

**2016**  
**ENVIRONMENTAL SCIENCE**  
**[HONOURS]**  
**Paper : I**

Full Marks : 75

Time : 4 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in  
their own words as far as practicable.

1. Answer any five of the following:  $2 \times 5 = 10$
- i) What do you mean by environmental awareness programme?
  - ii) What is genetic erosion? Give an example.
  - iii) Write down the theme of 'World Environment Day', 2015.
  - iv) What is Panspermia?
  - v) Define community maturation.
  - vi) What is neoendemics?
  - vii) What is cybernetics?
  - viii) Define bio-prospecting.

2. Answer any three of the followings:  $5 \times 3 = 15$
- i) What are the effects of acid rain on aquatic ecosystem? 5
  - ii) Write a short note on 'Non-formal Environmental Education'. What are the career options in Environmental Science? (give example).  $3 + 2 = 5$
  - iii) What is biogeochemical cycle? Briefly discuss Nitrogen cycle.  $2 + 3 = 5$
  - iv) Write a short note on earth's carrying capacity. 5
  - v) Mention the basic features of Tundra Biome. 5
3. Answer any five of the following:  $10 \times 5 = 50$
- i) Give the sequence of GWP of green house gases. Describe the role of developed and developing countries in global warming mitigation.  $2 + 8 = 10$
  - ii) What is social environment? What are the features of sustainability?  $2 + 8 = 10$
  - iii) Mention the significance of sigmoid and J-shaped curve in population. Describe the assumption of Hardy-Weinberg equilibrium.  $5 + 5 = 10$

iv) Explain Box and Pipe model. Draw and describe the Y-shaped energy flow model of an ecosystem.  $4+6=10$

v) What is paedomorphosis? What are the different types of speciation? Explain.  $2+8=10$

vi) What is ecological resilience? Explain. Write about the steps of ecological succession. What is ecotype?  $4+4+2=10$

vii) What are the causes of endemism? Write about animal distribution on earth.  $6+4=10$

viii) What do you mean by biodiversity? Describe the causes of loss of biodiversity.  $2+8=10$

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