



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2024-25
FINAL EXAMINATION

CLASS: IX
SUBJECT: ENVIRONMENTAL APPLICATION [SET A]

FULL MARKS: 100
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 6 printed pages.*

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

Question 1

Choose the correct answers to the questions from the given options.

(Do not copy the questions, write the correct answers only)

- (i) The surroundings of an organism which includes both living and nonliving components [1]
(a) Ecosystem (b) Environment (c) Biosphere (d) Community
- (ii) The first organism in succession in forest is [1]
(a) Xeric foliose lichen
(b) Xerophytic mosses
(c) Crustose-lichen stage
(d) Xerophytic shrub
- (iii) Which of the following is a radioactive waste? [1]
(a) E waste
(b) PCB
(c) Mercury and lead
(d) Polonium, Caesium, Strontium
- (iv) The pyramid of number is inverted for: [1]
(a) Grass-Grasshopper- Frog- Snake
(b) Dead leaf- earthworm- Bird
(c) Tree-Bird- parasite- Hyperparasite
(d) Algae- Insect- Small fish- Large fish
- (v) The measure of human demand on the earth's ecosystem is called [1]
(a) Sprawl (b) Ecological footprint (c) Urbanization (d) Push factor
- (vi) Assertion: Monocropping is the best agricultural practice of growing a single crop year after year on the same land [1]

Reason: Monocropping is the ultimate solution for food security.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true and reason is not the correct explanation of assertion.

(c) Assertion is true and reason is false.

(d) Both assertion and reason are false.

- (vii) Assertion: Pyramid of numbers indicates the numerical relationship between the different organisms at successive trophic levels. [1]**

Reason: Food pyramids graphically represent the relationships of organisms occupying a trophic level in a food chain.

(a) Both assertion and reason are true and reason is the correct explanation of assertion. **

(b) Both assertion and reason are true and reason is not the correct explanation of assertion.

(c) Assertion is true and reason is false.

(d) Both assertion and reason are false.

- (viii) [1]**



The swollen portion of the plant shown in the picture is adopted to

(a) Attract pollinators

(b) Regulate temperature

(c) Store food reserves

(d) Conserve water **

- (ix) Which of the following is NOT a reason of rural poverty in India? [1]**

(a) Unequal distribution of income

(b) Lack of family planning

(c) Lack of employment opportunities

(d) Development of small scale industries

- (x) In an aquatic ecosystem, the trophic level of algae is: [1]**

(a) T1 (b) T2 (c) T3 (d) T4**

- (xi) Among the statements given below the Correct ones that describe the Agricultural waste: [1]**

1. It is biodegradable in nature

2. Chemical fertilisers and pesticides are not a part of it.

3. Can be composted and used as bio manure

4. Includes tissues from body parts, asbestos, pipes, dry leaves etc.

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

(xii) What type of plant is shown in the picture given below? [1]



- (a) Water intensive plant
- (b) Leguminous plant
- (c) Drought resistant
- (d) Pest resistant plant

(xiii) Bagasse which is used as an alternative in paper making industries is obtained from [1]
 (a) Walnut (b) Berries (c) Sugarcane** (d) Bamboo

(xiv) Poverty and environmental degradation are two sides of the same coin. Select the correct sequence of situations in reference to the statement. [1]

1. Environmental degradation
 2. Natural resource depletion
 3. Poverty
 4. industrialization
- (a) 1,3,4,2
 - (b) 4,3,1,2
 - (c) 3,4,2,1
 - (d) 1,3,2,4

(xv) The number of different species of living things in an area is [1]
 (a) Genetic diversity
 (b) Biodiversity
 (c) Species diversity
 (d) Ecosystem diversity

(xvi) The objective of human resources development is to foster human resourcefulness. It is done by [1]
 1. Compensating employee
 2. Rigid fixed hours of work
 3. Offering corporate membership
 4. Providing professional skills training

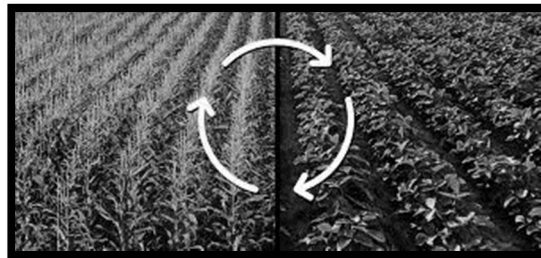
Choose the correct option:

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

- (xvii) **Permaculture was introduced by :** [1]
 (a) M.S. Swaminathan
 (b) Bruce Charles Bill Mollison
 (c) Rudolph Steiner
 (d) Robert Malthus
- (xviii) **Succession that begins in new habitats, uninfluenced by preexisting communities is called** [1]
 (a) Preexisting Succession
 (b) Primary succession
 (c) Secondary succession
 (d) Tertiary succession
- (xix) **Select the correct pair.** [1]
 (a) Extinct - Dodo
 (b) Introduced - Lantana
 (c) Keystone - Sea otter
 (d) Endemic - Rat
- (xx) **The ecological role and space that an organism fills in an ecosystem is called** [1]
 (a) Food role (b) Ecotype
 (c) Trophic level (d) Ecological niche

Question 2

- (i) **What is Jhumming? Why it is not recommended?** [2]
 (ii) **What are water intensive crops? Give an example.** [2]
 (iii) **The picture given below shows a n agricultural practice** [3]



- (a) Identify the agricultural practice
 (b) Mention any two advantages of the same.
- (iv) **Food security is built on three pillars. Explain.** [3]

Question 3

- (i) **The preservation of endemic species is a major concern on a worldwide context and in situ protection alone will not guarantee their conservation. Comment.** [2]
- (ii) **Define carrying capacity.** [2]
- (iii) **Explain any three hindrances to food security in India.** [3]
- (iv) **What are green dates? What is significant about 22nd April and 5th May?** [3]

SECTION B (40 MARKS)
(Attempt any four questions from this section)

Question 4

(i)

[5]



(a) Which branch of science is shown in the picture?

(b) How is it helpful in agriculture?

(ii) Explain Robert Malthus' theory on population.

[5]

(iii) Resource depletion adversely affects the ecological balance. Give any two causes of resource depletion and three impacts it has on the environment.

[5]

Question 5

(i) With the growing population and the demand of the humans the land use pattern has changed considerably. Analysis has shown that the built up land area has increased, whereas other categories like agricultural land and forest have decreased. Explain the possible causes of such change in land use patterns.

[5]

(ii) What is green revolution? What is its impact on the environment?

[5]

(iii) Identify the ecosystem shown in the picture.
Why is it important?

[5]



Question 6

(i) What is shifting cultivation? Why is it not preferred?

[5]

(ii) What is ecological footprint? How is it measured? What does it imply? Mention any two elements for which footprint values are studied.

[5]

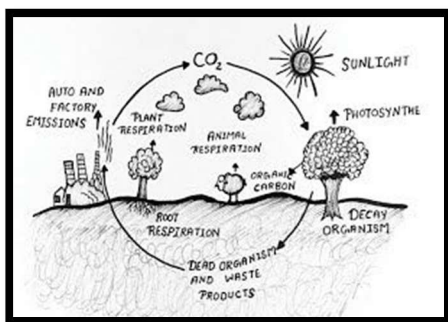
(iii) Why should forests be protected?

[5]

Question 7

(i)

[5]



(a) What does the diagram indicate?

(b) How is man responsible for the disruption of this?

(ii) Increase in population has led to increase in environmental degradation. Comment.

[5]

(iii) Describe the features of a forest ecosystem.

[5]

Question 8

(i) Sustainable development requires a deliberate choice in the direction of societal transition, but the options are narrowed down by the obligation to feed a growing world population. At present sufficient food is produced, but large differences exist in per capita supply. Poverty prevents many people from attaining a sufficient diet, while growing economic welfare pushes meat consumption conversely.

[5]

In reference to the above paragraph suggest ways to attain food security.

(ii) What is LISA? List any four components of LISA.

[5]

(iii) With the help of suitable examples, show the social value of biodiversity and is also a rich source of medicine and cosmetic.

[5]

Question 9

(i) The most hazardous wastes is shown in the picture

[5]



a) Identify the type of waste. From where is it generated?

b) Mention why these are considered to be most hazardous?

(ii) Conservation of resources is the need of the hour. How do you conserve resources in your daily life? Explain.

[5]

(iii) Write the characteristic features of Biosphere Reserves.

[5]