

ENVIRONMENTAL APPLICATIONS

Maximum Marks: 100

Time allowed: Two 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 [].

SECTION A (40 Marks)

(Attempt **all** questions from this **Section**.)

Question 1

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

[20]

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

- (i) The best method to *dispose* off biodegradable waste is:
- (a) Incineration
 - (b) Composting
 - (c) Recycling
 - (d) Open dumping
- (ii) Locals are involved in conservation of forests along with forest officials in:
- (a) Agro forestry
 - (b) Social forestry
 - (c) Joint Forest Management
 - (d) Silviculture

This paper consists of 7 printed pages and 1 blank page.

- (iii) A soil conservation strategy by placing *sandbags or boulders* on the path of water flow to reduce the velocity of water:
- (a) Check dam
 - (b) Tree break
 - (c) Contour bunding
 - (d) Mulching
- (iv) Composting is:
- (a) Burning of waste in a closed chamber
 - (b) Chemical treatment of waste
 - (c) Biological treatment of waste
 - (d) Segregation of waste
- (v) Which of the following is **not** an alternative fuel?
- (a) Petrol
 - (b) Hydrogen
 - (c) Ethanol
 - (d) CNG
- (vi) Dioxin is an example of *toxic gas* produced during:
- (a) Mining
 - (b) Incineration
 - (c) Composting
 - (d) Construction
- (vii) Which of the following is a non-conventional source of energy?
- (a) Coal
 - (b) Wind
 - (c) Petrol
 - (d) Diesel

- (viii) Community forestry benefits:
- (a) An individual
 - (b) Local community
 - (c) Forest officials
 - (d) Only farmers
- (ix) Bubble theory is a concept to reduce:
- (a) Water pollution
 - (b) Air pollution
 - (c) Soil pollution
 - (d) Noise pollution
- (x) Cyclone separators work on the principle of:
- (a) Rotation effect
 - (b) Electrostatic effect
 - (c) Cyclonic wind effect
 - (d) Magnetic effect
- (xi) Which of the following is **not** a traditional method of water harvesting?
- (a) Check dams
 - (b) Bore wells
 - (c) Eris
 - (d) Tankas
- (xii) Dastkar is a society for:
- (a) Craft people
 - (b) Stage actors
 - (c) Doctors
 - (d) Teachers

- (xiii) Which of the following is an alternative to the existing sewage system?
- (a) Percolation pits
 - (b) Dry compost toilet
 - (c) Landfills
 - (d) Composting
- (xiv) Forests are very important because:
- (a) They control the climate
 - (b) They act as carbon sink
 - (c) They increase the biodiversity
 - (d) All of the above
- (xv) The primary treatment in effluent treatment plant is:
- (a) Chemical
 - (b) Biological
 - (c) Physical
 - (d) Mechanical
- (xvi) Forests are getting converted to agricultural land due to:
- (a) increase in demand for food
 - (b) increase in pollution
 - (c) increase in water loss
 - (d) increase in habitat loss
- (xvii) Recycling of paper:
- (a) reduces deforestation
 - (b) causes deforestation
 - (c) causes air pollution
 - (d) causes water pollution

- (xviii) Subsidy is:
- (a) The fine paid by the polluter
 - (b) No taxes on non eco-friendly technologies
 - (c) Lower tax duties on eco-friendly technologies
 - (d) Higher tax duties on eco-friendly technologies
- (xix) Siltation of water bodies:
- (a) Disrupts the aquatic ecosystem
 - (b) Pollutes the soil
 - (c) Causes soil erosion
 - (d) Improves the irrigation system
- (xx) The founder director of *Tarun Bharat Sangh* is:
- (a) M. C. Mehta
 - (b) Dr. Rajendra Singh
 - (c) Medha Patkar
 - (d) Salim Ali

Question 2

- (i) Define Natural Resource Accounting. [2]
- (ii) Mention *any two* measures taken by Indian Government to protect Taj Mahal. [2]
- (iii) State *three* limitations of using conventional energy sources. [3]
- (iv) *Traffic in India is becoming a big problem.* [3]
Suggest *any three* methods to control traffic problems in India.

Question 3

- (i) What do you mean by *End of Pipe* treatment? [2]
- (ii) State *any two* aims of Watershed management. [2]
- (iii) What is North-South divide? On what basis is the division made? [3]
- (iv) Give *three* reasons why we should recycle water. [3]

SECTION B (60 Marks)

(Answer **any four** questions from this Section.)

Question 4

- (i) What is a dry compost toilet? Give *any four* advantages of using dry compost toilets. [5]
- (ii) Mention the roles of NGOs fighting for women's rights. (*Five points*) [5]
- (iii) List *any five* impacts of burning fuel wood on the environment. [5]

Question 5

- (i) What is Environmental Impact Assessment? Mention *any three* roles of Environmental Impact Assessment in environmental protection. [5]
- (ii) Explain the working of fluid bed combustion in reducing the air pollution. [5]
- (iii) Mention *any five* steps that can be taken to prevent deforestation. [5]

Question 6

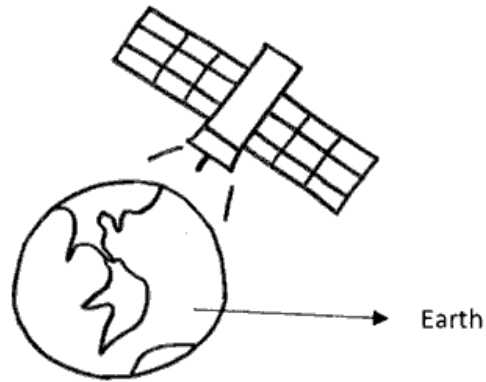
- (i) Name the founders of Gandhigram. Mention *three* objectives of Gandhigram. [5]
- (ii) List *any five* functions of Panchayat for the village development. [5]
- (iii) Write a short note on *Curitiba's* traffic management. [5]

Question 7

- (i) What is fuel wood? State *any three* reasons to find alternatives for fuel wood. [5]
- (ii) What are tree breaks? Mention *any three* advantages of tree breaks. [5]
- (iii) State the advantages of indigenous technology over modern technology in weaving industry. (*Three points*) [5]

Question 8

- (i) Study the diagram and answer the questions that follow: [5]



- (a) Name the device shown in the above picture.
- (b) Give *two* reasons why it is considered a good tool.
- (c) Mention *two* applications of it.
- (ii) What are wetlands? State *any three* major threats to wetlands. [5]
- (iii) Explain how the work initiated by Tarun Bharat Sangh changed the life of people in Rajasthan. [5]

Question 9

- (i) Explain why *grass root upward planning* is much better than *trickle down planning*. Give *any three* reasons. [5]
- (ii) What is globalisation? List *three* negative effects of globalisation. [5]
- (iii) *Small dams are better than large dams*. Give *any three* advantages and *two* limitations of small dam. [5]