2023

QUESTION PAPER

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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

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(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

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(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

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(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

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(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

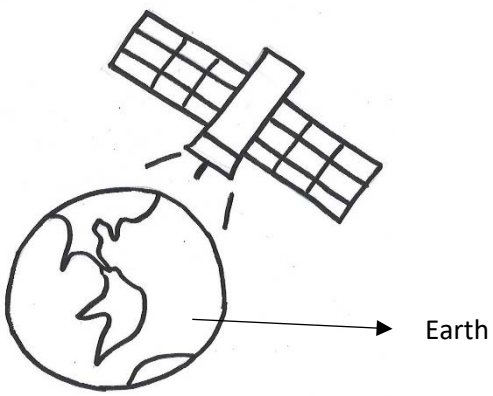
(i) What is fuel wood? State *any three* reasons to find alternatives for fuel wood. [5]

(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]

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