



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2022-2023
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 four 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. For any ecosystem, the amount of energy present in the _____ level is greater than that present in any other trophic level.
 - a) top consumer
 - b) decomposer
 - c) producer
 - d) herbivore
- ii. Which of the following organisms begins marine food chains?
 - a) Phytoplankton
 - b) Fishes
 - c) Zooplankton
 - d) Corals
- iii. Which is not a major cause of deforestation?
 - a) Shifting cultivation
 - b) Collection of non timber forest products
 - c) Fuel requirements
 - d) Raw materials for industries
- iv. Which of the following statement (s) is/are correct about Indian forest reserve?
 - I. Indian mangroves covering about 4500 km² area in the coastal regions and about

5% area of the world. II. Sunderban is the largest mangrove forests in India and it have been added to the list of biosphere reserves of UNESCO.

- a) Only I
 - b) Only II
 - c) Both I and II
 - d) Neither I or II
- v. Urban Sprawl refers to:
- a) The expansion of poorly planned, low-density, auto-dependent development, which spreads out over large amounts of land
 - b) The study of the life of the city
 - c) The movement of people out of cities to the surrounding areas
 - d) A territorial coalescence of two or more cities whose peripheral zones have grown together
- vi. The phenomenon of marble cancer is due to
- a) Soot
 - b) CFC
 - c) Fog
 - d) Acid rain
- vii. Why do all food chains start with plants?
- a) Because plants are easily grown
 - b) Because plants are nutritious
 - c) Because plants can produce its own energy
 - d) Because plants do not require energy
- viii. In a food chain the second trophic level is occupied by:
- a) Carnivores
 - b) Autotrophs
 - c) Herbivores
 - d) Producers
- ix. If 100 J energy is available at the producer level in a food chain then the energy available to the secondary consumer will be:
- a) 10J
 - b) 1J
 - c) 0.1J
 - d) 0.01J
- x. Which of the following habitat have most biodiversity?
- a) Antarctica
 - b) Amazon Rain forest
 - c) Sahara Desert
 - d) North Pole
- xi. The objective of environmental education is
- a) Raise consciousness about environmental education
 - b) To teach environmentally appropriate behavior
 - c) Create an environmental ethic that fosters awareness about ecological inter-dependence of economics, social and political
 - d) All of the above

- xii. 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.
- xiii. 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
- xiv. Autotrophic components are
 - a) Decomposers
 - b) Producers
 - c) Primary Consumers
 - d) Tertiary Consumers
- xv. The following is an example of a terrestrial Biome
 - a) Rivers
 - b) Deserts
 - c) Lakes
 - d) Streams
- xvi. Sustainability science is the study of concepts of sustainable development and ____
 - a) Environmental science
 - b) Geoscience
 - c) Bioscience
 - d) General science

QUESTION 2

- a) How can developing countries achieve sustainability? [2]
- b) Explain Predation citing an example. [2]
- c) How do decomposers play an important role in the ecosystem? [2]
- d) The East Kolkata Wetlands are witnessing great anthropogenic threats. Comment. [2]

QUESTION 3

- a) What is cultural eutrophication? [2]
- b) What is ODS? Give example of such a compound. [2]
- c) Rapid urbanization has put pressure on civic amenities. Justify the statement. [2]
- d) State any two major causes of environmental problems. [2]

QUESTION 4

- a) How has man disrupted the Water cycle in nature? [2]
- b) Define Law of Minimum and Law of Tolerance. [2]

- c) Explain any two threats caused to the deserts. [2]
- d) What are the factors that lead to rural poverty? [2]

SECTION –B [40 Marks]
Attempt any four questions from this section

QUESTION 5

- a) Various factors are responsible for massive migration from rural to urban areas. Explain the various push-pull factors responsible for migration. [5]
- b) What are Amartya Sen's view on social sustainability? [5]

QUESTION 6

- a) Discuss how poverty is responsible for environmental degradation. [5]
- b) Define biome. Differentiate a food chain and a food web. [5]

QUESTION 7

- a) Discuss any five environmental problems faced in today's world. [5]
- b) Explain any five causes of extinction of animals. [5]

QUESTION 8

- a) A sustainable community is one that is economically, environmentally and socially healthy and resilient. Comment. [5]
- b) Differentiate between Mutualism and Commensalism, citing examples. [5]

QUESTION

- a) Draw Carbon cycle. How has man disrupted the carbon cycle and affected the environment? [5]
- b) What are the various threats to the corals? [5]

QUESTION10

- a) What are the dimensions and indicators taken into consideration while calculating MPI? [5]
- b) Industries and power plants use water to cool machinery and discharge the warm water into the stream. Identify the type of pollution caused and mention some ill effects of the same. [5]