

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) Name *any two* ways by which a country can acquire carbon credits. [2]
- (ii) Give *any two* ways to achieve local self-sufficiency. [2]
- (iii) What is meant by ecological *foot print*? [2]
- (iv) Differentiate between *copyright* and *trade secret*. [2]
- (v) Distinguish between the two schools of thought based on Marx's view on environment. [2]
- (vi) Give *any two* examples of ex-situ conservation. Also, name *any two* biosphere reserves of India. [2]
- (vii) Name *any four* types of traditional rain water harvesting systems. [2]
- (viii) Explain briefly *any two* biological indicators of soil quality. [2]
- (ix) What are *bio-fertilizers*? Give *any two* examples of bio-fertilizers. [2]
- (x) Give *two* ways by which women's employment regulates population. [2]

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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 *Greenpeace*? What is its mission statement? When and where was it founded? Give *four* main objectives of the organization. [6]
- (b) Briefly explain Barry Commoner's Laws of Ecology. [4]

Question 3

- (a) Define *water pollution*. Name *any four* sources of water pollution. Discuss how the quality of water can be indicated by each of the following: [6]
- (i) pH level
 - (ii) Electrical conductivity
 - (iii) Turbidity
 - (iv) Temperature
- (b) Which Act was passed by the Government to safeguard the relationship between the tribal communities and their surroundings? Enumerate *any three* rights safeguarded by this Act. [4]

Question 4

- (a) What is meant by the *age structure* of a population? Discuss *any four* factors that have an impact on the birth rate of the population. [6]
- (b) Discuss the *two* types of population growth curve. Illustrate your answer with a suitable graphical representation. [4]

SECTION B

Question 5

- (a) What is meant by *new urbanism*? Discuss *any four* features of new urbanism. [6]
- (b) What is *mono-cropping*? Give *three* advantages and *three* disadvantages of mono-cropping [4]

Question 6

- (a) How was *colonial agriculture* different from *pre-colonial agriculture*? Discuss *three* negative impacts and *two* positive impacts of colonial agriculture. [6]
- (b) Discuss *any four* reasons why a different approach is needed to ensure food security in the Third World Countries. [4]

Question 7

- (a) Write a short note on Cuba – a sustainable country. [6]
- (b) Explain in detail *any four* ways by which sustainability can be attained in the field of agriculture. [4]

SECTION C

Question 8

- (a) What is meant by *Globalization*? Discuss *any six* advantages of globalization. Also, give four impacts of globalization on the environment. [6]
- (b) ‘TNCs have a detrimental effect on the environment’. Justify this statement by discussing *any four* ways in which TNCs play a negative role. [4]

Question 9

- (a) What is *Cost-benefit analysis*? Give *three* advantages and *three* disadvantages of Cost-benefit analysis. [6]
- (b) Which trade was banned by CITES in 1989? Discuss *any three* effects of this ban. [4]

Question 10

- (a) What is meant by *ecosystem services*? Classify the ecosystem services and explain *any two* in detail. [6]
- (b) Mention *any four* ozone depleting substances and give *one* source for each one of them. Also, give *four* impacts of ozone depletion. [4]