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 footprint? [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]
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: (i) pH level (ii) Electrical conductivity (iii) Turbidity (iv) Temperature [6]

(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]