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GEOGRAPHY

(Major)

Paper : 3.1

(Soil and Biogeography)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer the following questions by choosing the most appropriate option given against each question : 1×7=7
- (a) Which one of the following soils is formed under conditions of high rainfall with alternating dry and wet periods?
- (i) Arid soil
 - (ii) Laterite soil
 - (iii) Saline soil
 - (iv) Alkaline soil
- (b) Which one of the following soils is the end product of decomposition?
- (i) Saline and alkaline soils
 - (ii) Black soil
 - (iii) Laterite soil
 - (iv) Red soil

- (c) What do you mean by the term 'vegetation'?
- (i) Vegetation refers to the assemblage of plant species living in association with animal species
 - (ii) Vegetation refers to the assemblage of plant species living in association with each other in a given environment frame
 - (iii) Both (i) and (ii)
 - (iv) None of the above
- (d) Soil profile is
- (i) a cross-section through the soil horizons
 - (ii) the nature of the soil
 - (iii) an overall profile of the soil
 - (iv) None of the above
- (e) 'Illuviation' refers to
- (i) the redeposition of the solutes and the particles in the lower parts of the soil profile
 - (ii) the physical downward washing of clay and other fine particles
 - (iii) the redeposition of the solutes in the upper parts of the soil profile
 - (iv) None of the above

- (f) Plants which grow in very cold areas are known as
- (i) mesophytes
 - (ii) microthorns
 - (iii) xerophytes
 - (iv) None of the above
- (g) Which of the following is not an evergreen forest?
- (i) Mediterranean
 - (ii) Equatorial
 - (iii) Coniferous
 - (iv) Monsoon

2. Write very short notes on the following : $2 \times 4 = 8$

- (a) Pedology
- (b) Parent material
- (c) Ecological succession
- (d) Wildlife corridor

3. Write short notes on any *three* of the following : $5 \times 3 = 15$

- (a) Biomass
- (b) Rain forest
- (c) Soil horizon
- (d) Biodiversity
- (e) Deforestation

4. (a) Describe various soil types and their associated properties. 10

Or

- (b) Describe the soil-forming processes and discuss how the processes of soil formation vary in different climates. 10

5. (a) Give a comprehensive picture on the distribution and characteristics of plants in the world. 10

Or

- (b) Describe in detail the need for conservation of biodiversity in N-E India. How can project tiger help in biodiversity conservation? 7+3=10

6. (a) What is biosphere? Describe the processes of interaction among its various components. 3+7=10

Or

- (b) Define ecology and ecosystem. Give a brief description of the concept with suitable examples. 10
