

ENVIRONMENT 2017

1. Which of the following practices can help in water conservation in agriculture ?
1. Reduced or zero tillage of the land
 2. Applying gypsum before irrigating the field
 3. Allowing crop residue to remain in the field

Select the correct answer using the code given below :

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

Ans: D

2. Biological Oxygen Demand (BOD) is a standard criterion for
- (a) Measuring oxygen levels in blood
 - (b) Computing oxygen levels in forest ecosystems
 - (c) Pollution assay in aquatic ecosystems
 - (d) Assessing oxygen levels in high altitude regions

Ans: C

Exp:

- *Biochemical Oxygen Demand is an important water quality parameter which provides an index to assess the effect discharged wastewater will have on the receiving environment.*
 - *The higher the BOD value, the greater the amount of organic matter or "food" available for oxygen consuming bacteria.*
3. In India, if a species of tortoise is declared protected under Schedule I of the Wildlife (Protection) Act, 1972, what does it imply?
- (a) It enjoys the same level of protection as the tiger.
 - (b) It no longer exists in the wild, a few individuals are under captive protection; and how it is impossible to prevent its extinction.
 - (c) It is endemic to a particular region of India.
 - (d) Both (b) and (c) stated above are correct in this context.

Ans: A

4. Recently there was a proposal to translocate some of the lions from their natural habitat in Gujarat to which one of the following sites?
- (a) Corbett National Park
 - (b) Kuno Palpur Wildlife Sanctuary
 - (c) Mudumalai Wildlife Sanctuary
 - (d) Sariska National Park

Ans: B

Exp: *An environment ministry's expert committee has approved Kuno Palpur in Madhya Pradesh as the second home for Asiatic lions found only in Gir national park.*

5. The term 'Domestic Content Requirement' is sometimes seen in the news with reference to
- (a) Developing solar power production in our country.
 - (b) Granting licenses to foreign T.V. channels in our country.
 - (c) Exporting our food products to other countries.
 - (d) Permitting foreign educational institutions to set up their campuses in our country.

Ans: A

Exp: *The policy of Domestic Content Requirement is with intent to promote the local manufacturing of the components of solar generation equipment which includes the cells and modules.*

- *With an objective to establish India as a global leader in solar energy, the Ministry of New and Renewable Energy Launched its National Solar Policy in 2010 named as Jawaharlal Nehru National Solar Mission (JNNSM). Phase 1 of the National policy was composed of 2 parts.*
- *Batch 1 of policy implementation: India required developers of solar photovoltaic projects employing crystalline silicon technology to use solar modules manufacture in India*
- *Batch 2 India expanded this domestic sourcing requirement to crystalline silicon solar cells as well.*

6. With reference to 'Global Climate Change Alliance' which of the following statements is/are correct?
1. It is an initiative of the European Union.
 2. It provides technical and financial support to targeted developing countries to integrate climate change into their development policies and budgets.
 3. It is coordinated by World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

Select the correct answer using the code given below :

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

Ans: A

Exp: *The Global Climate Change Alliance (GCCA) is an initiative of the European Union. Its overall objective is to build a new alliance on climate change between the European Union and the poor developing countries that are most affected and that have the least capacity to deal with climate change. The GCCA does not intend to set up a new fund or governance structure, but is working through the European Commission's established channels for political dialogue and cooperation at national and international level.*

The GCCA+ aim is to boost the efficiency of its response to the needs of vulnerable countries and groups. Using ambitious and innovative approaches, it will achieve its goals by building on its two mutually reinforcing pillars:

- *Under the first pillar, the GCCA+ serves as a platform for dialogue and exchange of experience between the EU and developing countries, focusing on climate policy and bringing renewed attention to the issue of international climate finance. The results feed into negotiations for a new climate deal under the United Nations Framework Convention on Climate Change (UNFCCC).*
- *Under the second pillar, the GCCA+ acts as a source of technical and financial support for the world's most climate-vulnerable countries, whose populations need climate finance the most. Extra efforts will be made to strengthen the strategically important issues of ecosystems-based adaptation, migration and gender equality.*

7. According to the Wildlife (Protection) Act, 1972, which of the following animals cannot be hunted by any person except under some provisions provided by law?

1. Gharial
2. Indian wild ass
3. Wild buffalo

Select the correct answer using the code given below:

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

Ans: D

Exp: *The Government of India subsequently accorded the highest level of protection to Gharial by bringing it under Schedule I of the Wild Life Protection Act, 1972. In 1976, Project Crocodile was initiated with support from the United Nations Development Programme and Food and Agriculture Organization.*

The Indian wild ass is a subspecies of the onager native to Southern Asia. As of 2016, it is listed as Near Threatened by IUCN.

Wild Buffalo is also listed under the Schedule I of the Wildlife Protection Act, 1972

8. Consider the following statements :
1. Climate and Clean Air Coalition (CCAC) to Reduce Short Lived Climate Pollutants is a unique initiative of G20 group of countries;
 2. The CCAC focuses on methane, black carbon and hydrofluorocarbons.

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

Exp: *The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCA (C) was launched by the United Nations Environment Programme (UNEP) and six countries—Bangladesh, Canada, Ghana, Mexico, Sweden, and the United States—on 16 February 2012.*

It focuses on O3, CH4, Black Carbon, and HFCs

9. Consider the following statements in respect of Trade Related Analysis of Fauna and Flora in Commerce (TRAFFIC):
1. TRAFFIC is a bureau under United Nations Environment Programme (UNEP).
 2. The Mission of TRAFFIC is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

Which of the above statements is/are correct?

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

Ans: B

Exp: *TRAFFIC has an enviable reputation as a reliable and impartial organisation, a leader in the field of conservation as it relates to wildlife trade. TRAFFIC was established in 1976 and has developed into a global network, research-driven and action-oriented, committed to delivering innovative and practical conservation solutions based on the latest information.*

TRAFFIC also works in close co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

10. Due to some reasons, if there is a huge fall in the population of species of butterflies, what could be its likely consequence/consequences?
1. Pollination of some plants could be adversely affected.
 2. There could be a drastic increase in the fungal infections of some cultivated plants.
 3. It could lead to a fall in the population of some species of wasps, spiders and birds.

Select the correct answer using the code given below:

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

Ans: C

Exp: *Pollination is affected adversely and the predators of butterflies are also affected, do not have impact on fungal infection.*

11. It is possible to produce algae based biofuels, but what is/are the likely limitation(s) of developing countries in promoting this industry?
1. Production of algae based biofuels is possible in seas only and not on continents.
 2. Setting up and engineering the algae based biofuel production requires high level of expertise/technology until the construction is completed.
 3. Economically viable production necessitates the setting up of large scale facilities which may raise ecological and social concerns.

Select the correct answer using the code given below:

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

Ans: B

Exp: *Algae can be grown using land and water not suitable for plant and food production. The algal biofuel technology includes selection of specific species for production and extraction of valuable co-products. The algae are bioengineered for achieving advanced photosynthetic efficiencies through continued development of production system.*

To make the industry commercially viable, researchers have pursued biotech varieties, which could be particularly dangerous if released into nature. Some algae biodiesel proposals involve aquaculture-style operations in open ocean waters, which could have harmful ecological effects, especially if biotech algae is used.

Water and nutrient use would also be extreme, making any serious scaling up of algae biofuels quite unsustainable.

12. In the context of mitigating the impending global warming due to anthropogenic emission of carbon dioxide, which of the following can be the potential sites for carbon sequestration?
1. Abandoned and Uneconomic coal seams
 2. Depleted oil and gas reservoirs
 3. Subterranean deep saline formations

Select the correct answer using the code given below:

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

Ans: D

Exp: *Capturing CO₂ from the major stationary sources and its storage into deep geological formations is considered as a potential mitigation option. Geological storage of CO₂ can be undertaken in a variety of geological settings in sedimentary basins.*

The options for CO₂ are as follows:

- Depleted oil and gas reservoirs
- Use of CO₂ in FOR
- Deep unmineable coal seams/enhanced coalbed methane (ECBM) recovery
- Oceans

- Deep unused saline water-saturated formations
- Other geological media are basalts, shales, and cavities
- Subterranean deep saline formations

13. The term 'M-STriPES' is sometimes seen in the news in the context of
- Captive breeding of Wild Fauna
 - Maintenance of Tiger Reserves
 - Indigenous Satellite Navigation System
 - Security of National Highways

Ans: B

Exp: The full form of M-STriPES is Monitoring System for Tigers'-Intensive Protection and Ecological Status. It's a software monitoring system launched by the Indian Government in 2010 in some tiger reserves. The aim is to reduce vulnerability of Tigers. The system would enable field managers to assist intensity and spatial coverage of patrols in a geographic information system (GIS) domain

ENVIRONMENT 2016

1. On which of the following can you find the Bureau of Energy Efficiency Star Label?

- Ceiling fans
- Electric geysers
- Tubular fluorescent lamps

Select the correct answer using the code given below:

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

Ans: D

Exp: It is invoked for equipment/appliances Room Air Conditioner, Ceiling Fan, Colour Television, Computer, Direct Cool Refrigerator, Distribution Transformer, Domestic Gas Stove, Frost Free Refrigerator, General Purpose Industrial Motor, Monoset Pump, OpenwellSubmersible Pump Set, Stationary Type Water Heater, Submersible Pump Set, Tfl, Ballast, Solid State Inverter, Office Automation Products, Diesel Engine Driven Mono-setpumps For Agricultural Purposes, Diesel Generator Set, Led Lamps, Inverter Ac.

2. In the cities of our country, which among the following atmospheric gases are normally considered in calculating the value of Air Quality Index?

- Carbon dioxide

- Carbon monoxide
- Nitrogen dioxide
- Sulphur Dioxide
- Methane

Select the correct answer using the code given below

- 1, 2 and 3 only
- 2, 3 and 4 Only
- 1, 4 and 5 Only
- 1, 2, 3, 4 and 5

Ans: B

Exp: The Air quality index in India was recently developed by the IIT Kanpur. The Index considers eight pollutants — PM10 (particulate matter 10), PM2.5(particulate matter 2.5), NO2 (Nitrogen dioxide), SO2 (Sulphur dioxide), CO (Carbon monoxide), O3 (Ozone), NH3 (Ammoniac) and Pb(Lead)).

3. Which of the following is/are the advantage/advantages of practicing drip irrigation?
- Reduction in weed
 - Reduction in soil salinity
 - Reduction in soil erosion

Select the correct answer using the code given below.

- 1 and 2 only
- 3 only
- 1 and 3 only
- None of the above is an advantage of practicing drip irrigation

Ans: C

Exp: It has no role in reduction in soil salinity.

4. Consider the following statements:
- The International Solar Alliance was launched at the United Nations Climate Change Conference in 2015.
 - The Alliance includes all the member countries of the United Nations.

Which of the statements given above is/are correct?

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

Ans: A

Exp: India and France launched an International Solar Alliance to boost solar energy in developing countries. The initiative was launched at the UN Climate Change Conference in Paris on 30 November by Indian Prime Minister

Narendra Modi and French President Francois Hollande. The alliance includes around 120 countries that support the “Declaration on the occasion to launch the international solar alliance of countries dedicated to the promotion of solar energy.”

5. Consider the following statements:

1. The Sustainable Development Goals were first proposed in 1972 by a global think tank called the ‘Club of Rome’.
2. The Sustainable Development Goals have to be achieved by 2030.

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

Exp: *The Sustainable Development Goals (SDGs), officially known as Transforming our world: the 2030 Agenda for Sustainable Development, are an intergovernmental set of aspiration Goals with 169 targets. The Goals are contained in paragraph 54 United Nations Resolution A/RES/70/1 of 25 September 2015. The history of the SDGs can be traced to 1972 when governments met under the auspices of the United Nations Human and Environment Conference, to consider the rights of the human family to a healthy and productive environment. and not the Club of Rome which is a global think tank that deals with a variety of international political issues. Founded in 1968 at Accademia dei Lincei in Rome, Italy, It raised considerable public attention in 1972 with its report The Limits to Growth. The club states that its mission is “to act as a global catalyst for change through the identification and analysis of the crucial problems facing humanity.*

6. What is/are the importance/importances of the ‘United Nations Convention to Combat Desertification’?

1. It aims to promote effective action through innovative national programmes and supportive inter-national partnerships.
2. It has a special/particular focus on South Asia and North Africa regions, and its secretariat facilitates the allocation of major portion of financial resources to these regions.
3. It is committed to bottom-up approach, encouraging the participation of local people in combating the desertification.

Select the correct answer using the code given below.

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

Ans: C

Exp: *The convention aims to promote effective action through innovative national programmes and supportive international partnerships. committed to a bottom-up approach, encouraging the participation of local people in combating desertification and land degradation.*

7. With reference to the Agreement at the UNFCCC Meeting in Paris in 2015, which of the following statements is/are correct?

1. The Agreement was signed by all the member countries of the UN and it will go into effect in 2017.
2. The Agreement aims to limit the greenhouse gas emissions so that the rise in average global temperature by the end of this century does not exceed 20C or even 1.50C above pre-industrial levels.
3. Developed countries acknowledged their historical responsibility in global warming and committed to donate S 1000 billion a year from 2020 to help developing countries to cope with climate change.

Select the correct answer using the code given below.

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

Ans: B

Exp: *Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. An historic agreement to combat climate change and unleash actions and investment towards a low carbon, resilient and sustainable future was agreed by 195 nations in Paris. The universal agreement’s main aim is to keep a global temperature rise this century well below 2 degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5 degrees Celsius above pre-industrial levels. UNFCCC Conference of the Parties, or COP 21 agreed to extend the current goal of mobilizing*

\$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025. Option (1) is separately correct but wrong with option (3)

8. With reference to 'Agenda 21', sometimes seen in the news, consider the following statements:
1. It is a global action plan for sustainable development.
 2. It originated in the World Summit on Sustainable Development held in Johannesburg in 2002

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

Exp: *It was initiated in Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992.*

9. What is 'Greenhouse Gas Protocol'?
- (a) It is an international accounting tool for government and business leaders to understand, quantify and manage greenhouse gas emissions
 - (b) It is an initiative of the United Nations to offer financial incentives to developing countries to reduce greenhouse gas emissions and to adopt eco-friendly technologies
 - (c) It is an inter-governments agreement ratified by all the member countries of the United Nations to reduce greenhouse gas emissions to specified levels by the year 2022
 - (d) It is one of the multilateral REDD-initiatives hosted by the World Bank

Ans: A

Exp: *The Greenhouse Gas Protocol (GHGP) provides accounting and reporting standards, sector guidance, calculation tools, and trainings for business and government. It establishes a comprehensive, global, standardized framework for measuring and managing emissions from private and public sector operations, value chains, products, cities, and policies.*

10. The term Intended Nationally Determined Contribution is sometimes seen in the news in the context of:
- (a) Pledge made by the European countries to rehabilitate refugees from the war-affected Middle East.
 - (b) Plain of nation outlined by the countries of the world to combat climate changes.

- (c) Capital contributed by the member countries in the establishment of Asian Infrastructure Investment Bank.
- (d) Plain of action outlined by the countries of the regarding Sustainable Developments Goals.

Ans: B

Exp: *INDCs are the primary means for governments to communicate internationally the steps they will take to address climate change in their own countries. INDCs will reflect each country's ambition for reducing emissions, taking into account its domestic circumstances and capabilities for achieving sustainable development goals.*

11. Which of following statements is/are correct?

Proper design and effective implementation of UN-REDD+ Programme can significantly contribute to

1. Protection of biodiversity
2. Resilience of forest ecosystems
3. Poverty reduction

Select the correct answer using the code given below

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

Ans: A

12. With reference to an initiative called 'The Economics of Ecosystems and Biodiversity (TEEB)', which of the following statements is/are correct?

1. It is initiative hosted by UNEP, IMF and World Economic Forum.
2. It is a global initiative that focuses on drawing attention to the economic benefits of biodiversity.
3. It presents an approach that can help decision-makers recognize, demonstrate and capture the value of ecosystems and biodiversity.

Select the correct answer using the code given below

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

Ans: C

Exp: *The Economics of Ecosystems and Biodiversity (TEEB) is an initiative hosted by the United Nations Environment Programme (UNEP).*

13. With reference to 'Red Sanders', sometimes seen in the news, consider the following statements:
1. It is a tree species found in a part of South India.
 2. It is one of the most important trees in the tropical rain forest areas of South 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: A

Exp: *It is a species of thorny deciduous region.*

14. 'Net metering' is sometimes seen in the news in the context of promoting the
- (a) production and use of solar energy by the households/consumers
 - (b) use of piped natural gas in the kitchens of households
 - (c) installation of CNG kits in motor- cars
 - (d) installation of water meters in urban households

Ans: A

Exp: *Net metering is a billing mechanism that credits solar energy system owners for the electricity they add to the grid.*

15. Which of the following best describe the aim of 'Green India Mission' of the Government of India?
1. Incorporating environment benefits and costs into the Union and State Budgets thereby implementing the 'green accounting'.
 2. Launching the second green revolution to enhance agriculture output so as to ensure food security to one and all in the future.
 3. Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures.

Select the correct answer using the code given below

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

Ans: C

Exp: *The objectives are:*

- To increase forest/tree cover to the extent of 5 million hectares (mha) and improve quality of forest/tree cover on another 5 mha of forest/non-forest lands;

- To improve/enhance eco-system services like carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity; along with provisioning services like fuel, fodder, and timber and non-timber forest produces (NTFPs); and

- To increase forest based livelihood income of about 3 million households.

16. Consider the following pairs:

Terms sometimes seen in the news Their origin

1. Annex-I Countries : Cartagena Protocol
2. Certified Emissions Reductions : Nagoya Protocol
3. Clean Development Mechanism : Kyoto Protocol

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

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

Ans: C

Exp: *All the terms are associated with Kyoto Protocol. Certified Emission Reductions (CERs) are a type of emissions unit (or carbon credits) issued by the Clean Development Mechanism (CDM) Executive Board for emission reductions achieved by CDM projects and verified by a DOE (Designated Operational Entity) under the rules of the Kyoto Protocol.*

Annex I parties are industrialized countries belonging to the Organization for Economic Cooperation and Development (OECD) and countries designated as Economies in Transition under the Framework Convention on Climate Change (FCCC), that pledged to reduce their greenhouse gas emissions to 1990 levels by the year 2000.

17. Why does the Government of India promote the use of 'Neem-coated Urea' in agriculture?
- (a) Release of Neem oil in the soil increases nitrogen fixation by the soil microorganisms
 - (b) Neem coating slows down the rate of dissolution of urea in the soil
 - (c) Nitrous oxide, which is a greenhouse gas, is not at all released into atmosphere by crop fields
 - (d) It is a combination of a weedicide and a fertilizer for particular crops

Ans: B

Exp: When ordinary urea is applied, it gets converted to ammonium carbamate. Some of this gets converted to ammonia gas in what is called ammonia volatilisation. The rest of the ammonium carbamate undergoes chemical transformation and nitrates are formed. Some of these are absorbed by the plants. The rest are either leached into the underground water or are denitrified to gaseous nitrogen and nitrous oxide under anaerobic conditions (absence of oxygen). Neem has properties that check nitrogen loss at each stage. It slows down the process of nitrate formation and hence excess nitrate is not available for denitrification.

ENVIRONMENT 2015

- Which of the following National Parks is unique in being a swamp with floating vegetation that supports a rich biodiversity?
 - Bhitarkanika National Park
 - Keibul Lamjao National Park
 - Keoladeo Ghana National Park
 - Sultanpur National Park

Ans: B

Exp: The Keibul Lamjao National Park is a national park in the Bishnupur district of the state of Manipur. Keibul Lamjao National is world's only floating national park. The park is a swamp with floating mass of vegetation (called phumdis), at the south-eastern side of the Loktak Lake, which has been declared a Ramsar site. It was initially declared as a Sanctuary in 1966, but subsequently declared as National Park in 1977.

- What can be the impact of excessive/inappropriate use of nitrogenous fertilizers in agriculture?
 - Proliferation of nitrogen-fixing microorganisms in soil can occur.
 - Increase in the acidity of soil can take place.
 - Leaching of nitrate to the ground-water can occur.

Select the correct answer using the code given below:

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

Ans: C

Exp: Excess nitrogen leads to proliferation of nitrogen fixing bacteria thus causing eutrophication (in water body not in soil). As ammonium builds up in the soil due to excessive application of Nitrogen, it is increasingly converted to nitrate by bacterial

action, a process that releases hydrogen ions and helps acidify the soil. The buildup of nitrate enhances emissions of nitrous oxides from the soil and also encourages leaching of highly water-soluble nitrate into streams or groundwater.

- With reference to the International Union for Conservation of Nature and Natural Resources (IUCN) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which of the following statements is/are correct?
 - IUCN is an organ of the United Nations and CITES is an international agreement between governments.
 - IUCN runs thousands of field projects around the world to better manage natural environments.
 - CITES is legally binding on the States that have joined it, but this Convention does not take the place of national laws.

Select the correct answer using the code given below:

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

Ans: B

Exp: IUCN is not an organ of the United Nations but has observer and consultative status at the United Nations. CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments.

- With reference to 'fly ash' produced by the power plants using coal as fuel, which of the following statements is/are correct?
 - Fly ash can be used in the production of bricks for building construction.
 - Fly ash can be used as a replacement for some of the Portland cement contents of concrete.
 - Fly ash is made up of silicon dioxide and calcium oxide only, and does not contain any toxic elements.

Select the correct answer using the code given below:

- | | |
|-------------|------------|
| (a) 1 and 2 | (b) Only 2 |
| (c) 1 and 3 | (d) Only 3 |

Ans: A

Exp: Fly ash may contain (apart from silicon dioxide and calcium oxide) some toxic elements such as arsenic, lead, mercury etc.

- With reference to 'dugong', a mammal found in India, which of the following statements is/are correct?

1. It is a herbivorous marine animal.
2. It is found along the, entire coast of India.
3. It is given legal protection under Schedule I of the Wildlife (Protection) Act, 1972.

Select the correct answer using the code given below:

- (a) 1 and 2 (b) Only 2
(c) 1 and 3 (d) Only 3

Ans: C

Exp: *The dugong (Dugong dugon) is a herbivorous marine mammal, often called the “sea cow” for its habit of grazing on seagrass meadows. The habitats of Dugong in India include major reef regions of Gulf of Mannar, Palk Bay, Andaman and Nicobar Islands and Gulf of Kachchh (not the entire coast). It has been protected at serial no.-7 of part-I (Mammal) of schedule I [Rare and endangered species which are totally protected] of Wild Life (Protection) Act, 1972.*

6. Which one of the following is the national aquatic animal of India?
(a) Saltwater crocodile
(b) Olive ridley turtle
(c) Gangetic dolphin
(d) Gharial

Ans: C

Exp: *The Gangetic Dolphin was included in Schedule I of the Wildlife (Protection) Act, 1972. In 1982, the dolphin population in the Ganga was estimated to be between 5,000 and 6,000. But, by 2010, it had dwindled to less than 2,000. In 2009, the government notified the Gangetic Dolphin as the national aquatic animal to channel attention and resources towards conserving the species. The dolphins are an indicator species for the river ecosystem and are considered the mascot of a healthy aquatic environment.*

7. Which one of the following regions of Indian has a combination of mangrove forest, evergreen forest and deciduous forest?
(a) North Coastal Andhra Pradesh
(b) South-West Bengal
(c) Southern Saurashtra
(d) Andaman and Nicobar Islands

Ans: D

Exp: *The South Andaman forests have a profuse growth of epiphytic vegetation, mostly ferns and orchids. The Middle Andamans harbours mostly moist deciduous forests. North Andamans is characterised by the wet evergreen type, with plenty of woody climbers. This atypical forest coverage of Andaman & Nicobar is made-up of twelve types namely (1)*

Giant evergreen forest (2) Andamans tropical evergreen forest (3) Southern hilltop tropical evergreen forest (4) Cane brakes (5) Wet bamboo brakes (6) Andamans semi-evergreen forest (7) Andamans moist deciduous forest (8) Andamans secondary moist deciduous forest (9) Littoral forest (10) Mangrove forest (11) Brackish water mixed forest (12) Submontane hill valley swamp forest.

8. Which one the following is associated with the issue of control and phasing out of the use of ozone-depleting substances?
(a) Bretton Woods Conference
(b) Montreal Protocol
(c) Kyoto Protocol
(d) Nagoya Protocol

Ans: B

Exp: *The Montreal Protocol is widely considered as the most successful environment protection agreement. The Protocol sets out a mandatory timetable for the phase out of ozone depleting substances. This timetable has been reviewed regularly, with phase out dates accelerated in accordance with scientific understanding and technological advances.*

The Montreal Protocol sets binding progressive phase out obligations for developed and developing countries for all the major ozone depleting substances, including CFCs, halons and less damaging transitional chemicals such as HCFCs.

9. What is Rio+20 Conference, often mentioned in the news?
(a) It is the United Nations Conference on Sustainable Development
(b) It is a Ministerial Meeting of the World Trade Organization
(c) It is a Conference of the Inter-governmental Panel on Climate Change
(d) It is a Conference of the Member Countries of the Convention on Biological Diversity

Ans: A

Exp: *Rio+20 is the short name for the United Nations Conference on Sustainable Development which took place in Rio de Janeiro, Brazil in June 2012 – twenty years after the landmark 1992 Earth Summit in Rio.*

At the Rio+20 Conference, world leaders, along with thousands of participants from the private sector, NGOs and other groups, came together to shape how we can reduce poverty, advance social equity and ensure environmental protection on an ever more crowded planet.

The official discussions focussed on two main themes: how to build a green economy to achieve

sustainable development and lift people out of poverty; and how to improve international coordination for sustainable development.

AT Rio+20, more than \$513 billion was pledged to build a sustainable future. It signaled a major step forward in achieving the future we want.

10. Which of the statements regarding 'Green Climate Fund' is/are correct?

1. It is intended to assist the developing countries in adaption and mitigation practices to counter climate change.
2. It is founded under the aegis of UNEP, OECD, Asian Development Bank and World Bank.

Select the correct answer using the code given below:

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

Ans: A

Exp: *The Green Climate Fund (GCF) is a fund within the framework of the UNFCCC founded as a mechanism to redistribute money from the developed to the developing world, in order to assist the developing countries in adaptation and mitigation practices to counter climate change. The GCF is based in the new Songdo district of Incheon, South Korea. It is governed by a Board of 24 members and initially supported by an Interim Secretariat.*

11. Which one of the following National Parks has a climate that varies from tropical to subtropical, temperate and arctic?

- (a) Khangchendzonga National Park
- (b) Nandadevi National Park
- (c) Neora Valley National Park
- (d) Namdapha National Park

Ans: D

Exp: *The climate of Khangchendzonga and Nandadevi National Parks varies from temperate to arctic and that of Neora National Park is subtropical. Only Namdapha National Park has a climate that varies from tropical to subtropical, temperate and arctic.*

12. 'BioCarbon Fund Initiative for Sustainable Forest Landscapes' is managed by the

- (a) Asian Development Bank
- (b) International Monetary Fund
- (c) United Nations Environment Programme
- (d) World Bank

Ans: D

Exp: *Three nations are funding a major new BioCarbon Fund initiative to support forest*

landscapes. The funding pledge was announced during an event at the United Nations' climate summit in Warsaw, known as COP19.

Norway, the United Kingdom, and the United States together committed \$280 million – up to \$135 million from Norway, \$120 million from the U.K, and \$25 million from the U.S. – as part of their efforts to slow climate change.

The initiative will be managed by the BioCarbon Fund, a public-private program housed within the World Bank that mobilizes finance for activities that sequester or conserve carbon emissions in forest and agricultural systems.

13. With reference to 'Forest Carbon Partnership Facility', which of the following statements is/are correct?

1. It is a global partnership of governments, businesses, civil society and indigenous peoples.
2. It provides financial aid to universities, individual scientists and institutions involved in scientific forestry research to develop eco-friendly and climate adaptation technologies for sustainable forest management.
3. It assists the countries in their 'REDD+ (Reducing Emissions from Deforestation and Forest Degradation+)' efforts by providing them with financial and technical assistance.

Select the correct answer using the code given below:

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

Ans: C

Exp: *The Forest Carbon Partnership Facility is a global partnership of governments, businesses, civil society, and Indigenous Peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries (activities commonly referred to as REDD+).*

14. With reference to an organization known as 'BirdLife International', which of the following statements is/are correct?

1. It is a Global Partnership of Conservation Organizations.
2. The concept of 'biodiversity hotspots' originated from this organization.
3. It identifies the sites known/referred to as 'Important Bird and Biodiversity Areas'.

Select the correct answer using the code given below:

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

Ans: C

Exp: BirdLife international is a global partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. It is the World's largest partnership of conservation organisations, with over 120 partner organisations 120 partner organisations.

An Important Bird and Biodiversity Area (IBA) is an area recognized as being globally important habitat for the conservation of birds populations. Currently there are about 10,000 IBAs worldwide. The program was developed and sites are identified by BirdLife International. These sites are small enough to be entirely conserved and differ in their character, habitat or ornithological importance from the surrounding habitat.

A biodiversity hotspot is a biogeographic region with a significant reservoir of biodiversity that is under threat from humans. Norman Myers wrote about the concept in two articles in "The Environmentalist" (1988), & 1990 revised after thorough analysis by Myers and others in "Hotspots: Earth's Biologically Richest and Most Endangered Terrestrial Ecoregions".

15. Which one of the following is the best description of the term 'ecosystem'?
- (a) A community of organisms interacting with one another
 - (b) That part of the Earth which is inhabited by living organisms
 - (c) A community of organisms together with the environment in which they live
 - (d) The flora and fauna of a geographical area

Ans: C

Exp: A community of organisms together with the environment in which they live

16. Which one of the following best describes the main objective of 'Seed Village Concept'?
- (a) Encouraging the farmers to use their own farm seeds and discouraging them to buy the seeds from others
 - (b) Involving the farmers for training in quality seed production and thereby to make available quality seeds to others at appropriate time and affordable cost
 - (c) Earmarking some villages exclusively for the production of certified seeds

- (d) Identifying the entrepreneurs in villages and providing them technology and finance to set up seed companies

Ans: B

Exp: A village, wherein trained group of farmers are involved in production 'of seeds of various crops and cater to the needs of themselves, fellow farmers of the village and farmers of neighbouring villages in appropriate time and at affordable cost is called "a seed village".

ENVIRONMENT 2014

1. With reference to Bombay Natural History Society (BNHS), consider the following statements:
1. It is an autonomous organization under the Ministry of Environment and Forests.
 2. It strives to conserve nature through action-based research, education and public awareness.
 3. It organizes and conducts nature trails and camps for the general public.

Which of the statements given above is/are correct?

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

Ans: C

2. Other than poaching, what are the possible reasons for the decline in the population of Ganges River Dolphins?
1. Construction of dams and barrages on rivers
 2. Increase in the population of crocodiles in rivers
 3. Getting trapped in fishing nets accidentally
 4. Use of synthetic fertilizers and other agricultural chemicals in crop-fields in the vicinity of rivers

Select the correct answer using the code given below:

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

Ans: C

3. If you walk through countryside, you are likely to see some birds stalking alongside the cattle to seize the insects, disturbed by their movement through grasses.

Which of the following is/are such bird/birds?

1. Painted Stork
2. Common Myna
3. Black-necked Crane

Select the correct answer using the code given below:

- (a) 1 and 2
- (b) Only 2
- (c) 2 and 3
- (d) Only 3

Ans: B

4. The most important strategy for the conservation of biodiversity together with traditional human life is the establishment of
- Biosphere reserves
 - Botanical gardens
 - National parks
 - Wildlife sanctuaries

Ans: A

5. Consider the following international agreements:
- The International Treaty on Plant Genetic Resources for Food and Agriculture
 - The United Nations Convention to Combat Desertification
 - The World Heritage Convention

Which of the above has / have a bearing on the biodiversity?

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

Ans: D

6. The most important strategy for the conservation of biodiversity together with traditional human life is the establishment of
- Biosphere reserves
 - Botanical gardens
 - National parks
 - Wildlife sanctuaries

Ans: A

7. Consider the following statements:
- Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.
 - National Tiger Conservation Authority is a statutory body.
 - National Ganga River Basin Authority is chaired by the Prime Minister.

Which of the statements given above is/ are correct?

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

Ans: B

8. With reference to 'Global Environment Facility', which of the following statements is/are correct?
- It serves as financial mechanism for 'Convention on Biological Diversity' and 'United Nations Framework Convention on Climate Change'
 - It undertakes scientific research on environmental issues at global level
 - It is an agency under OECD to facilitate the transfer of technology and funds to underdeveloped countries with specific aim to protect their environment.
 - Both (a) and (b)

Ans: A

9. Consider the following statements regarding 'Earth Hour':
- It is an initiative of UNEP and UNESCO.
 - It is a movement in which the participants switch off the lights for one hour on a certain day every year.
 - It is a movement to raise the awareness about the climate change and the need to save the planet.

Which of the statements given above is/are correct?

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

Ans: C

10. If a wetland of international importance is brought under the 'Montreux Record', what does it imply?
- Changes in ecological character have occurred, are occurring or are likely to occur in the wetland as a result of human interference.
 - The country in which the wetland is located should enact a law to prohibit any human activity within five kilo metres from the edge of the wetland
 - The survival of the wetland depends on the cultural practices and traditions of certain communities living in its vicinity and therefore the cultural diversity therein should not be destroyed
 - It is given the status of 'World Heritage Site'

Ans: A

11. Brominated flame retardants are used in many household products like mattresses and upholstery. Why is there some concern about their use?
- They are highly resistant to degradation in the environment.
 - They are able to accumulate in humans and animals.

Select the correct answer using the code given below:

- Only 1
- Only 2
- Both 1 and 2
- Neither 1 nor 2

Ans: C

14. Which of the following adds/add carbon dioxide to the carbon cycle on the planet Earth?
- Volcanic action
 - Respiration
 - Photosynthesis
 - Decay of organic matter

Select the correct answer using the code given below:

- 1 and 3 only
- Only 2
- 1, 2 and 4 only
- 1, 2, 3 and 4

Ans: C

15. Lichens, which are capable of initiating ecological succession even on a bare rock, are actually a symbiotic association of
- Algae and bacteria
 - Algae and fungi
 - Bacteria and fungi
 - Fungi and mosses

Ans: B

16. Which of the following are some important pollutants released by steel industry in India?

- Oxides of sulphur
- Oxides of nitrogen
- Carbon monoxide
- Carbon dioxide

Select the correct answer using the code given below:

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

Ans: D

17. In India, the problem of soil erosion is associated with which of the following?

- Terrace cultivation
- Deforestation
- Tropical climate'

Select the correct answer using the code given below:

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

Ans: B

18. Which one of the following is the correct sequence of a food chain?

- Diatoms-Crustaceans-Herrings
- Crustaceans-Diatoms-Herrings
- Diatoms-Herrings-Crustaceans
- Crustaceans-Herrings-Diatoms

Ans: A

19. With reference to 'Eco-Sensitive Zones', which of the following statements is/are correct?

- Eco-Sensitive Zones are the areas that are declared under the Wildlife (Protection) Act, 1972.
- The purpose of the declaration of Eco-Sensitive Zones is to prohibit all kinds of human activities, in those zones except agriculture.

Select the correct answer using the code given below:

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

Ans: D

ENVIRONMENT 2013

1. Under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, who shall be the authority to initiate the process for determining the nature and extent of individual or community forest rights or both?

- State Forest Department
- District Collector/Deputy Commissioner
- Tahsildar/Block Development Officer/Mandal Revenue Officer
- Gram Sabha

Ans: D

2. Acid rain is caused by the pollution of environment by

- Carbon dioxide and nitrogen
- Carbon monoxide and carbon dioxide
- Ozone and carbon dioxide
- Nitrous oxide and sulphur dioxide

Ans: D

3. With reference to food chains in ecosystems, consider the following statements:

- A food chain illustrates the order in which a chain of organisms feed upon each other.
- Food chains are found within the populations of a species.
- A food chain illustrates the numbers of each organism which are eaten by others.

Which of the statements given above is/are correct?

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

Ans: A

4. In which of the following States is lion-tailed macaque found in its natural habitat?

- Tamil Nadu 2. Kerala
3. Karnataka 4. Andhra Pradesh

Select the correct answer using the codes given below:

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

Ans: A

5. Which one of the following terms describes not only the physical space occupied by an organism, but also its functional role in the community of organisms?

- Ecotone (b) Ecological niche
(c) Habitat (d) Home range

Ans: B

6. Photochemical smog is a resultant of the reaction among:
- NO₂, O₃ and peroxyacetyl nitrate in the presence of sunlight
 - CO, O₂ and peroxyacetyl nitrate in the presence of sunlight
 - CO, CO₂ and NO₂ at low temperature
 - High concentration of NO₂, O₃ and CO in the evening

Ans: A

7. Consider the following
- | | |
|------------------|-------------------|
| 1. Star tortoise | 2. Monitor lizard |
| 3. Pygmy hog | 4. Spider monkey |

Which of the above found in India?

- 1, 2 and 3 only
- 2 and 3 only
- 1 and 4 only
- 1, 2, 3 and 4

Ans: A

8. Which of the following can be found as pollutants in the drinking water in some parts of India?
- | | |
|-------------|-----------------|
| 1. Arsenic | 2. Sorbitol |
| 3. Fluoride | 4. Formaldehyde |
| 5. Uranium | |

Select the correct answer using the codes given below:

- 1 and 3 only
- 2, 4 and 5 only
- 1, 3 and 5 only
- 1, 2, 3, 4 and 5

Ans: C

9. In the grasslands, trees do not replace the grasses as a part of an ecological succession because of:
- Insects and fungi
 - Limited sunlight and paucity of nutrients
 - Water limits and fire
 - None of the above

Ans: C

10. Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity?
- Oceans, lakes, grasslands, mangroves
 - Mangroves, oceans, grasslands, lakes
 - Mangroves, grasslands, lakes, oceans
 - Oceans, mangroves, lakes, grasslands

Ans: C

11. Consider the following fauna of India:
- | | |
|---------------|-----------------------|
| 1. Gharial | 2. Leatherback turtle |
| 3. Swamp deer | |

Which of the above is/are endangered?

- 1 and 2 only
- Only 3
- 1, 2 and 3
- None

Ans: C

12. Which of the following leaf modifications occurs/ occur in desert areas to inhibit water loss?
- Hard and waxy leaves
 - Tiny leaves or no leaves
 - Thorns instead of leaves

Select the correct answer using the codes given below:

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

Ans: D

13. With reference to the food chains in ecosystems, which of the following kinds of organism is / are known as decomposer organism/organisms?
- Virus
 - Fungi
 - Bacteria

Select the correct answer using the codes given below:

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

Ans: B

ENVIRONMENT 2012

1. How does National Biodiversity Authority (NBA) help in protecting the Indian agriculture?
- NBA checks the biopiracy and protects the indigenous and traditional genetic resources.
 - NBA directly monitors and supervises the scientific research on genetic modification of crop plants.
 - Application for Intellectual Property Rights related to genetic/biological resources cannot be made without the approval of NBA.

Which of the statements given above is/are correct?

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

Ans: C

2. If national water mission is properly and completely implemented how will it impact the country?
- Part of the water needs of urban areas will be met through recycling of waste water.
 - The water requirements of coastal cities with inadequate alternative sources of water will be met by adopting appropriate technologies that allow for the use of ocean water.
 - All the rivers of Himalayan origin will be linked to the rivers of peninsular India
 - The expenses incurred by farmers for digging bore wells and for installing motors and pump

sets to draw groundwater will be completely reimbursed by the Government.

Select the correct answer using the codes given below:

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

Ans: B

3. Consider the following statements:

Chlorofluorocarbons, known as ozone depleting substances are used

1. In the production of plastic foams
2. in the production of tubeless tyres
3. In cleaning certain electronic components
4. As pressurizing agents in aerosol cans

Which of the statements given above is/are correct?

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

Ans: D

4. Government of India encourages the cultivation of 'sea buckthorn'. What is the importance of this plant?

1. It helps in controlling soil erosion and in preventing desertification.
2. It is a rich source of biodiesel.
3. It has nutritional value and is well-adapted to live in cold areas of high altitudes.
4. Its timber is of great commercial value.

Which of the statements given above is/ are correct?

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

Ans: C

5. With reference to the wetlands of India, consider the following statements:

1. The country's total geographical area under the category of wetlands is recorded more in Gujrat as Compared to other states
2. In India, the total geographical area of coastal wetlands is larger than that of inland wetlands

Which of the statements given above is/are correct?

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

Ans: C

6. The increasing amount of carbon dioxide in the air is slowly raising the temperature of the atmosphere, because it absorbs

- (a) The water vapour of the air and retains its heat
- (b) The UV part of the solar radiation
- (c) All the solar radiations

(d) The infrared part of the solar radiation

Ans: D

7. Other than resistance to pests, what are the prospects for which genetically engineered plants have been created?

1. To enable them to withstand drought
2. To increase the nutritive value of the produce
3. To enable them to grow and do photosynthesis in spaceships and space stations
4. To increase their shelf life

Select the correct answer using the codes given below

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

Ans: C

8. Consider the following protected areas:

1. Bandipur 2. Bhitarkanika
3. Manas 4. Sunderbans

Which of the above are declared Tiger Reserves?

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

Ans: B

9. In which one among the following categories of protected areas in India are local people not allowed to collect and use the biomass?

- (a) Biosphere reserves
- (b) National parks
- (c) Wetlands declared under Ramsar convention
- (d) Wildlife sanctuaries

Ans: B

10. Which one of the following groups of animals belongs to the category of endangered species?

- (a) Great Indian bustard, Musk Deer, Red Panda and Asiatic Wild Ass
- (b) Kashmir Stag, Cheetah, Blue Bull, GIB
- (c) Snow Leopard, Swamp Deer, Rhesus Monkey, Saras (Crane)
- (d) Lion Tailed Macaque, Blue Bull, Hanuman Langur, Cheetah

Ans: A

11. The Millenium Ecosystem Assessment describes the following major categories of ecosystem services-provisioning, supporting, regulating, preserving and cultural. Which one of the following is supporting service?

- (a) Production of food and water
- (b) Control of climate and disease

- (c) Nutrient Cycling and crop pollinator
- (d) Maintenance of diversity

Ans: C

12. Which of the following can be threats to the biodiversity of a geographical area?

- 1. Global warming
- 2. Fragmentation of habitat
- 3. Invasion of alien species
- 4. Promotion of vegetarianism

Select the correct answer using the codes given below:

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

Ans: A

13. Consider the following:

- 1. Black necked crane
- 2. Cheetah
- 3. Flying squirrel
- 4. Snow leopard

Which of the above are naturally found in India?

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

Ans: B

14. Consider the following agricultural practices:

- 1. Contour bunding
- 2. Relay cropping
- 3. Zero tillage

In the context of global climate change, which of the above helps/help in carbon sequestration/ storage in the soil?

- (a) 1 and 2 only
- (b) Only 3
- (c) 1, 2 and 3
- (d) None of them

Ans: B

15. What would happen if phytoplankton of an ocean is completely destroyed for some reason?

- 1. The ocean as a carbon sink would be adversely affected.
- 2. The food chains in the ocean would be adversely affected.
- 3. The density of ocean water would drastically decrease.

Select the correct answer using the codes given below:

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

Ans: A

ENVIRONMENT 2011

1. Biodiversity forms the basis for human existence in the following ways:

- 1. Soil formation
- 2. Prevention of soil erosion
- 3. Recycling of waste
- 4. Pollination of crops

Select the correct answer using the codes given below:

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

Ans: D

2. The formation of ozone hole in the Antarctic region has been a cause of concern. What could be the reason for the formation of this hole?

- (a) Presence of prominent tropo-spheric turbulence; and inflow of chlorofluorocarbons
- (b) Presence of prominent polar front and stratospheric' clouds; and inflow of chlorofluorocarbons
- (c) Absence of polar front and stratospheric clouds; and inflow of methane and chlorofluorocarbons
- (d) Increased temperature at polar region due to global warming

Ans: B

3. Regarding "carbon, credits", which one of the following statements is not correct?

- (a) The carbon credit system was ratified in conjunction with the Kyoto Protocol
- (b) Carbon credits are awarded to countries or groups that have reduced greenhouse gases below their emission quota
- (c) The goal of the carbon credit system is to limit the increase of carbon dioxide emission
- (d) Carbon credits are- traded at a price fixed from time to time by the United Nations Environment Programme

Ans: B

4. There is a concern: over the increase in harmful algal blooms in the seawaters of India. What could be the causative factors for this phenomenon?

- 1. Discharge of nutrients from the estuaries.
- 2. Run-off from the land during the monsoon.
- 3. Upwelling in the seas.

Select the correct answer from the codes given below:

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

Ans: D

5. A sandy and saline area is the natural habitat of an Indian animal species. The animal has no predators in that area but its existence is threatened due to the destruction of its habitat. Which one of the following could be that animal?

- (a) Indian wild buffalo
 (b) Indian wild ass
 (c) Indian wild boar
 (d) Indian gazelle

Ans: B

6. The “Red Data Books” published by the International Union for Conservation of Nature and Natural Resources (IUCN) contain lists of:

1. Endemic plant and animal species present in the biodiversity hotspots,
2. Threatened plant and animal species.
3. Protected sites for conservation of nature and natural resources in various countries.

Select the correct answer using the codes given below:

- (a) 1 and 3 (b) Only 2
 (c) 2 and 3 (d) Only 3

Ans: B

7. Three of the following criteria have contributed to the recognition of Western Ghats-Sri Lanka and Indo-Burma regions as hotspots of biodiversity:

1. Species richness
2. Vegetation density
3. Endemism
4. Ethno-botanical importance
5. Threat perception
6. Adaptation of flora and fauna to warm and humid conditions

Which three of the above are correct criteria in this context?

- (a) 1, 2 and 6 (b) 2, 4 and 6
 (c) 1, 3 and 5 (d) 3, 4 and 6

Ans: C

8. Human activities in the recent past have Caused the increased concentration of carbon dioxide in the atmosphere, but a lot of it does not remain in the lower atmosphere because of:

1. its escape into the outer stratosphere.
2. the photosynthesis by phyto-plankton in the oceans.
3. the trapping of air in the polar ice caps.

Which of the statements given above is/are correct?

- (a) 1 and 2 (b) Only 2
 (c) 2 and 3 (d) Only 3

Ans: C

9. In the context of ecosystem productivity, marine upwelling zones are important as they increase the marine productivity by bringing the:

1. decomposer microorganisms to the surface.
2. nutrients to the surface.
3. bottom-dwelling organisms to- the surface.

Which of the statements given above is/are correct?

- (a) 1 and 2 (b) Only 2
 (c) 2 and 3 (d) Only 3

Ans: B

10. With reference to India, consider the following Central Acts:

1. Import and Export (Control) Act, 1947
2. Mining and Mineral Development (Regulation) Act, 1957
3. Customs Act, 1962
4. Indian Forest Act, 1927

Which of the above Acts have relevance to/bearing on the biodiversity conservation in the country?

- (a) 1 and 3 only (b) 2, 3 and 4 only
 (c) 1, 2, 3 and 4 (d) None of the above Acts

Ans: C

ENVIRONMENT 2010

1. Some species of plants are insectivorous. Why?
- (a) Their growth in shady and dark places does not allow them to undertake sufficient photosynthesis and thus they depend on insects for nutrition
 - (b) They are adapted to grow in nitrogen deficient soils and thus depend on insects for sufficient nitrogenous nutrition
 - (c) They cannot synthesize certain vitamins themselves and depend on the insects digested by them
 - (d) They have remained in that particular stage of evolution as living fossils, a link between autotrophs and heterotrophs

Ans: B

2. Consider the following statements:
1. The Taxus tree naturally found in the Himalayas
 2. The Taxus tree is listed in the Red Data Book
 3. A drug called “taxol” is obtained from Taxus tree is effective against Parkinson’s disease

Which of the statements given above is/are correct?

- (a) 1 and 2 (b) Only 2
(c) 2 and 3 (d) Only 3

Ans: B

3. A pesticide which is a chlorinated hydrocarbon is sprayed on a food crop. The food chain is: Food crop – Rat – Snake – Hawk. In this food chain, the highest concentration of the pesticide would accumulate in which one of the following?
(a) Food crop (b) Rat
(c) Snake (d) Hawk

Ans: D

4. King Cobra is the only snake that makes its own nest. Why does it make its nest?
(a) It is a snake-eater and the nest helps attract other snakes
(b) It is a viviparous snake and needs a nest to give birth to its offspring

- (c) It is an oviparous snake and lays its eggs in the nest and guards the nest until they are hatched
(d) It is a large, cold blooded animal and needs a nest to hibernate in the cold season

Ans: C

5. Excessive release of the pollutant carbon monoxide (CO) into the air may produce a condition in which oxygen supply in the human body decrease. What causes this condition?
(a) When inhaled into the human body, CO is converted into CO₂
(b) The inhaled CO has much higher affinity for haemoglobin as compared to oxygen
(c) The inhaled CO destroys the chemical structure of haemoglobin
(d) The inhaled CO adversely affects the respiratory centre in the brain

Ans: B