



ACADEMY OF CIVIL SERVICES

ENVIRONMENT

UPSC PREVIOUS YEARS PRELIMS QUESTIONS (2011-2018)

2011

1) 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

2) 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
- 3) A sandy and saline area is the natural habitat of an Indian 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
- 4) 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
- 5) Recently, “Oil Zapper” was in the news. What is it?**
- a) It is an eco-friendly technology for the remediation of oily sludge and oil spills.
 - b) It is the latest technology developed for under sea oil exploration.
 - c) It is a genetically engineered high biofuel yielding maize variety
 - d) It is the latest technology to control the accidentally caused flames from oil wells.
- 6) 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

7) 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) 2 only
- c) 2 and 3
- d) 3 only

2012

1) Consider the following statements:

Chlorofluorocarbons, known as ozone-depleting substances, are used

1. In the production of plastics 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) 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

2) Consider the following protected areas:

1. Bandipur
2. Bhattarkarnika
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

3) 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

4) 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

5) 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 maintenance of diversity

6) 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

7) 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

2013

1) 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

2) In the grassland, 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

3) Which one of the following is the correct sequence of ecosystem in the order of decreasing productivity?

- a) Oceans, lakes, grassland, mangroves
- b) Mangroves, ocean, grasslands, lakes
- c) Mangroves, grassland, lakes, oceans**

d) Oceans, mangroves, lakes, grassland

4) 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

5) Acid rain is caused by the pollution of environment by

- a) Carbon dioxide and nitrogen
- b) Carbon monoxide and carbon dioxide
- c) Ozone and carbon dioxide

d) Nitrous oxide and sulphur dioxide

6) 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

7) 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**

8) Consider the following organism:

- 1. Agaricus
- 2. Nostoc
- 3. Spirogyra

Which of the above is/are used as biofertilizer/biofertilizers?

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

9) In which of the following states is lion-tailed macaque found in its natural habitat?

- 1. Tamil Nadu
- 2. Kerela
- 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

10) 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

11) Photochemical smog is a resultant of the reaction among

a) NO₂, O₃ and peroxyacetyl nitrate in the presence of sunlight

- b) CO, O₂ and peroxyacetyl nitrate in the presence of sunlight
- c) CO, CO₂ and NO₂ at low temperature
- d) High concentration of NO₂, O₃ and CO in the evening

12) 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

13) 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

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) 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)

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) 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
- 5) 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
- 6) 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
- 7) 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
- 8) 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
- 9) 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**
- 10) 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 above statements given above is/are correct?

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

11) 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

12) 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

2015

1) With reference to 'fly ash' produced by the power plants using coal as fuel, which of the following statements is/are correct?

- 1. Fly ash can be used in the production of bricks for building construction.
- 2. 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
- 2) 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 1 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
- 3) Which one of the following is the national aquatic animal of India?**
- a) Saltwater crocodile
- b) Olive Ridley Turtle
- c) Gangetic dolphin**
- d) Gharial
- 4) Which one of 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

- 5) 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**
- 6) The Genetic Engineering Appraisal Committee is constituted under the
- a) Food Safety and Standards Act, 2006
 - b) Geographical indications of Goods (Registration and Protection) Act, 1999
 - c) Environment (Protection) Act, 1986**
 - d) Wildlife (Protection) Act, 1972
- 7) 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) 1 only
 - b) 2 and 3 only
 - c) 1 and 3 only**
 - d) 1, 2 and 3
- 8) 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 or organisms together with the environment in which they live**
 - d) The flora and fauna of a geographical area
- 9) 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**

2016

1) The term ‘Intended Nationally Determined Contributions’ is sometimes seen in the news in the context of

- a) Pledges made by the European countries to rehabilitate refugees from the war-affected Middle East.
- b) Plan of action outlined by the countries of the world to combat climate change.**
- c) Capital contributed by the member countries in the establishment of Asian Infrastructure Investment Bank
- d) Plan of action outlined by the countries of the world regarding Sustainable Development Goals

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) 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 weedicide and a fertilizer for particular crops.

4) Consider the following pairs:

Terms sometimes seen in 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

5) Project Loon, sometimes seen in the news, is related to

- a) Waste management technology
- b) Wireless communication technology**
- c) Solar power production technology
- d) Water conservation technology

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) Which of the 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**

8) 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-governmental 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.

9) 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

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 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

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 microorganism.
- 3. Genetic engineering can be used to create microorganisms specifically designed for bioremediations.

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) It is possible to produce algae-based biofuels, but what is/are the likely limitations 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

4) 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**

5) 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.

- 6) 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
- 7) The term 'M-STrIPES' is sometimes 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
- 8) 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.
- 9) 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

2018

- 1) In which one of the following states is Pakhui Wildlife Sanctuary located?
- a) **Arunachal Pradesh**
 - b) Manipur
 - c) Meghalaya

d) Nagaland

2) Consider the following statements:

1. The definition of “Critical Wildlife Habitat” is incorporated in the Forest Rights Act, 2006
2. For the first time in India, Baigas have been given Habitat Rights
3. 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 statements given above is/are correct?

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