

# ENVIRONMENTAL SCIENCE

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*Maximum Marks: 70*

*Time Allowed: Three hours*

*(Candidates are allowed **additional 15 minutes** for **only** reading the paper.  
They must **NOT** start writing during this time).*

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*Answer all questions in Section A, Section B and Section C.*

*Section A consists of **objective / very short answer** questions.*

*Section B consists of **short answer** questions.*

*Section C consists of **long answer** questions.*

*The intended marks for questions or parts of questions are given in brackets [ ].*

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## SECTION A - 14 MARKS

### Question 1

- (i) An organism that requires high level of dissolved oxygen is: [1]
- (a) Catfish
  - (b) Trout
  - (c) Seahorse
  - (d) Worm
- (ii) Which one of the following is **NOT** a greenhouse gas? [1]
- (a) Carbon Monoxide
  - (b) Carbon Dioxide
  - (c) Methane
  - (d) Carbontetra Chloride

- (iii) The term *ecosystem* was coined by: [1]
- (a) Charles Darwin
  - (b) Alexander von Humboldt
  - (c) Arthur Tansley
  - (d) Carl Ritter

- (iv) The image given below is the logo of a non-government organisation called: [1]



- (a) Green peace
  - (b) World Wide Fund for Nature
  - (c) World Bank
  - (d) United Nations Environment Programme
- (v) Most of the \_\_\_\_\_ drugs sold in the market are made from the medicinal plants found in Amazon. [1]
- (vi) The GATT was signed in \_\_\_\_\_. [1]
- (vii) \_\_\_\_\_ is the first country to use urban organic farming. [1]
- (viii) Repeated use of heavy machinery on the clayey soil leads to \_\_\_\_\_. [1]
- (ix) Write the expanded forms of the following: [2]
- (a) TRIPS
  - (b) AGMARK
- (x) Write one word for the description given below: [4]
- (a) The growing of trees on the bunds and boundaries of farming lands, done by the farmers themselves.
  - (b) The statistical study of human population.
  - (c) A government policy to restrict international trade and promote national manufacturers.
  - (d) A type of soil with the particle size ranging between 0.02mm and 0.002 mm particles.

## SECTION B - 28 MARKS

### Question 2 [4]

- (i) What is *environmental economics*? How does environmental economics help to reduce the exploitation of natural resources?

OR

- (ii) Name the Constitutional Act passed to protect the rights of the tribals. Enumerate *any three* rights safeguarded by this Act.

### Question 3 [4]

- (i) Why was the ivory trade banned by CITES? Explain *any three* effects of this ban.

OR

- (ii) Explain why Cuba adopted urban organic gardening.

### Question 4 [4]

- (i) State *any two* methods of urban agriculture that involve the use of organic methods.
- (ii) Why is soil respiration important?

### Question 5 [4]

- (i) State *any two* points to highlight the role of Biosphere Reserves in conservation.
- (ii) Define *ecological footprint*.

### Question 6 [4]

A label on a tomato ketchup bottle mentions 'Potassium Metabisulphite' and 'Sunset Yellow' along with other ingredients. Identify the categories to which these two ingredients belong. Define these categories.

**Question 7** [4]

Name *any four* indicators of water quality. Briefly explain the significance of each one of them.

**Question 8** [4]

Draw properly labelled diagrams of *exponential growth curve* and *logistic growth curve*.

**SECTION C – 28 MARKS**

**Question 9**

As per the statistical data, India produced approximately 316 million tonnes of food grain in the year 2021, which is claimed to be sufficient to feed everyone in our country. However, there are still people who do not get sufficient food in terms of quantity or quality or both.

- (i) State *any four* provisions mentioned in Food Security Bill, 2013. [4]
- (ii) “However, there are still people who do not get sufficient food in terms of quantity or quality or both.” Give *any three* reasons for food scarcity in India. [3]

**Question 10**

- (i) (a) Mahatma Gandhi’s development model was in favour of socio – economic harmony. Discuss *any four* points to justify the statement. [4]

**OR**

- (b) Write short notes on *any two* organisations which facilitated international trade.
- (ii) What was Malthus’ theory about human population? Why was his theory criticised? [3]

**Question 11**

- (i) What are the key provisions of the Basel Convention? [4]
- (ii) Is Project Tiger a failure or a success? Support your views by giving *any three* reasons. [3]

## Question 12

Read the passage given below and answer the questions that follow.

Every time you take printouts unnecessarily or throw a paper into the bin, think for a minute as to how many trees have been felled to manufacture something you use so often every day.

Can you take out some time from your everyday routine and devote it to starting a simple recycling programme at your school or your neighbourhood? Not only would you save our planet from the torture of felling greenery, but you would also reduce waste generation and dumping of waste into the environment.

- (i) Write *any four* initiatives which you can take as a student to practice and propagate recycling. [2]
- (ii) Explain *any three* benefits of 3Rs of waste management. [3]
- (iii) Briefly explain *any two* methods of managing biodegradable waste, other than practicing 3Rs. [2]