

ENVIRONMENTAL SCIENCE

PAPER 1 (THEORY)

(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.)

Answer **Question 1** (compulsory) from **Part I** and **five** questions from **Part II**, choosing **at least one** question from each of the Sections **A, B** and **C**.

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

PART I (20 Marks)

Answer **all** questions.

Question 1

- (i) State the basic principles of stewardship of land. [2]
- (ii) Give *any two* impacts of genetic erosion on ecosystem. [2]
- (iii) Define *carrying capacity*. State *any two* factors that determine the carrying capacity of an ecosystem. [2]
- (iv) Give *any two* scarce resources which are diverted to make luxury goods. [2]
- (v) List *any two* benefits of local market to the villagers. [2]
- (vi) Distinguish *traditional agriculture* from *modern agriculture*. [2]
- (vii) List *any two* ecological impacts of the Transnational Companies. [2]
- (viii) Mention *any two* chemical indicators of soil quality. [2]
- (ix) Give *two* objectives of Basel Convention. [2]
- (x) Give the full forms of: [2]
 - (a) IPR
 - (b) GNP

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PART II (50 Marks)

Answer **five** questions in all, choosing at least **one** question from each of the Sections A, B, and C.

SECTION A

Question 2

- (a) What is WWF? List the goals and strategies put forth by WWF. [6]
- (b) What is *social forestry*? Mention *any four* types of social forestry. How does it differ from Joint Forestry Management? [4]

Question 3

- (a) What are *life strategies*? State their types. Mention *any four* characteristics of each of the types stated by you. [6]
- (b) Discuss *four* indicators of water quality and *give one* significance of each of them. [4]

Question 4

- (a) What are the different techniques of monitoring air quality of a place? Discuss briefly *any two* of the methods. [6]
- (b) 'Women empowerment can bring about a major change in human population'. Discuss. [4]

SECTION B

Question 5

- (a) What are the pull and push factors of urbanization? Explain *any four* negative impacts of urbanization. [6]
- (b) Discuss urban development planning and traffic management methods used in Curitiba. [4]

Question 6

- (a) Discuss the different types of irrigation systems. Explain *any four* advantages and *any four* disadvantages of each type. [6]
- (b) What is a *dry toilet*? How does it work? [4]

Question 7

- (a) Discuss the problems related to food security in the third world countries. Give *any two* solutions to tackle these problems. [6]
- (b) Mention *any eight* main features of the Food Security Law 2013. [4]

SECTION C

Question 8

- (a) What is meant by *defensive expenditure*? Explain its purpose and importance. [6]
- (b) What is *ozone layer*? How does it get depleted? State *any two* steps taken to control ozone layer depletion. [4]

Question 9

- (a) Differentiate between *free trade* and *protectionism*. State *any two* advantages and *any two* disadvantages of each. [6]
- (b) State the *two* types of externalities. Give *two* examples of each type. [4]

Question 10

- (a) What is meant by *Cost Benefit Analysis*? Mention *any three* advantages and *two* disadvantages of Cost Benefit Analysis. [6]
- (b) Discuss the case study of aquaculture in India to understand the impact of free trade. [4]