WWF was being created. Aware of the need for a strong, recognizable symbol that would overcome all language barriers, WWF’s founders agreed that the big, furry animal with her appealing, black-patched eyes would make an excellent logo.

Source: Shankar

Q.6) Which of the following are the focal areas of Global Environment Facility (GEF) for climate finance?

1. Biological diversity
2. Climate change
3. Ozone layer depletion
4. Land degradation
5. Desertification

Select the correct answer using the code given below:

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

ANS: D

Explanation: The GEF's governance, operational, financial and administrative oversight procedures are set out in the Instrument for the Establishment of the Restructured Global Environment Facility, which was adopted in 1994 and subsequently amended in 2002 (GEF Instrument). The GEF now has six focal areas:

- biological diversity;
- climate change;
- international waters;
- land degradation, primarily desertification and deforestation;
- ozone layer depletion; and
- persistent organic pollutants.

Source: GEF

Q.7) MARPOL Convention is related to which of the following?

- a) Sustainable use of marine resources
- b) Development of renewable energy on sea shores
- c) Prevention of pollution of the marine environment by ships
- d) Ozone pollution & depletion

ANS: C

Explanation: The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.

- The MARPOL Convention was adopted on 2 November 1973 at IMO. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977.
- As the 1973 MARPOL Convention had not yet entered into force, the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983.
- In 1997, a Protocol was adopted to amend the Convention and a new Annex VI was added which entered into force on 19 May 2005. MARPOL has been updated by amendments through the years.
- The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes.

Source: Shankar

Q.8) Which of the following activities carried out by Wildlife Institute of India (WII)?

1. Training
2. Research
3. Employment
4. Consultancy services

Select the correct answer using the code given below:

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

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ANS: B

Explanation: Build up scientific knowledge on wildlife resources. Train personnel at various levels for conservation and management of wildlife.

- Carry out research relevant to management including the development of techniques appropriate to Indian conditions.
- Provide information and advice on specific wildlife management problems.
- Collaborate with international organizations on wildlife research, management and training.
- Develop as a regional centre of international importance on wildlife and natural resource conservation.
- Publicity and consultancy services

Source: Shankar

Q.9) Which of the following convention is related to Persistent Organic Pollutants?

- a) Basel convention
- b) Paris convention
- c) Stockholm convention
- d) Rotterdam convention

ANS: C

Explanation: The Stockholm Convention on Persistent Organic Pollutants is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment.

- Exposure to Persistent Organic Pollutants (POPs) can lead to serious health effects including certain cancers, birth defects, dysfunctional immune and reproductive systems, greater susceptibility to disease and damages to the central and peripheral nervous systems.
- Given their long range transport, no one government acting alone can protect its citizens or its environment from POPs.
- In response to this global problem, the Stockholm Convention, which was adopted in 2001 and entered into force in 2004, requires its parties to take measures to eliminate or reduce the release of POPs into the environment.

Source: Stockholm Convention

Q.10) Which state in India deployed artificial reefs to protect the Islands?

- a) Odisha
- b) Kerala
- c) Karnataka
- d) Tamil Nadu

ANS: D

Explanation: Sinking islands may become a reality with sea level rise and climate change in decades to come.

- Tamil Nadu has hit upon a novel idea to protect such islands on its coast – deployment of artificial reefs near vulnerable islands.
- Artificial reefs, made of concrete, have been found to be capable of preventing further erosion of ecologically sensitive islands and also regenerate coral biodiversity in the Gulf of Mannar region.

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- Vaan is one of the 21 islands in the Gulf of Mannar, which was declared marine biodiversity park in 1986.
 - Indiscriminate mining of coral and use of destructive fishing practices in the past few decades have fully submerged two of the islands while Vaan was on the verge of submergence when the project began in 2015.
 - Its area had been reduced from 16 hectares in 1986 to 2 hectares in 2014.
- Source: The Hindu

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Climate Change

Q.1) Which of the following is/are the sources of methane?

1. Wetlands
2. Livestock
3. Wildfires

Select the correct answer using the code given below:

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

ANS: D

Explanation: Methane (CH₄) is emitted by natural sources such as wetlands, as well as human activities such as leakage from natural gas systems and the raising of livestock. Smaller sources include termites, oceans, sediments, volcanoes, and wildfires.

Source: Shankar

Q.2) Consider the following statements regarding “fluorinated gases”:

1. They have low global warming potentials (GWPs) relative to other greenhouse gases.
2. They are the most potent and longest lasting type of greenhouse gases emitted by human activities.

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: Fluorinated gases are emitted through a variety of industrial processes such as aluminum and semiconductor manufacturing & Substitution for Ozone-Depleting Substances.

- Many fluorinated gases have very high global warming potentials (GWPs) relative to other greenhouse gases. Fluorinated gases are well-mixed in the atmosphere, spreading around the world after they're emitted.
- Fluorinated gases are removed from the atmosphere only when they are destroyed by sunlight in the far upper atmosphere. In general, fluorinated gases are the most potent and longest lasting type of greenhouse gases emitted by human activities.

Source: Shankar

Q.3) Which of the following statement is NOT correct about black carbon?

- a) It warms the Earth by absorbing heat in the atmosphere and by reducing albedo.
- b) It disrupts cloudiness and monsoon rainfall and accelerates melting of mountain glaciers such as the Hindu Kush-Himalayan glaciers.
- c) Black carbon stays in the atmosphere for years.
- d) It is a form of particulate air pollutant, produced from incomplete combustion.

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ANS: C

Explanation: Black carbon (BC) is a solid particle or aerosol, (though not a gas) contributes to warming of the atmosphere.

- Black carbon, commonly known as soot, is a form of particulate air pollutant, produced from incomplete combustion.
- It consists of pure carbon in several linked forms. Black carbon stays in the atmosphere for only several days to weeks.
- Thus the effects of BC on the atmospheric warming and glacier retreat disappear within months of reducing emissions.

Source: Shankar

Q.4) Arrange the following green house gases according to their global warming potential (GWP) in descending order:

1. Methane
2. Carbon Dioxide
3. Nitrous Oxide

Select the correct answer using the code given below:

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

ANS: D

Explanation:

GWP & Lifetime of Green House Gases:

S. No	GAS	GWP (100-year)	LIFETIME (years)
1	Carbon di oxide	1	100
2	Methane	21	12
3	Nitrous oxide	310	120
4	Hydro fluoro carbons (HFCs)	140-11,700	1-270
5	Perfluoro carbons (PFCs)	6,500-9,200	800-50,000
6	Sulfur hexafluoride (SF6)	23,900	3,200

Q.5) “Coastal waters are also affected by excess nutrient inputs, mostly nitrogen, from agriculture, fertilizers and sewage” – describes which of the following?

- a) Eutrophication
- b) Bio-magnification
- c) Bio-accumulation
- d) Ocean Acidification

ANS: A

Explanation: Coastal waters are also affected by excess nutrient inputs, mostly nitrogen, from agriculture, fertilizers and sewage.

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The resulting eutrophication leads to large plankton blooms, and when these blooms collapse and sink to the sea bed the subsequent respiration of bacteria decomposing the algae leads to a decrease in sea water oxygen and an increase in CO₂ (a decline in pH).

Source: Shankar

Q.6) Consider the following statements regarding “upwelling zones”:

1. Surface Coastal regions periodically experience upwelling events where deeper ocean water circulates onto continental shelves and near-shore areas.
2. This exposes the productive upper ocean ecosystems to colder water containing more nutrients & more carbon dioxide.

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: UPWELLING: Surface Coastal regions periodically experience upwelling events where deeper ocean water circulates onto continental shelves and near-shore areas.

- This exposes the productive upper ocean ecosystems to colder water containing more nutrients & more CO₂.
- As ocean acidification makes the upper oversaturated layer of sea water shallower each year, these natural upwelling events will more often cause under-saturated water to well up and flow to the shore.
- Coastal marine organisms that form shells are unaccustomed to such events, and periodic exposures to these significantly different conditions may affect these communities.

Source: Shankar

Q.7) “Saturation Horizon” mechanism is related to which of the following?

- a) Ocean acidification
- b) Conservation of Agriculture
- c) Carbon Storage
- d) Shifting of Monsoon

ANS: A

Explanation: Deep, cold ocean waters are naturally under saturated with carbonate ions causing the shells of most calcifying organisms to dissolve.

- Surface waters are over saturated with carbonate ions and do not readily dissolve shells of calcifying organisms.
- The saturation horizon is the level below which calcium carbonate minerals undergo dissolution.
- Those organisms that can survive below the saturation horizon do so due to special mechanisms to protect their calcium carbonate from dissolving.
- As ocean acidification causes this horizon to rise vertically in the water column so more and more calcifying organisms will be exposed to under saturated water and thus vulnerable to dissolution of their shells and skeletons.
- The saturation horizon of calcite occurs at a greater ocean depth than that for aragonite, but both horizons have moved closer to the surface presently when compared to the 1800s.

Source: Shankar

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Q.8) Consider the following statements regarding “Ozone”:

1. It is a natural gas.
2. It is found in the stratosphere and troposphere.

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: Ozone is a natural gas; it is an allotrope of oxygen consisting of three atoms of oxygen bound together in a non-linear fashion. The chemical symbol of ozone is O₃.

- It is found in two different layers of the atmosphere. Ozone in the troposphere is “bad” because it dirties the air and helps to form smog, which is not good to breathe.
- Ozone in the stratosphere is “good” because it protects life on Earth by absorbing some of the sun’s harmful Ultra Violet (UV) rays.
- The ozone layer is very important because the configuration of the ozone molecule and its chemical properties are such that ozone efficiently absorbs ultraviolet light, thus acting like a sun-screen.

Source: Shankar

Q.9) Chloro-flouro-carbons (CFCs) are used in which of the following?

1. Refrigerators
2. Foaming agents
3. Aerosol sprays

Select the correct answer using the code given below:

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

ANS: D

Explanation: CFCs molecules are made up of chlorine, fluorine and carbon. They are used as refrigerants, propellants in aerosol sprays, foaming agents in plastic manufacturing, fire extinguishing agents, solvents for cleaning electronic and metallic components, for freezing foods etc.

Two-thirds of CFC is used as refrigerants while one-third is used as blowing agents in foam insulation products.

Source: Shankar

Q.10) “The Umheher technique” is related to which of the following?

- a) Ozone measurement
- b) Soil health measurement
- c) Surface flow measurement
- d) Landslide measurement

ANS: A

Explanation: The Umheher technique is the most common measure of total ozone abundance is the Dobson unit (named after the pioneering atmospheric physical Gordon Dobson) which is the thickness of the ozone column (compressed at Standard Temperature

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and Pressure (STP) in milli-centimeters. At STP one Dobson unit is equal to 2.69×10^{20} molecules per square meter.

Source: Shankar

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Environment Impact Assessment

Q.1) “It defined as the study to predict the effect of a proposed activity/project on the environment” – describes which of the following?

- a) Carrying capacity
- b) Carbon storage
- c) Food chain
- d) Environment Impact Assessment

ANS: D

Explanation: Environment Impact Assessment or EIA can be defined as the study to predict the effect of a proposed activity/project on the environment.

A decision making tool, EIA compares various alternatives for a project and seeks to identify the one which represents the best combination of economic and environmental costs and benefits.

Source: <https://www.cseindia.org/understanding-eia-383>

Q.2) Consider the following statements regarding “Environment Impact Assessment”:

1. It was first introduced in Scandinavian countries.
2. In India it was started by Department of Science and Technology with direction of planning commission.

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: EIA as a mandatory regulatory procedure originated in the early 1970s, with the implementation of the National Environment Policy Act (NEPA) 1969 in the US.

- A large part of the initial development took place in a few high-income countries, like Canada, Australia, and New Zealand (1973-74).
- However, there were some developing countries as well, which introduced EIA relatively early - Columbia (1974), Philippines (1978).
- The Indian experience with Environmental Impact Assessment began over 20 years back.
- It started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle.
- This was subsequently extended to cover those projects, which required the approval of the Public Investment Board.
- Till 1994, environmental clearance from the Central Government was an administrative decision and lacked legislative support.

Source: <https://www.cseindia.org/understanding-eia-383>

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Q.3) Which of the following act gives mandatory powers to assess a project/initiative under Environment Impact Assessment?

- a) Wildlife Protection Act, 1972
- b) Forest Conservation Act, 1980
- c) Environmental (Protection) Act, 1986
- d) Forest Rights Act, 2006

ANS: C

Explanation: On 27 January 1994, the Union Ministry of Environment and Forests (MEF), Government of India, under the Environmental (Protection) Act 1986, promulgated an EIA notification making Environmental Clearance (EC) mandatory for expansion or modernization of any activity or for setting up new projects listed in Schedule 1 of the notification.

Since then there have been 12 amendments made in the EIA notification of 1994.

Source: <https://www.cseindia.org/understanding-eia-383>

Q.4) “It refers to systematic analysis of the environmental effects of development policies, plans, programmes and other proposed strategic actions” – describes which of the following?

- a) Environment Impact Assessment
- b) Social Impact Assessment
- c) Strategic Environment Assessment
- d) Health Impact Assessment

ANS: C

Explanation: Strategic Environment Assessment (SEA) refers to systematic analysis of the environmental effects of development policies, plans, programmes and other proposed strategic actions.

- This process extends the aims and principles of EIA upstream in the decision-making process, beyond the project level and when major alternatives are still open.
- SEA represents a proactive approach to integrating environmental considerations into the higher levels of decision-making.

Source: <https://www.cseindia.org/understanding-eia-383>

Q.5) Which of the following are the stages of part of Environment Impact Assessment cycle?

1. Screening
2. Scooping
3. Public Hearing
4. Appraisal
5. Termination

Select the correct answer using the codes given below:

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

ANS: B

Explanation: Environment Impact Assessment Notification of 2006 has decentralized the environmental clearance projects by categorizing the developmental projects in two categories, i.e., Category A (national level appraisal) and Category B (state level appraisal).

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- Category A projects are appraised at national level by Impact Assessment Agency (IAA) and the Expert Appraisal Committee (EAC) and Category B projects are appraised at state level.
- State Level Environment Impact Assessment Authority (SEIAA) and State Level Expert Appraisal Committee (SEAC) are constituted to provide clearance to Category B process.

After 2006 Amendment the EIA cycle comprises of four stages:

- Screening
- Scoping
- Public hearing
- Appraisal

Source: <https://www.cseindia.org/understanding-eia-383>

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

1. They are microscopic plant organisms that live in both salty and fresh aquatic environments.
 2. Their total biomass is greater than plants on land.
- 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: Derived from the Greek words phyto (plant) and plankton (made to wander or drift), phytoplankton are microscopic plant organisms that live in aquatic environments, both salty and fresh.

- Some phytoplanktons are bacteria, some are protists, and most are single-celled plants. Among the common kinds are cyanobacteria, silica-encased diatoms, dinoflagellates, green algae, and chalk-coated coccolithophores.
- Phytoplankton produce more than 60% of oxygen produced from all plants.
- Like land plants, all phytoplankton have chlorophyll to capture sunlight, and they use photosynthesis to turn it into chemical energy.
- They consume carbon dioxide, and release oxygen. All phytoplankton photosynthesize, but some get additional energy by consuming other organisms.
- These micro-algae are present throughout the lighted regions of all the seas and oceans including the Polar Regions.
- Their total biomass is many times greater than that of the total plants on land and they serve as the “pasture grounds” in the aquatic environment.

Source: Shankar

Q.7) Arrange the following in chronological order:

1. Environment Protection Act.
2. Wildlife Protection Act.
3. Project Tiger.

Select the correct answer using the code given below:

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

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ANS: D

Explanation: The adoption of a National Policy for Wildlife Conservation in 1970 and the enactment of the Wildlife (Protection) Act in 1972 lead to a significant growth in the protected areas network.

- From 5 national parks and 60 sanctuaries to a network of 669 Protected Areas with geographical area of the country, 4.92%.
- Project Tiger is a tiger conservation programme launched in April 1973 by the Government of India during Prime Minister Indira Gandhi's tenure.
- Environmental (Protection) Act 1986.

Source: Envis

Q.8) Which of the following is/are declared by state as protected areas for their adequate ecological, geo-morphological and natural significance?

1. National Parks
2. Biosphere reserves
3. Bird reserves

Select the correct answer using the code given below:

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

ANS: A

Explanation: The Wild Life (Protection) Act of 1972 provided for the declaration of certain areas by the State Government as wildlife sanctuaries if the area was thought to be of adequate ecological, geo-morphological and natural significance.

The Wild Life (Protection) Act (WPA) of 1972 provided for the declaration of National Parks by the State Government in addition to the declaration of wildlife sanctuaries.

Source: Wildlife Protection Act, 1972

Q.9) Consider the following statements:

1. Slender loris (primate) found in the tropical rainforests of Southern India only.
2. The Indian star tortoise found only in scrub forests of India.

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: Slender loris (primate) found only in the tropical rainforests of Southern India and Sri Lanka.

The Indian star tortoise found in scrub forests of India and Sri Lanka.

Source: WWF

Q.10) Consider the following statements regarding project elephant:

1. It was launched in 1992.
2. It is a centrally sponsored scheme to assist states having free ranging populations of wild elephants.

Which of the statements given above is/are correct?

- a) 1 only

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

ANS: C

Explanation: Project Elephant was launched in February, 1992 as centrally sponsored scheme to assist states having free ranging populations of wild elephants and to ensure long term survival of identified viable populations of elephants in their natural habitats.

- The Project is being mainly implemented in 13 States / UTs , viz. Andhra Pradesh, Arunachal Pradesh, Assam, Jharkhand, Karnataka, Kerala, Meghalaya, Nagaland, Orissa, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal.
- Small support is also being given to Maharashtra and Chhattisgarh.
- States are being given financial as well as technical assistance in achieving the objectives of the Project.
- Help is also provided to other states with small populations of elephants for the purpose of census, training of field staff and mitigation of human–elephant conflict.

Source: Shankar

Conservation Efforts (Environment)

Q.1) Which of the following International conventions/treaties is/are signed by India?

1. Ramsar Convention, 1971
2. Convention on International Trade in Endangered Species of Wild Fauna and Flora
3. Convention on Migratory Species, 1979

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: India is a member of all major international conservation treaties related to habitat, species and environment (like Ramsar Convention, 1971; Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973; Convention on Migratory Species, 1979; Convention on Biological Diversity, 1992, among others).

Source: <https://www.downtoearth.org.in/blog/forests/wildlife-conservation-in-india-are-we-really-serious--51505>

Q.2) Buxa tiger reserve is often seen in news is located in which of the following state?

- a) Bihar
- b) Uttar Pradesh
- c) Odisha
- d) West Bengal

ANS: D

Explanation: Once famous for dolomite mining, Buxa was declared a tiger reserve in 1983 and got the status of National park in 1992.

- Located in the Assam-Bhutan border, Buxa has an area of 745 sq km, the largest forest in North Bengal.
- The park holds the maximum number of elephant, Indian bison, leopard, many species of deer and many smaller mammals, innumerable species of birds and reptiles.
- Buxa is rich with biodiversity and has a great collection of rare orchids and medicinal plants.

Source: The Hindu

Q.3) In which of the following states/union territories is/are snow leopard found?

1. Jammu & Kashmir
2. Himachal Pradesh
3. Uttar Pradesh

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

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ANS: B

Explanation: Snow leopard is the icon of high mountains of Asia.

- In India, they inhabit the higher Himalayan and Trans-Himalayan landscape in an altitudinal range between approximately 3,000 m to 5,400 m above MSL, spanning c. 100,000 km² in the five states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.
- This area contributes to about 5% of the global snow leopard range.
- Long term research and conservation efforts in India have made it one of the best researched snow leopard range countries in the world.

Source: <http://164.100.117.97/WriteReadData/userfiles/SPAI.pdf>

Q.4) Consider the following statements regarding Great Indian Bustard (GIB):

1. It is found in Rajasthan and Gujarat only.
2. WWF-India, is undertaking initiatives towards conservation of GIB in and around Desert National Park.

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: Historically, the great Indian bustard was distributed throughout Western India, spanning 11 states, as well as parts of Pakistan.

- Its stronghold was once the Thar Desert in the north-west and the Deccan plateau of the peninsula.
- Today, its population is confined mostly to Rajasthan and Gujarat. Small population occurs in Maharashtra, Karnataka and Andhra Pradesh.
- WWF-India has provided inputs in developing the 'Guidelines for the State Action Plan for Resident Bustard Recovery Programme'.
- It has played an important role in raising awareness about the declining populations and highlighting the importance of implementing a focused bustard conservation programme at the national level.
- WWF-India, is undertaking initiatives towards conservation of GIB in and around Desert National Park.

Source:

https://www.wwfindia.org/about_wwf/priority_species/threatened_species/great_indian_bustard/

Q.5) Consider the following statements regarding Sangai Deer:

1. It is found in Keibul Lamjao National Park only.
2. It is a state animal of Manipur.

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 brow-antlered deer is found in Keibul Lamjao National Park in Manipur. It is largely seen over the floating biomass, locally called “phumdi” in the South Eastern part of Loktak Lake inside the park.

- The park covers an area of 40 km² and the home range of the deer in the park is confined to 15–20 km².
- Phumdi is the most important and unique part of Sangai’s habitat. It is the floating mass of entangled vegetation formed by the accumulation of organic debris and biomass with soil.
- The sangai is an endemic and endangered subspecies of brow-antlered deer found only in Manipur, India. It is also the state animal of Manipur.

Source: <https://www.thehindubusinessline.com/news/manipurs-sangai-deer-needs-a-new-home/article9973347.ece>

Q.6) “Katarniaghat Wildlife Sanctuary” is part of crocodile conservation project is located in which of the following state?

- a) Tamil Nadu
- b) Maharashtra
- c) Uttar Pradesh
- d) Odisha

ANS: C

Explanation: Project Crocodile was introduced in 1975. The primary focus was on breeding and rearing in captivity.

- The initiative was taken by the Government of India in association with the Food and Agriculture Organization and United Nations Development Fund.
- Due to the implementation of this project, there is an increase in the population of crocodiles, which has saved them from extinction.
- The protected areas include National Chambal Sanctuary and Katarniaghat Wildlife Sanctuary.
- The Katarniaghat Wildlife Sanctuary is a protected area in the Upper Gangetic plain in Uttar Pradesh, India and covers an area of 400.6 km² in the Terai of the Bahraich district.

Source: <https://blog.ipleaders.in/top-5-conservation-projects-wildlife-india/>

Q.7) Which of the following initiatives are covered under the National Mission for Enhanced Energy Efficiency (NMEEE)?

1. Perform Achieve and Trade
2. Market Transformation for Energy Efficiency
3. Energy Efficiency Financing Platform (EEP)
4. Framework for Energy Efficient Economic Development (FEEED)

Select the correct answer using the code given below:

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

ANS: D

Explanation: The National Mission for Enhanced Energy Efficiency (NMEEE), which seeks to strengthen the market for energy efficiency by creating conducive regulatory and policy regime.

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- NMEEE has been envisaged to foster innovative and sustainable business models to the energy efficiency sector.
- The NMEEE seeks to create and sustain markets for energy efficiency in the entire country which will benefit the country and the consumers”.

Four New Initiatives to Enhance Energy Efficiency:

- Perform Achieve and Trade
- Market Transformation for Energy Efficiency
- Energy Efficiency Financing Platform (EEP)
- Framework for Energy Efficient Economic Development (FEEED)

Source: Shankar

Q.8) “Global Animal Protection Index” is released by which of the following institute?

- WEF
- GEF
- World Animal Protection
- UNDP

ANS: C

Explanation: India is one of the better-performing countries in the global Animal Protection Index 2020, created by international animal welfare charity, World Animal Protection.

- The Animal Protection Index (API) aims to showcase where countries are doing well, and where they fall short on animal welfare policy and legislation, so they can take steps to improve.
- The index ranks countries from A (being the highest score) to G (being the weakest score) according to their policy and legislation.
- India has attained a C ranking in the index, along with countries like New Zealand, Mexico, France, and Spain.

Source: The Hindu

Q.9) Which of the following is/are principle agents of Acid rain?

1. Sulfuric Acid
2. Carbon dioxide
3. Nitric Acid

Select the correct answer using the code given below:

- 1 only
- 1 and 2 only
- 1 and 3 only
- 1, 2 and 3

ANS: C

Explanation: The term ‘acid rain’ refers to the deposition of wet or dry acidic materials from the atmosphere on the earth’s surface.

- Although most conspicuously associated with rainfall, the pollutants may fall on the earth’s surface either in the form of snow, sleet, hail or fog or in the dry form of gases or particulate matter.
- Sulphuric acid and nitric acid is considered as the principal agents responsible for acid rain. But the major culprits are human beings.
- Smokes emitted from the industries are the major source of sulphur dioxide whereas smokes emitted from the motor vehicle is the major source of nitrogen oxide.
- These emissions mixed with atmospheric moisture from the sulphuric acid and nitric acids which, sooner or later precipitate on earth in various form.

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Source: NCERT

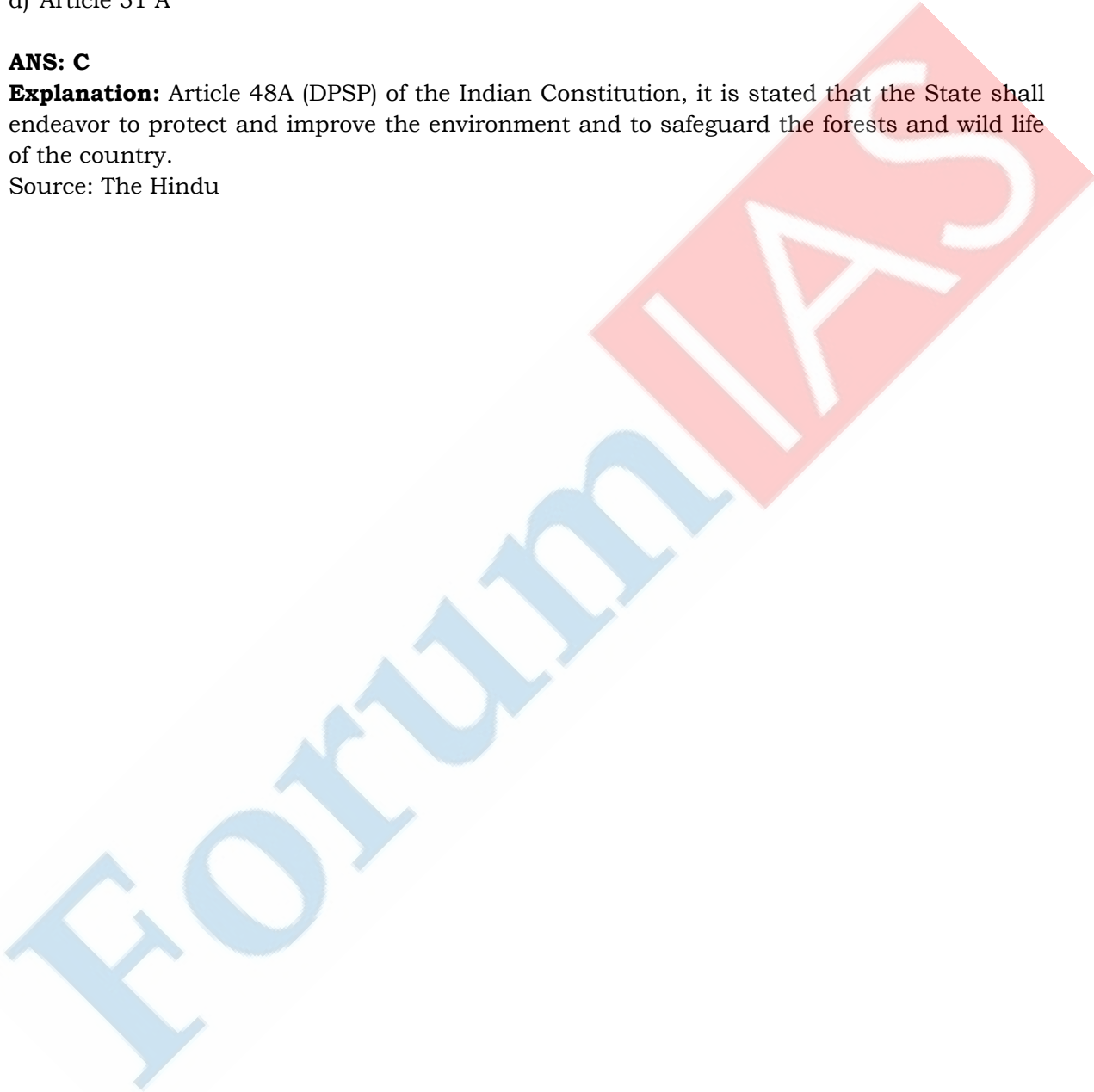
Q.10) Which Article of Indian Constitution states that the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country?

- a) Article 42 A
- b) Article 45 A
- c) Article 48 A
- d) Article 51 A

ANS: C

Explanation: Article 48A (DPSP) of the Indian Constitution, it is stated that the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country.

Source: The Hindu



Environment

Q.1) Which of the following subspecies of tiger is/are NOT extinct?

1. Sumatran
2. Bali
3. Javan

Select the correct answer using the code given below:

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

ANS: A

Explanation: The scientific name for the tiger is *Panthera tigris*.

- There are eight subspecies of tiger: among the eight, at present five subspecies are present in the wild.
- They are - Bengal, South China, Indochinese, Sumatran, and Siberian.
- Three subspecies of tiger—Caspian, Bali, and Javan—are extinct.

Source: Shankar page no: 187

Q.2) “Pugmark Census Technique” is used to estimate the population of which of the following specie?

- a) Tiger
- b) Great Indian Bustard
- c) Elephants
- d) Indian Hangul

ANS: A

Explanation: The process of estimating the number of tigers in a given area is called ‘Tiger census.’

- This exercise provides us with an estimate of tiger number, density and change in tiger indices - a measure of tiger occupancy in a given area.
- It is conducted at regular intervals to know the current tiger populations and population trends.
- Besides estimating the number of tigers the method also helps to gather information on the density of the tiger populations and associated prey.
- The most commonly used technique in the past was ‘Pugmark Census Technique’.
- In this method the imprints of the pugmark of the tiger were recorded and used as a basis for identification of individuals.
- Now it is largely used as one of the indices of tiger occurrence and relative abundance.

Source: Shankar page no: 188

Q.3) “Nagarjunsagar-Srisailem Tiger Reserve” is the largest tiger reserve in India is located in which of the following state (s)?

- a) Andhra Pradesh
- b) Odisha
- c) Chhattisgarh

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d) Tamil Nadu

ANS: A

Explanation: Nagarjunsagar-Srisaïlam Tiger Reserve is the largest tiger reserve in India.

- The reserve spreads over five districts, Kurnool District, Prakasam District, Guntur District of Andhra Pradesh and Nalgonda District and Mahbubnagar district of Telangana state.
- The total area of the tiger reserve is 3,728 km².

Source: ENVIS

Q.4) Consider the following statements regarding “Green Climate fund”:

1. It was established at CoP – 21 of UNFCCC.
2. It funds both developed and developing countries green projects.

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: At COP 16, Parties established a Green Climate Fund (GCF) as an operating entity of the financial mechanism of the Convention under Article 11.

The GCF will support projects, programmes, policies and other activities in developing country Parties. The Fund will be governed by the GCF Board.

Source: Shankar page no: 255

Q.5) The Loess Plateau – climate smart agriculture is worldwide famous for its success. In which of the following country it was implemented?

- a) Vietnam
- b) Taiwan
- c) China
- d) Tunisia

ANS: C

Explanation: Climate-smart agriculture gives attention to landscape approaches, for example, integrated planning of land, agriculture, forests, fisheries and water to ensure synergies are captured.

- These can be further strengthened by adding better weather forecasting, more resilient food crops and risk insurance to cover losses when the vagaries of weather strike.
- If yields increase through such practices and become more stable, it results in improved farm incomes. A more stable income helps enhance the adaptive capacity of farmers.
- A good number of countries are now showing that it can be done.
- China has been a leader in this, with programs such as the Loess Plateau now internationally famous.

Source: Shankar page no: 263

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Q.6) Consider the following statements regarding IPCC:

1. It does not conduct any research nor does it monitor climate related data or parameters.
2. Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information

Which of the statements above given is/are correct?

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

ANS: C

Explanation: The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.

- It does not conduct any research nor does it monitor climate related data or parameters.
- Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis.
- Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information.

Source: Shankar page no: 263

Q.7) National Green House Gas Inventories Programme (NGGIP) was established by which of the following institution?

- a) World Bank
- b) UNEP
- c) IPCC
- d) GEF

ANS: C

Explanation: The IPCC established the national green house gas Inventories Programme (NGGIP) to provide methods for estimating national inventories of greenhouse gas emissions to, and removals from, the atmosphere.

The guidance produced by the NGGIP is used by countries that are Parties to the UN Framework Convention on Climate Change (UNFCCC) to estimate the emissions and removals that they report to the UNFCCC.

Source: Shankar page no: 264

Q.8) “Global Stocktake” is often seen in news is related to which of the following?

- a) UNFCCC
- b) WTO
- c) World Bank
- d) UNCTAD

ANS: A

Explanation: GST refers to proposed five-yearly-review of the impact of climate change action undertaken by countries.

- Under the Paris Agreement, each country has to present a climate action plan every five years.
- Under the Paris Agreement, the first global stocktake will happen in 2023.
- It will help world to determine whether it needs to do more and how much more.

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Source: Shankar page no: 259

Q.9) “FAME India scheme” is often seen in news is related to which of the following?

- a) Street lights
- b) Smart agriculture
- c) Smart fans
- d) Electric & Hybrid vehicles

ANS: D

Explanation: Faster Adoption and Manufacturing of (Hybrid) and Electric Vehicles (FAME India) scheme rolled out in april, 2015 by Union Minister for Heavy Industries and Public Enterprises

- The scheme will help promote use of electric and hybrid vehicles, and initially, a subsidy of 30% will be provided to the buyers.
- Phased replacement of fossil fuel-based vehicles with those based on latest technologies will lead to a net saving of Rs 14,000 crore.
- The scheme is proposed to be implemented over six years, till 2020, which looks at sales of electric and hybrid vehicles up to 60-70 lakh units per year.

Q.10) Which of the following pollutants are notified under “National Ambient Air Quality Standards (NAAQS)”?

1. Sulphur Dioxide
2. Nitrogen Dioxide
3. Arsenic
4. Nickel
5. Carbon Monoxide

Select the correct answer using the code given below:

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

ANS: D

Explanation: National Ambient Air Quality Standards (NAAQS) were notified in the year 1982, duly revised in 1994 based on health criteria and land uses.

The NAAQS have been revisited and revised in November 2009 for 12 pollutants, which include

- sulphur dioxide (SO₂),
- nitrogen dioxide (NO₂),
- particulate matter having size less than 10 micron (PM₁₀),
- particulate matter having size less than 2.5 micron (PM_{2.5}),
- ozone,
- lead,
- carbon monoxide (CO),
- arsenic,
- nickel,
- benzene,
- ammonia, and
- benzopyrene.

Source: The Hindu

Revision

Q.1) “Dobson Unit” is the measurement unit for which of the following?

- Ozone concentration
- Solar concentration
- Lake purity
- Warming potential measurement

ANS: A

Explanation: Dobson Unit is the most common unit for measuring ozone concentration. One Dobson Unit is the number of molecules of ozone that would be required to create a layer of pure ozone 0.01 millimeters thick at a temperature of 0 degrees Celsius and a pressure of 1 atmosphere.

Source: NOAA

Q.2) Consider the following statements regarding “Petersburg Dialogue”:

- It was started in 2010 by Russia.
- It is an informal annual meeting to have constructive exchanges on the issues of international climate actions.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

ANS: B

Explanation: Petersburg Dialogue was launched in 2010 by Germany after failed climate negotiations at the 2009 Copenhagen Summit.

- It is an informal annual meeting of the high-level ministers and representatives of various countries that enables them to have constructive exchanges on the issues of international climate actions.
- The co-chair of the Climate Dialogue is the country presiding over the next conference of United Nations Framework Convention on Climate Change (UNFCCC).

Source: The Hindu

Q.3) The term “Southern Annular Mode” is often seen on news is associated with which of the following?

- Arctic Ocean
- Antarctic Oscillation
- Pacific Gyres
- Temperate cyclones

ANS: B

Explanation: The Southern Annular Mode (SAM), also known as the Antarctic Oscillation (AAO), refers to the (non-seasonal) north-south movement of the strong westerly winds that blow almost continuously in the mid- to high latitudes of the southern hemisphere.

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Q.4) “Agasthyavanam biological Park” is recently seen in news is located in which of the following state?

- a) Kerala
- b) Andhra Pradesh
- c) Arunachal Pradesh
- d) Odisha

ANS: A

Explanation: Agasthyavanam was established in 1997, Agasthyavanam Biological Park is a wildlife sanctuary in Kerala.

- The park is located near Thiruvananthapuram, the capital city of Kerala.
- Agasthyavanam Biological Park is spread over an area of 23 sq. km., of which 17.5 sq. km. of the park has been dedicated for natural regeneration to develop into a dense forest.
- It is contiguous to Neyyar Wildlife Sanctuary and Peppara Wildlife Sanctuary.
- The rest area of the park is left for systematic conservation programs.
- The park has been named after the Agasthyamalai Agasthyakoodam Peak, which can be seen at a distance from the park.
- Forest Department is procuring forest produce collected by the tribes people of the Agasthyavanam Biological Park (ABP) and surrounding forest ranges to be sold to commercial establishments and various collectives to deal with the lockdown necessitated by the COVID-19 pandemic

Source: The Hindu

Q.5) The “Task Force on Climate-Related Financial Disclosures (TCFD)” is sometimes seen in news is related to which of the following?

- a) UNEP Finance Initiative
- b) Global Environment Facility
- c) World Bank Climate Financing Unit
- d) AIIB

ANS: A

Explanation: The Task Force on Climate-Related Financial Disclosures (TCFD) was created in 2015 by the Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures for use by companies, banks, and investors in providing information to stakeholders.

- Increasing the amount of reliable information on financial institutions’ exposure to climate-related risks and opportunities will strengthen the stability of the financial system, contribute to greater understanding of climate risks and facilitate financing the transition to a more stable and sustainable economy.
- Following the publication of the final recommendations by FSB’s TCFD in June 2017, UNEP FI began a series of ‘TCFD Pilot Projects’ for banks, investors, and insurers. Participants in these pilots have worked to pioneer practical approaches for the assessment and disclosure of climate risks and opportunities.

Source: World Bank

Q.6) Recently researchers have found a dragon tree species for the first time in which of the following state?

- a) Odisha
- b) Maharashtra
- c) Mizoram

d) Assam

ANS: D

Explanation: Assam has added to India's botanical wealth a plant that yields dragon's blood — a bright red resin used since ancient times as medicine, body oil, varnish, incense and dye.

- A trio of researchers led by Assam forest officials has discovered *Dracaena cambodiana*, a dragon tree species in the Dongka Sarpo area of West Karbi Anglong.
- This is for the first time that a dragon tree species has been reported from India.
- *Dracaena cambodiana* is an important medicinal plant as well as an ornamental tree.
- It is a major source of dragon's blood, a precious traditional medicine in China.

Several antifungal and antibacterial compounds, antioxidants, flavonoids, etc., have been extracted from various parts of the plant.

Source: The Hindu

Q.7) Which of the following are the key dimensions of National Mission on Sustainable Agriculture (NMSA)?

1. Water efficiency
2. Improved farm practices
3. Access to information
4. Agriculture insurance

Select the correct answer using the code given below:

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

ANS: D

Explanation: The NMSA has identified 10 key dimensions for adaptation and mitigation:

- Improved Crop Seeds, Livestock and Fish Culture
- Water Efficiency
- Pest Management
- Improved Farm Practices
- Nutrient Management
- Agricultural Insurance
- Credit Support
- Markets
- Access to Information
- Livelihood Diversification

Source: Shankar page no: 239

Q.8) The grey slender loris is often seen in news is a?

- a) Sea mammal
- b) Butterfly species
- c) Primate
- d) Insect

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ANS: C

Explanation: The gray slender loris (primate) is found in India and Sri Lanka. Its natural habitats are subtropical or tropical dry forests and subtropical or tropical moist lowland forests. It is threatened by habitat loss.

Source: Shankar page no: 220

Q.9) Which of the following institutions are involved in monitoring the ozone layer?

1. World Meteorological Organization (WMO)
2. World Weather Watch (WWW)
3. Global Climate Observing System (GCOS)

Select the correct answer using the code given below:

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

ANS: D

Explanation: Some organizations that help in monitoring the atmosphere and form a network of information's communication about the atmosphere, including ozone layer monitoring are:

- World Meteorological Organization (WMO)
- World Weather Watch (WWW)
- Integrated Global Ocean Services Systems (IGOSS)
- Global Climate Observing System (GCOS)

Source: Shankar page no: 217

Q.10) "Nameri tiger reserve" is located in which of the following state?

- a) Nagaland
- b) Assam
- c) Mizoram
- d) Uttarakhand

ANS: B

Explanation: Nameri Tiger Reserve (declared in 1999-2000) is located in the foothills of the eastern Himalayas in the Sonitpur district of the state of Assam.

- It is on the interstate border with Arunachal Pradesh. The Pakke Tiger Reserve of Arunachal Pradesh adjoins it on its north-eastern point.
- The river Jia-Bhareli (a tributary of Brahmaputra River) with its tributaries, the Nameri, Upper Dikorai and Bor Dikorai flow through the Reserve.
- Besides Tiger, the reserve is also home to the sambar, barking deer, wild boar and bison.

Source: The Hindu