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Name..... 22

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, FEBRUARY 2013  
(CUCSS)

Environmental Science

ES 1C 03—ENVIRONMENTAL BIOLOGY—I

(2010 admissions)

Time : Three Hours

Maximum : 36 Weightage

I. Answer *all* questions. Each question carries 1 weightage :

- 1 Define Environment.
- 2 What is Autecology ?
- 3 What is meant by trophic niche ?
- 4 Define Guild.
- 5 What is Ecological dominance ?
- 6 What is the Second Law of Thermodynamics in energy flow ?
- 7 What is a Grazing food chain ?
- 8 Define pyramid of biomass.
- 9 What is the trophic status of a grasshopper ?
- 10 What is the percentage of oxygen in atmospheric air ?
- 11 Give the different forms of phosphorus in water.
- 12 Define Limiting factor.
- 13 What is  $LC_{50}$  ?
- 14 What is meant by eurythermal organism ?

(14 × 1 = 14 weightage)

II. Answer any *seven* questions. Each question carries 2 weightage :

- 15 Give a brief account of the history of Ecology.
- 16 Explain Ecotone concept.
- 17 Write briefly on position interactions between species.
- 18 Explain ecological succession.
- 19 Distinguish between Primary and Secondary productivity.
- 20 Give the significance of inverted pyramids.
- 21 Describe oxygen-carbondioxide cycle in a lake.
- 22 Write notes on Nitrogen cycle.

Turn over

- 23 Explain with examples, Shelford's law of tolerance.  
24 What is the combined concept of limiting factors?

(7 × 2 = 14 weightage)

III. Answer any *two* questions. Each question carries 4 weightage :

- 25 Give a detailed account of population characteristics.  
26 Explain energy flow in an ecosystem.  
27 Describe the Sulfur cycle.  
28 What are the physico-chemical factors of a terrestrial ecosystem. Add remarks on limiting factors.

(2 × 4 = 8 weightage)