
ENVIRONMENTAL APPLICATIONS

(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.

Section A is compulsory. Attempt 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

- (a) State any *two* consequences of siltation in waterways. [2]
- (b) What are toxic wastes? [2]
- (c) State the scope and limitation of biogas as a kitchen fuel. [2]
- (d) What is meant by community forestry? State its one importance. [2]
- (e) Suggest *two* methods which are implemented in Curitiba for traffic management. [2]
- (f) State *two* reasons for water recycling. [2]
- (g) Explain activated sludge. Give an example. [2]
- (h) What are CFC's? [2]
- (i) State *three* disadvantages associated with the construction of dams on waterways. [3]
- (j) Mention *three* advantages of hydel power over coal. [3]
- (k) Name a newly evolved technique of water management and explain it. [3]
- (l) What is Natural Resource Accounting? Give an example. [3]
- (m) Mention *three* advantages of Remote Sensing Satellites. [3]
- (n) State any *three* ways of controlling the traffic problem in a metropolitan city in India. [3]
- (o) *Eco-friendly technologies, despite being environment friendly have not found many takers in India. Give three reasons justifying this statement.* [3]

- (p) Explain how decomposition of waste in open areas has an adverse impact on human health. [3]

SECTION B (60 Marks)

Attempt any four questions from this Section

Question 2

- (a) What is a *Cyclone Separator*? Describe the mechanism of a *Cyclone Separator* with the help of a diagram. [5]
- (b) Enumerate the advantages and disadvantages of:
- (i) Land fills.
 - (ii) Chemical fertilizers. [5]
- (c) Explain the work done by Tarun Bharat Sangh in soil conservation. [5]

Question 3

- (a) Explain the role of Environment Impact Assessment (EIA) in environment protection. [5]
- (b) Explain the impact of globalization on developing countries. [5]
- (c) What is remote sensing? Explain the role of remote sensing in environmental monitoring. [5]

Question 4

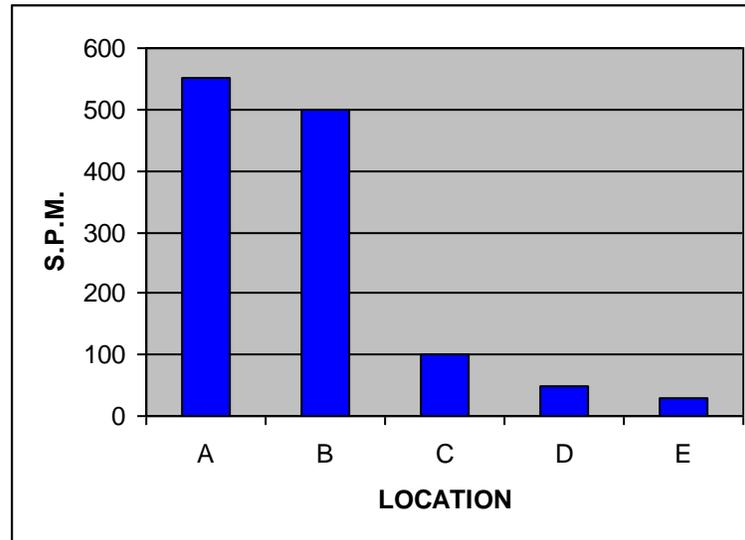
- (a) Explain the effect of using wood as fuel on the environment. [5]
- (b) What is meant by dry compost toilets? Explain the eco-friendliness of these toilets over the conventional toilets. [5]
- (c) What does sustainability mean? What is the role of inter-governmental organizations in saving the environment? [5]

Question 5

- (a) Explain the *roof top water harvesting technique* with the help of a neat diagram. [5]
- (b) Gandhi's model of decentralized governance is the most successful form of governance. Explain. [5]
- (c) How does the impounding of waterways by building dams affect the environment? [5]

Question 6

- (a) Explain the role of NGOs in sustaining a better environment. [5]
- (b) The graph given below shows the concentration of Suspended Particulate Matter (SPM) in the atmosphere in the various locations A, B, C, D and E of a country. Study the graph and answer the questions that follow:



- (i) State any *two* reasons that contribute to the increase in the SPM concentration in different locations. [2]
- (ii) List any *two* harmful effects on health caused by Suspended Particulate Matter (SPM). [2]
- (iii) Explain the role of legislation for control of the SPM emissions from vehicles. [2]
- (iv) Briefly explain any *four* initiatives that can be taken to reduce the emission of SPM in locations A and B. [4]

Question 7

- (a) Define a resource. What are the difficulties encountered in assigning monetary values to resources? [5]
- (b) List any *five* non-conventional sources of energy and state their advantages. [5]
- (c) Suggest *five* methods to reduce waste generation in metropolitan cities. [5]