



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2023-2024
HALF YEARLY EXAMINATION

CLASS:IX
SUBJECT: ENVIRONMENTAL SCIENCE

FULL MARKS: 80
TIME: 2 HOURS

*Answers to this Paper must be written on the paper provided separately.
You will not be allowed to write during the first 15 minutes.
This time is to be spent in reading the Question Paper.
The time given at the head of this Paper is the time allowed for writing the answers.*

*Attempt all questions from Section A and any four questions from Section B.
The intended marks for questions or parts of questions are given in brackets [].
This question paper consists of five printed pages.*

SECTION A (40 Marks)
Attempt all questions from this Section

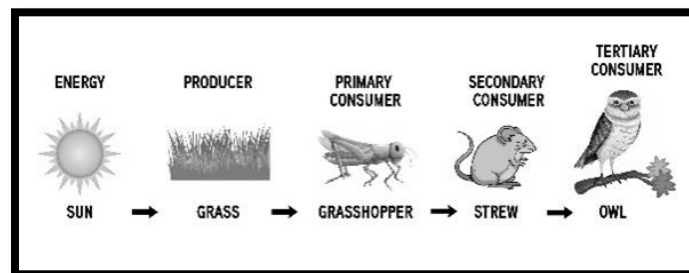
QUESTION 1

[16]

Choose the correct answers to the questions from the given options.
(Do not copy questions, write the correct answers only.)

- i. The following is an example of a terrestrial Biome
 - a) Rivers
 - b) Desert
 - c) Lakes
 - d) Streams
- ii. Autotrophic components are
 - a) Producers
 - b) Primary consumers
 - c) Secondary consumers
 - d) Tertiary consumers
- iii. Hawaiian crow is known to survive only in captivity. It is
 - a) Critically endangered
 - b) Extinct in wild
 - c) Vulnerable
 - d) Rare
- iv. Sustainability science is the study of concepts of sustainable development and ____
 - a) Environmental science
 - b) Bioscience
 - c) General science
 - d) Geosciences

- v. **Habitat destruction which results in the threat to biodiversity is resulted due to**
 - a) Agricultural industries
 - b) Decrease in human population
 - c) Adequate rainfall
 - d) Optimum nutrients
- vi. **A healthy environment depends upon a**
 - a) Healthy economy
 - b) Healthy biodiversity
 - c) Healthy humans
 - d) Healthy animals
- vii. **Grasslands in Australia is known as**
 - a) Veldt
 - b) Pampas
 - c) Prairies
 - d) Downs
- viii. **How do invasive species affect the biodiversity?**
 - a) It helps the native species to survive furthermore.
 - b) It threatens the survival of native species.
 - c) It forms a close bond with the native species and protects the biodiversities.
 - d) Does not affect the biodiversity.
- ix. **The organisms in the adjoining figure represents:**



- a) Food level
 - b) Trophic level
 - c) Biomass level
 - d) Energy level
- x. **Assertion: Atmospheric nitrogen cannot be utilized by living organisms.**
Reason: Nitrifying bacteria converts atmospheric nitrogen to its soluble form.
 - a) A is true and R is the correct reason for A.
 - b) A is false and R is not correct reason for A.
 - c) A is false but R is true.
 - d) Both A and R are true.
- xi. **Statement A: One of the MDG is reduction of poverty.**
Statement B: Poverty is defined as lack of wealth.
 - a) Both statements A and B are correct.
 - b) Statement A is correct and Statement B is incorrect.
 - c) Statement A is incorrect and Statement B is correct.
 - d) Both Statements A and B are incorrect.

- xii. Match Column I with Column II and choose the correct option from those given below:

Column I

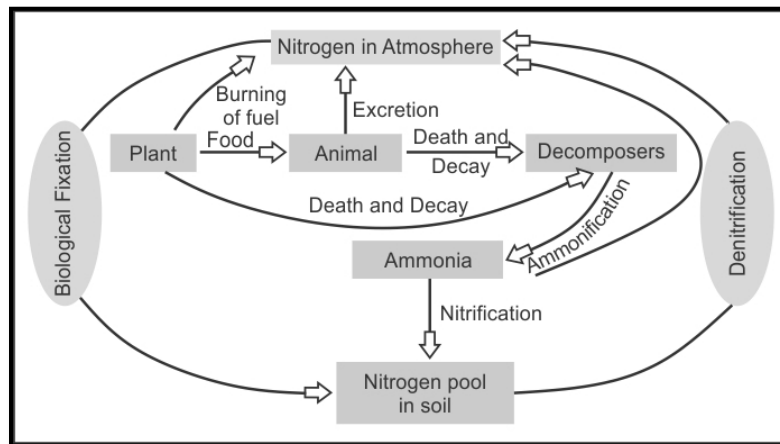
1. Limnetic zone
2. Birth rate
3. Niche
4. Non-point source of pollution

Column II

- A. Street surface contamination
- B. Role
- C. Natality
- D. Pond

- a) 1-A 2-B 3-C 4-D
- b) 1-D 2-C 3-B 4-A
- c) 1-B 2-D 3-C 4-A
- d) 1-D 2-B 3-A 4-C

The following questions (xiii to xvi) are based on the figure given below. Answer these questions by choosing the correct option.



- xiii. What does the diagram represent?
- a) Nitrogen cycle
 - b) Sulphur cycle
 - c) Carbon cycle
 - d) Water cycle
- xiv. Process 2 in the above diagram is performed by
- a) *Salmonella*
 - b) *Lactobacillus*
 - c) *E.coli*
 - d) *Rhizobium*
- xv. The element which is represented in the above diagram is used for _____ synthesis.
- a) Carbohydrate
 - b) Fat
 - c) Protein
 - d) Starch

- xvi. The root nodules of _____ plants harbor organisms which take part in biological fixation of the element.
- a) Alpine
 - b) Leguminous
 - c) Xerophytic
 - d) Hydrophytic

QUESTION 2

- a) Differentiate between producers and consumers citing one example of each. [2]
- b) Define Bio-magnification. [2]
- c) Why is benzene considered to be a harmful pollutant? [2]
- d) Cite any two examples of Bio-geographic regions in India. [2]

QUESTION 3

- a) Environmental Science is an interdisciplinary subject. How does the study of Environmental Science benefit us? [2]
- b) Explain with an example the terms Parasite and Host. [2]
- c) Various anthropogenic factors have disrupted the bio-geochemical cycles of nature. How has man disrupted the nitrogen cycle? [2]
- d) State any two threats faced by the corals. [2]

QUESTION 4

- a) Define with example non-point source of water pollution. [2]
- b) Write the full forms of MDG and OECD. [2]
- c) How can education be used as a calculator to calculate MPI? [2]
- d) Why are wetlands important? [2]

SECTION –B [40 Marks]

Attempt **any four** questions from this section

QUESTION 5

- a) Define water table. What is ground water? How is it formed? [5]
- b) United Nations Conference on Environment and Development has defined deforestation as “land degradation in arid, semi-arid, and sub-humid areas resulting from various factors including climatic variations and human activities.” State the various anthropogenic causes that lead to massive deforestation across the world. [5]

QUESTION 6

- a) Define Succession. Explain the process in details. [5]
- b) How does Co-evolution help in forming new species? [5]

QUESTION 7

- a) What is a sustainable community? What does a sustainable community seek to achieve? [5]
- b) Discuss in detail the threats confronting the desert ecosystem. [5]

QUESTION 8

- a) Describe any five parameters for measuring poverty. [5]
- b) How oceans get polluted? [5]

QUESTION 9

- a) What are the causes of extinction of species? [5]
- b) What are the modern day environmental problems? [5]

QUESTION10

- a) Describe the five major life zones of ocean. [5]
- b) State the effects of thermal pollution. [5]

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