

**ENVIRONMENT**  
**PRELIMS PREVIOUS YEARS QUESTIONS**

**PRELIMS - SYLLABUS & PREVIOUS YEARS QUESTIONS ANALYSIS**

- General issues on **Environmental Ecology, Bio-diversity and Climate Change** - that do not require subject specialization

No.	Topics	2019	2018	2017	2016	2015	2014	2013	2012	2011
1	ECOSYSTEM									
	i. Food Chain	-	-	-	-	-	1	2	1	-
	ii. Ecological Succession	-	-	-	-	-	1	1	-	-
	iii. General	-	-	-	-	1	1	2	-	1
2	BIOGEOCHEMICAL CYCLES									
	i. Carbon cycle	-	1	-	-	-	1	-	-	1
	ii. Nitrogen cycle	-	-	-	-	-	-	1	-	-
3	BIODIVERSITY									
	i. Conservation of BD	-	-							
	a. Protected areas	1	1	3	-	-	-	-	1	1
	b. General	-	1	-	-	-	2	-	1	1
	ii. Threats of BD	-	1	-	-	-	1	-	2	1
	iii. General	-	-	-	-	-	-	-	-	2
	iv. Fauna	3	-	3	3	2	4	4	4	1
	v. Flora	1	2	-	2	-	1	-	1	-
	vi. Forest	1	-	-	-	3	1	1	-	2
	vii. Wetlands	1	-	-	-	-	3	-	1	1
	viii. Coral reefs	-	1	-	-	-	1	-	-	-
	ix. Organizations	-	2	1	5	3	4	-	2	1
	x. Acts	5	-	1	-	1	2	-	-	1
4	POLLUTION	4	-	3	1	2	2	4	3	2
6	ENERGY	-	-	1	-	1	-	-	1	-
	<b>Total</b>	<b>16</b>	<b>9</b>	<b>12</b>	<b>11</b>	<b>15</b>	<b>25</b>	<b>16</b>	<b>17</b>	<b>16</b>

**2019**

1. Consider the following statements:
  1. As per recent amendment to the Indian Forest Act, 1927, forest dwellers have the right to fell the bamboos grown on forest areas.
  2. As per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006, bamboo is a minor forest produce.
  3. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest

Right) Act, 2006 allows ownership of minor forest produce to forest dwellers.

Which of the statements given above is/are correct?

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

2. Consider the following statement:

- 1. Asiatic lion is naturally found in India only.
- 2. Double-humped camel is naturally found in India only.
- 3. One-horned rhinoceros is naturally found in India only.

Which of the statements given above is/are correct?

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

3. Why is there a great concern about the 'microbeads' that are released into environment?

- (a) They are considered harmful to marine ecosystems.
- (b) They are considered to cause skin cancer in children.
- (c) They are small enough to be absorbed by crop plants in irrigated fields.
- (d) They are often found to be used as food adulterants.

4. Consider the following statements:

- 1. Some species of turtles are herbivores.
- 2. Some species of fish are herbivores.
- 3. Some species of marine mammals are herbivores.
- 4. Some species of snakes are viviparous.

Which of the statements given above are correct?

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

5. Consider the following pairs:

- | <b>Wildlife</b>        | <b>Naturally found in</b> |
|------------------------|---------------------------|
| 1. Blue-finned Mahseer | : Cauvery River           |
| 2. Irrawaddy Dolphin   | : Chambal River           |
| 3. Rusty-spotted Cat   | : Eastern Ghats           |

Which of the pairs given above are correctly matched?

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

6. In India, 'extended producer responsibility' was introduced as an important feature in which of the following?

- (a) The Bio-medical Waste (Management and Handling) Rules 1998
- (b) The Recycled Plastic (Manufacturing and Usage) Rules, 1999
- (c) The e-Waste (Management and Handling) Rules, 2011
- (d) The Food Safety and Standard Regulations, 2011

7. Consider the following statements:

1. As per law, the Compensatory Afforestation Fund Management and Planning Authority exists at both National and State Levels.
2. People's participation is mandatory in the compensatory afforestation programme carried out under the Compensatory Afforestation Fund Act, 2016.

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

8. Consider the following statements:

The Environment Protection Act, 1986 empowers the Government of India to

1. state the requirement of public participation in the process of environmental protection, and the procedure and manner in which it is sought
2. lay down the standards for emission or discharge of environmental pollutants from various sources

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 and 2

9. As per the Solid Waste Management Rules, 2016 in India, which one of the following statements is correct?

- (a) Waste generator has to segregate waste into five categories.
- (b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
- (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.

(d) It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.

10. Which of the following are in Agasthyamala Biosphere Reserve?
- (a) Neyyar, Peppara and Shendurney Wildlife Sanctuaries; and Kalakad Mundanthurai Tiger Reserve
  - (b) Mudumalai, Sathyamangalam and Wayanad Wildlife Sanctuaries; and Silent Valley National Park
  - (c) Kaundinya, Gundla Brahmeswaram and Paikonda Wildlife Sanctuaries; and Mukurthi National Park
  - (d) Kawal and Sri Venkateswara Wildlife Sanctuaries; and Nagarjunasagar- Srisailem Tiger Reserve

11. Consider the following :
- 1. Carbon monoxide
  - 2. Methane
  - 3. Ozone
  - 4. Sulphur dioxide

Which of the above are released into atmosphere due to the burning of crop/biomass residue?

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

12. Consider the following statements:
- 1. Under the Ramsar Convention, it is mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.
  - 2. The Wetlands (Conservation and management) Rules, 2010 were framed by the Government of India based on the recommendations of Ramsar Convention.
  - 3. The Wetlands (Conservation and Management) Rules, 2010 also encompass the drainage area or catchment regions of the wetlands as determined by the authority.

Which of the statements given above is/are correct?

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

13. In the context of proposals to the use of hydrogen-enriched CNG (H-CNG) as fuel for buses in public transport, consider the following statements :
- 1. The main advantage of the use of H-CNG is the elimination of carbon monoxide emissions.

2. H-CNG as fuel reduces carbon dioxide and hydrocarbon emissions.
3. Hydrogen up to one-fifth by volume can be blended with CNG as fuel for buses.
4. H-CNG makes the fuel less expensive than CNG.

Which of the statements given above is/are correct?

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

14. Consider the following States:

1. Chhattisgarh
2. Madhya Pradesh
3. Maharashtra
4. Odisha

With reference to the States mentioned above, in terms of the percentage of forest cover to the total area of State, which one of the following is the correct ascending order?

- (a) 2-3-1-4
- (b) 2-3-4-1
- (c) 3-2-4-1
- (d) 3-2-1-4

15. Recently, there was a growing awareness in our country about the importance of Himalayan nettle (*Girardinia diversifolia*) because it is found to be a sustainable source of

- (a) anti-malarial drug
- (b) biodiesel
- (c) pulp for paper industry
- (d) textile fibre

16. In India, the use of carbofuran, methyl parathion, phorate and triazophos is viewed with apprehension. These chemicals are used as

- (a) pesticides in agriculture
- (b) preservatives in processed foods
- (c) fruit-ripening agents
- (d) Moisturising agents in cosmetics

2018

1. Which of the following leaf modifications occur(s) in the desert areas to inhibit water loss?

1. Hard and waxy leaves
2. Tiny leaves
3. Thorns instead of leaves

Select the correct answer using the code given below:

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

2. How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)?

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

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

3. The term “sixth mass extinction/sixth extinction” is often mentioned in the news in the context of the discussion of

- (a) Widespread monoculture practices in agriculture and large-scale commercial farming with indiscriminate use of chemicals in many parts of the world that may result in the loss of good native ecosystems.
- (b) Fears of a possible collision of a meteorite with the Earth in the near future in the manner it happened 65 million years ago that caused the mass extinction of many species including those of dinosaurs.
- (c) Large scale cultivation of genetically modified crops in many parts of the world and promoting their cultivation in other parts of the world which may cause the disappearance of good native crop plants and the loss of food biodiversity.
- (d) Mankind’s over-exploitation/misuse of natural resources, fragmentation/loss of natural habitats, destruction of ecosystems, pollution and global climate change.

4. Which of the following statements best describes “carbon fertilization”?

- (a) Increased plant growth due to increased concentration of carbon dioxide in the atmosphere
- (b) Increased temperature of Earth due to increased concentration of carbon dioxide in the atmosphere
- (c) Increased acidity of oceans as a result of increased concentration of carbon dioxide in the atmosphere
- (d) Adaptation of all living beings on Earth to the climate change brought about by the

increased concentration of carbon dioxide in the atmosphere

5. The Partnership for Action on Green Economy (PAGE), a UN mechanism to assist countries transition towards greener and more inclusive economies, emerged at
- The Earth Summit on Sustainable Development 2002, Johannesburg
  - The United Nations Conference on Sustainable Development 2012, Rio de Janeiro
  - The United Nations Framework Convention on Climate Change 2015, Paris
  - The World Sustainable Development Summit 2016, New Delhi

6. In which one of the following States is Pakhui Wildlife Sanctuary located?
- Arunachal Pradesh
  - Manipur
  - Meghalaya
  - Nagaland

7. Consider the following statements:

- The definition of "Critical Wildlife Habitat" is incorporated in the Forest Rights Act, 2006.
- For the first time in India, Baigas have been given Habitat Rights.
- Union Ministry of Environment, Forest and Climate Change officially decides and declares Habitat Rights for Primitive and Vulnerable Tribal Groups in any part of India.

Which of the statement given above is/are correct?

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

8. Why is a plant called *Prosopis juliflora* often mentioned in news?

- Its extract is widely used in cosmetics.
- It tends to reduce the biodiversity in the area in which it grows.
- Its extract is used in the synthesis of pesticides.
- None of the above

9. Consider the following statements:

- Most of the world's coral reefs are in tropical waters.
- More than one-third of the world's coral reefs are located in the territories of Australia, Indonesia and Philippines.
- Coral reefs host far more number of animal phyla than those hosted by tropical rainforests.

Which of the statements given above is/are correct?

- 1 and 2 only

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

2017

1. 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 Program (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

2. In the context of solving pollution problems, what is/are the advantage/advantages of bioremediation technique?

1. It is a technique for cleaning up pollution by enhancing the same biodegradation process that occurs in nature.
2. Any contaminant with heavy metals such as cadmium and lead can be readily and completely treated by bioremediation using microorganisms
3. Genetic engineering can be used to create microorganisms specifically designed for bioremediation.

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

3. 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 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

4. 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

5. The term 'M-Stripes' is sometime seen in the news in the context of
  - (a) Captive breeding of Wild Fauna
  - (b) Maintenance of Tiger Reserves
  - (c) Indigenous Satellite Navigation System
  - (d) Security of National Highways
6. In India, if a species of tortoise is declared protected under Schedule 1 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 now 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.
7. 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
8. 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
9. If you want to see gharials in their natural habitat, which one of the following is the best place to visit?
  - (a) Bhitarkanika Mangroves

- (b) Chambal River
- (c) Pulicat Lake
- (d) Deepor Beel

10. Consider the following pairs:

*Commonly used / Consumed materials*                      *Unwanted or controversial chemicals likely to be found in them*

- 1. Lipstick                      -                      Lead
- 2. Soft drinks                      -                      Brominated vegetable oils
- 3. Chinese fast food                      -                      Monosodium glutamate

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

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

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

12. From the ecological point of view, which one of the following assumes importance in being a good link between the Eastern Ghats and the Western Ghats?

- (a) Sathyamangalam Tiger Reserve
- (b) Nallamala Forest
- (c) Nagarhole National park
- (d) Seshachalam Biosphere Reserve

2016

1. What is/are the importance/importance's of the 'United Nations Convention to Combat Desertification'?

- 1. It aims to promote effective action through innovative national programs and supportive international 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

2. In which of the following regions of India are you most likely to come across the 'Great Indian Hornbill' in its natural habitat?

- (a) Sand deserts of northwest India
- (b) Higher Himalayas of Jammu and Kashmir
- (c) Salt marshes of western Gujarat
- (d) Western Ghats

3. Which of the following are the key features of 'National Ganga River basin Authority (NGRBA)?

1. River basin is the unit of planning and management.
2. It spearheads the river conservation efforts at the national level.
3. One of the Chief Ministers of the States through which the Ganga flows becomes the Chairman of NGBRA on rotation basis.

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

4. What is/are unique about 'Kharai camel', a breed found in India?

1. It is capable of swimming up to three kilometres in seawater.
2. It survives by grazing on mangroves.
3. It lives in the wild and cannot be domesticated.

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

5. Recently, our scientists have discovered a new and distinct species of banana plant which attains a height of about 11 metres and has orange-coloured fruit pulp. In which part of India has it been discovered?

- (a) Andaman Islands

- (b) Anaimalai Forests
- (c) Maikala Hills
- (d) Tropical rain forests of northeast.

6. With reference to an initiative called “The Economics of Ecosystems and Biodiversity (TEEB)’, which of the following statements is/are correct?
1. It is an 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
7. 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
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
9. ‘Gadgil Committee Report’ and ‘Kasturirangan Committee Report’, sometimes seen in the news, are related to

- (a) Constitutional reforms
- (b) Ganga Action Plan
- (c) Linking of rivers
- (d) Protection of Western Ghats

10. Recently, for the first time in our country, which of the following states has declared a particular butterfly as 'State Butterfly'?

- (a) Arunachal Pradesh
- (b) Himachal Pradesh
- (c) Karnataka
- (d) Maharashtra

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

1. Carbon dioxide.
2. Carbon monoxide
3. Nitrogen dioxide
4. Sulfur dioxide
5. Methane

Select the correct answer using the code given below

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

2015

1. Which of the following National Parks is unique in being a swamp with floating vegetation that supports a rich biodiversity?

- (a) Bhitarkanika National Park
- (b) Keibul Lamjao National Park
- (c) Keoladeo Ghana National Park
- (d) Sultanpur National Park

2. 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?

1. IUCN is an organ of the United Nations and CITES is an international agreement between governments.
2. IUCN runs thousands of field projects around the world to better manage natural environments.
3. 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) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

3. 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) 2 only
- (c) 1 and 3
- (d) 3 only

4. Which one of the following is the national aquatic animal of India?

- (a) Saltwater crocodile
- (b) Olive ridley turtle
- (c) Gangetic dolphin
- (d) Gharial

5. Which one of the following regions of India 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

6. 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

7. Which 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

8. The Genetic Engineering Appraisal Committee is constituted under the
- Food Safety and Standards Act, 2006
  - Geographical Indications of Goods (Registration and Protection) Act, 1999
  - Environment (Protection) Act, 1986
  - Wildlife (Protection) Act, 1972

9. Consider the following States:
- Arunachal Pradesh
  - Himachal Pradesh
  - Mizoram

In which of the above States do 'Tropical Wet Evergreen Forests' occur?

- 1 only
  - 2 and 3 only
  - 1 and 3 only
  - 1, 2 and 3
10. With reference to an organisation known as 'BirdLife International', which of the following statements is/are correct?
- It is a Global Partnership of Conservation Organizations.
  - The concept of 'biodiversity hotspots' originated from this organization.
  - It identifies the sites known/referred to as 'Important Bird and Biodiversity Areas'.

Select the correct answer using the code given below.

- 1 only
  - 2 and 3 only
  - 1 and 3 only
  - 1, 2 and 3
11. In India, in which one of the following types of forests is teak a dominant tree species?
- Tropical moist deciduous forest
  - Tropical rain forest
  - Tropical thorn scrub forest
  - Temperate forest with grasslands
12. Which one of the following is the best description of the term 'ecosystem'?
- A community of organisms interacting with one another
  - That part of the Earth which is inhabited by living organisms
  - A community of organisms together with the environment in which they live
  - The flora and fauna of a geographical area
13. 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.

3. 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) 2 only
- (c) 1 and 3
- (d) 3 only

14. With reference to bio-toilets used by the Indian Railways, consider the following statements:

- 1. The decomposition of human waste in the bio-toilets is initiated by a fungal inoculum.
- 2. Ammonia and water vapour are the only end products in this decomposition which are released into the atmosphere.

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

15. With reference to 'fuel cells' in which hydrogen-rich fuel and oxygen are used to generate electricity, consider the following statements:

- 1. If pure hydrogen is used as a fuel, the fuel cell emits heat and water as by-products.
- 2. Fuel cells can be used for powering buildings and not for small devices like laptop computers.
- 3. Fuel cells produce electricity in the form of Alternating Current (AC).

Which of the statements given above is/are correct?

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

2014

1. If a wetland of international importance is brought under the 'Montreux Record', what does it imply?
- (a) Changes in ecological character have occurred, are occurring or are likely to occur in the wetland as a result of human interference
  - (b) The country in which the wetland is located should enact a law to prohibit any human activity within five kilometres from the edge of the wetland

- (c) 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
- (d) It is given the status of 'World Heritage Site'

2. Consider the following pairs:

- |                             |   |          |
|-----------------------------|---|----------|
| 1. Dampa Tiger Reserve      | : | Mizoram  |
| 2. Gumti Wildlife Sanctuary | : | Sikkim   |
| 3. Saramati Peak            | : | Nagaland |

Which of the above pairs is / are correctly matched?

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

3. With reference to a conservation organization called 'Wetlands international', which of the following statements is /are correct?

1. It is an intergovernmental organization formed by the countries which are signatories to Ramsar Convention.
2. It works at the field level to develop and mobilize knowledge, and use the practical experience to advocate for better policies.

Select the correct answer using the code given below.

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

4. 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

5. Which of the following adds/add carbon dioxide to the carbon cycle on the planet Earth?

1. Volcanic action

2. Respiration
3. Photosynthesis
4. Decay of organic matter

Select the correct answer using the code given below.

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

6. If you travel through the Himalayas, you are likely to see which of the following plants naturally growing there?

1. Oak
2. Rhododendron
3. Sandalwood

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

7. Which of the following have coral reefs?

1. Andaman and Nicobar Islands
2. Gulf of Kachchh
3. Gulf of Mannar
4. Sunderbans

Select the correct answer using the code given below.

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

8. Consider the following pairs :

***Wetlands***

1. Harike Wetlands
2. Keoladeo Ghana National Park
3. Kolleru Lake

***Confluence of rivers***

- : Confluence of Beas and Satluj / Sutlej  
: Confluence of Banas and Chambal  
: Confluence of Musi and Krishna

Which of the above pairs is/are correctly matched?

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

9. The most important strategy for the conservation of biodiversity together with traditional human life is the establishment of

- (a) Biosphere Reserves
- (b) Botanical Gardens
- (c) National Parks
- (d) Wildlife Sanctuaries

10. Consider the following international agreements:

1. The International Treaty on Plant Genetic Resources for Food and Agriculture
2. The United Nations Convention to Combat Desertification
3. The World Heritage Convention

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

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

11. Consider the following statements regarding 'Earth Hour':

1. It is an initiative of UNEP and UNESCO.
2. It is a movement in which the participants switch off the lights for one hour on a certain day every year.
3. 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?

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

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

1. Eco-Sensitive Zones are the areas that are declared under the Wildlife (Protection) Act, 1972.
2. 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) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

13. Consider the following statements:

1. Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.
2. National Tiger Conservation Authority is a statutory body.
3. National Ganga River Basin Authority is chaired by the Prime Minister.

Which of the statements given above is/ are correct?

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

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

- (a) Diatoms-Crustaceans-Herrings
- (b) Crustaceans-Diatoms-Herrings
- (c) Diatoms –Herrings-Crustaceans
- (d) Crustaceans-Herrings-Diatoms

15. 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) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

16. Consider the following:

1. Bats
2. Bears
3. Rodents

The phenomenon of hibernation can be observed in which of the above kinds of animals?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1, 2 and 3
- (d) Hibernation cannot be observed in any of the above

17. 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) 2 only
- (c) 2 and 3
- (d) 3 only

18. Lichens, which are capable of initiating ecological succession even on a bare rock, are actually a symbiotic association of

- (a) algae and bacteria
- (b) algae and fungi
- (c) bacteria and fungi
- (d) fungi and mosses

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

1. Terrace cultivation
2. Deforestation
3. Tropical climate

Select the correct answer using the code given below.

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

20. With reference to Neem tree, consider the following statements:

1. Neem oil can be used as a pesticide to control the proliferation of some species of insects and mites.
2. Neem seeds are used in the manufacture of biofuels and hospital detergents.
3. Neem oil has applications in pharmaceutical industry.

Which of the statements given above is/ are correct?

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

21. Which one of the following is the process involved in photosynthesis?

- (a) Potential energy is released to form free energy
- (b) Free energy is converted into potential energy and stored

- (c) Food is oxidized to release carbon dioxide and water
- (d) Oxygen is taken, and carbon dioxide and water vapour are given out

22. Among the following organisms, which one does not belong to the class of other three?

- (a) Crab
- (b) Mite
- (c) Scorpion
- (d) Spider

23. With reference to 'Global Environment Facility',

which of the following statements is / are correct?

- (a) It serves as financial mechanism for 'Convention on Biological Diversity' and 'United Nations Framework Convention on Climate Change'
- (b) It undertakes scientific research on environmental issues at global level
- (c) It is an agency under OECD to facilitate the transfer of technology and funds to underdeveloped countries with specific aim to protect their environment
- (d) Both (a) and (b)

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

1. Oxides of sulphur
2. Oxides of nitrogen
3. Carbon monoxide
4. Carbon dioxide

Select the correct answer using the code give below.

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

25. Brominated flame retardants are used in many household products like mattresses and upholstery. Why is there some concern about their use?

1. They are highly resistant to degradation in the environment.
2. They are able to accumulate in humans and animals.

Select the correct answer using the code given below.

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

1. In the grasslands, trees do not replace the grasses as a part of an ecological succession because of
  - (a) Insects and fungi
  - (b) Limited sunlight and paucity of nutrients
  - (c) Water limits and fire
  - (d) None of the above
2. Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity?
  - (a) Oceans, lakes, grasslands, mangroves
  - (b) Mangroves, oceans, grasslands, lakes
  - (c) Mangroves, grasslands, lakes, oceans
  - (d) Oceans, mangroves, lakes, grasslands
3. With reference to food chains in ecosystems, consider the following statements:
  1. A food chain illustrates the order in which a chain of organisms feed upon each other.
  2. Food chains are found within the populations of a species.
  3. A food chain illustrates the numbers of each organism which are eaten by others.

Which of the statements given above is/are correct?

- (a) 1 only
  - (b) 1 and 2 only
  - (c) 1, 2 and 3
  - (d) None
4. Which of the following adds/adds nitrogen to the soil?
    1. Excretion of urea by animals
    2. Burning of coal by man
    3. Death of vegetation

Select the correct answer using the codes given below.

- (a) 1 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
5. In which of the following States is lion-tailed macaque found in its natural habitat?
    1. 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) 2 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

6. 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?

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

7. Consider the following:

- 1. Star tortoise
- 2. Monitor lizard
- 3. Pygmy hog
- 4. Spider monkey

Which of the above are naturally found in India?

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

8. Consider the following animals:

- 1. Sea cow
- 2. Sea horse
- 3. Sea lion

Which of the above is/are mammal/mammals?

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

9. With reference to the food chains in ecosystems, which of the following kinds of organism is/are known as decomposer organism/organisms?

- 1. Virus
- 2. Fungi
- 3. Bacteria

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

10. Consider the following fauna of India:

1. Gharial
2. Leatherback turtle
3. Swamp deer

Which of the above is/are endangered?

(a) 1 and 2 only

(b) 3 only

(c) 1, 2 and 3

(d) None

11. Consider the following pairs:

*National Park*

*River flowing through the Park*

- |                                |   |        |
|--------------------------------|---|--------|
| 1. Corbett National Park       | : | Ganga  |
| 2. Kaziranga National Park     | : | Manas  |
| 3. Silent Valley National Park | : | Kaveri |

Which of the above pairs is/are correctly matched?

(a) 1 and 2

(b) 3 only

(c) 1 and 3

(d) None

12. Which of the following is/are unique characteristic/characteristics of equatorial forests?

1. Presence of tall, closely set trees with crowns forming a continuous canopy
2. Coexistence of a large number of species
3. Presence of numerous varieties of epiphytes

Select the correct answer using the codes given below:

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

13. 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:

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

14. Due to improper/indiscriminate disposal of old and used computers or their parts, which of the following are released into the environment as e-waste?

- 1. Beryllium
- 2. Cadmium
- 3. Chromium
- 4. Heptachlor
- 5. Mercury
- 6. Lead
- 7. Plutonium

Select the correct answer using the codes given below.

- (a) 1, 3, 4, 6 and 7 only
- (b) 1, 2, 3, 5 and 6 only
- (c) 2, 4, 5 and 7 only
- (d) 1, 2, 3, 4, 5, 6 and 7

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

- (a) Carbon dioxide and nitrogen
- (a) Carbon monoxide and carbon dioxide
- (b) Ozone and carbon dioxide
- (d) Nitrous oxide and sulphur dioxide

16. Photochemical smog is a resultant of the reaction among

- (a)  $\text{NO}_2$ ,  $\text{O}_3$ , and peroxyacetyl nitrate in the presence of sunlight
- (b)  $\text{CO}$ ,  $\text{O}_2$  and peroxyacetyl nitrate in the presence of sunlight
- (c)  $\text{CO}$ ,  $\text{CO}_2$  and  $\text{NO}_2$  at low temperature
- (d) High concentration of  $\text{NO}_2$ ,  $\text{O}_3$  and  $\text{CO}$  in the evening

2012

1. 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

2. 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, Cheetal, Blue Bull and Great Indian Bustard
  - (c) Snow Leopard, Swamp Deer, Rhesus Monkey and Saras (Crane)
  - (d) Lion-tailed Macaque, Blue Bull, Hanuman Langur and Cheetal
3. The Millennium 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 pollination
  - (d) Maintenance of diversity
4. What is the difference between the antelopes Oryx and Chiru?
- (a) Oryx is adapted to live in hot and arid areas whereas Chiru is adapted to live in steppes and semi-desert areas of cold high mountains
  - (b) Oryx is poached for its antlers whereas Chiru is poached for its musk
  - (c) Oryx exists in western India only whereas Chiru exists in north-east India only.
  - (d) None of the statements (a), (b) and (c) given above is correct
5. 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
6. 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

7. How does **National Biodiversity Authority (NBA)** help in protecting the Indian agriculture?

1. NBA checks the biopiracy and protects the indigenous and traditional genetic resources.
2. NBA directly monitors and supervises the scientific research on genetic modification of crop plants.
3. 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?

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

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

9. 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) 2 only
- (c) 3 only
- (d) 1, 2 and 3

10. 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 Gujarat 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) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

11. 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) 1 only
- (b) 2, 3 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

12. Vultures which used to be very common in Indian countryside some years ago are rarely seen nowadays. This is attributed to

- (a) the destruction of their nesting sites by new invasive species
- (b) a drug used by cattle owners for treating their diseased cattle
- (c) scarcity of food available to them
- (d) a widespread, persistent and fatal disease among them

13. The acidification of oceans is increasing. Why is this phenomenon a cause of concern?

- 1. The growth and survival of calcareous phytoplankton will be adversely affected.
- 2. The growth and survival of coral reefs will be adversely affected.
- 3. The survival of some animals that have phytoplanktonic larvae will be adversely affected.
- 4. The cloud seeding and formation of clouds will be adversely affected.

Which of the statements given above is/are correct?

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

14. **Biomass gasification** is considered to be one of the sustainable solutions to the power

crisis in India. In this context, which of the following statements is/are correct?

1. Coconut shells, groundnut shells and rice husk can be used in biomass gasification.
2. The combustible gases generated from biomass gasification consist of hydrogen and carbon dioxide only.
3. The combustible gases generated from biomass gasification can be used for direct heat generation but not in internal combustion engines.

Select the correct answer using the codes given below:

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

**15.** Lead, ingested or inhaled, is a health hazard. After the addition of lead to petrol has been banned, what still are the sources of **lead poisoning**?

1. Smelting units
2. Pens and pencils
3. Paints
4. Hair oils and cosmetics

Select the correct answer using the codes given below:

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

**16.** If National Water Mission is properly and completely implemented, how will it impact the country?

1. Part of the water needs of urban areas will be met through recycling of waste water.
2. 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.
3. All the rivers of Himalayan origin will be linked to the rivers of peninsular India.
4. The expenses incurred by farmers for digging bore-wells and for installing motors and pump-sets to draw ground water will be completely reimbursed by the Government.

Select the correct answer using the codes given below:

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

**17.** What is the role of ultraviolet (UV) radiation in the water purification systems?

1. It inactivates/kills the harmful microorganisms in water.
2. It removes all the undesirable odours from the water.

3. It quickens the sedimentation of solid particles, removes turbidity and improves the clarity of water.

Which of the statements given above is/are correct?

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

2011

1. 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 phytoplankton 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) 2 only
- (c) 2 and 3
- (d) 3 only

2. 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) 2 only
- (c) 2 and 3
- (d) 3 only

3. 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 Act

4. Consider the following
1. Photosynthesis
  2. 2. Respiration
  3. Decay of organic matter
  4. Volcanic action

Which of the above add carbon dioxide to the carbon cycle on Earth?

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

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

6. 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

7. Which one of the following is not a site for in-situ method of conservation of flora?
- (a) Biosphere Reserve
  - (b) Botanical Garden
  - (c) National Park
  - (d) Wildlife Sanctuary

- 8.** The 2004 Tsunami made people realize that mangroves can serve as a reliable safety hedge against coastal calamities. How do mangroves function as a safety hedge?
- The mangrove swamps separate the human settlements from the sea by a wide zone in which people neither live nor venture out
  - The mangrove provide both food and medicines which people are in need of after any natural disaster
  - The mangrove trees are tall with dense canopies and serve as an excellent shelter during a cyclone or tsunami
  - The mangrove trees do not get uprooted by storms and tides because of their extensive roots.
- 9.** The “Red Data Books” published by the International Union for Conservation of Nature and Natural Resources (IUCN) contain lists of
- Endemic plant and animal species present in the biodiversity hotspots.
  - Threatened plant and animal species
  - Protected sites for conservation of nature and natural resources in various countries.

Select the correct answer using the codes given below:

- 1 and 3
  - 2 only
  - 2 and 3
  - 3 only
- 10.** Consider the following statements:
- Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes
  - Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the statements given above is/are correct?

- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
- 11.** Two important rivers- one with its source in Jharkhand (and known by a different name in Odisha), and another, with its source in Odisha – merge at a place only a short distance from the coast of Bay of Bengal before flowing into the sea. This is an important site of wildlife and biodiversity and a protected area.

Which one of the following could be this?

- Bhitarkanika
- Chandipur on sea

- (c) Gopalpur on sea
- (d) Simlipal

- 12.** 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. Ethno-botanical importance
  3. Vegetation density
  4. Endemism
  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
- 13.** If a tropical rain forest is removed, it does not regenerate quickly as compared to a tropical deciduous forest. This is because
- (a) the soil of rain forest is deficient in nutrients
  - (b) propagules of the trees in a rain forest have poor viability
  - (c) the rain forest species are slow growing
  - (d) exotic species invade the fertile soil of rain forest
- 14.** The Himalayan Range is very rich in species diversity. Which one among the following is the most appropriate reason for this phenomenon?
- (a) It has a high rainfall that supports luxuriant vegetative growth
  - (b) It is a confluence of different biogeographical zones
  - (c) Exotic and invasive species have not been introduced in this region
  - (d) It has less human interference
- 15.** Consider the following:
1. Carbon dioxide
  2. Oxides of Nitrogen
  3. Oxides of Sulphur

Which of the above is/are the emission/emissions from coal combustion at thermal power plants?

- (a) 1 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
- 16.** 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) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3



