

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

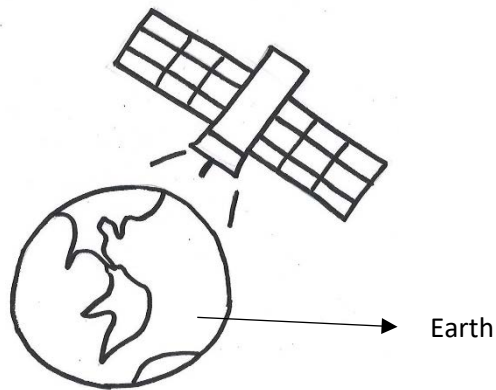
- (i) Name the founders of Gandhigram. Mention *three* objectives of Gandhigram. [5]
- (ii) List *any five* functions of Panchayat for the village development. [5]
- (iii) Write a short note on *Curitiba's* traffic management. [5]

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]