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No. of Printed Pages: 02

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**SARDAR PATEL UNIVERSITY**

M.Sc. Examination - April 2015

M. Sc. Integrated Biotechnology (IG-EBT) 7<sup>th</sup> Semester

Wednesday, 22<sup>nd</sup> April 2015

Session: Morning Time: 10:30 am to 1:30 pm

Subject / Course code :- PS07CIGEB2

Subject / Course Title :- Ecology and Biodiversity

Maximum Marks: 70

- Note: 1) All the Questions are compulsory.  
2) Figures on the right indicate marks.

Q.1 Choose the correct option 1x8= 8

- (i) Autoecology deals with \_\_\_\_\_
  - [a] ecology of species
  - [b] ecology of many species
  - [c] ecology of community
  - [d] all the above
- (ii) The concept of niche was first proposed by
  - [a] Tansley [b] Joseph Grinnell [c] Reiter [d] E.P. Odum
- (iii) The branch of science that deals with study of trends in human population is called
  - [a] demography [b] population ecology
  - [c] demogeography [d] dendrochronology
- (iv) Food levels in an ecosystem are called \_\_\_\_\_
  - [a] producer level [b] consumer level [c] pyramid [d] trophic level
- (v) IUCN (The International Union For Conservation Of Nature And Natural Resources) headquarters is at
  - [a] Gland, Switzerland [b] Paris, France
  - [c] Vienna, Austria [d] NewYork, USA
- (vi) A lake rich in nutrients and species is classified as \_\_\_\_\_
  - [a] dystrophic [b] eutrophic [c] oligotrophic [d] ecotrophic
- (vii) The diversity of the habitat over the total geographical area is called \_\_\_\_\_
  - [a] Gamma diversity [b] Alpha diversity
  - [c] Beta diversity [d] Delta diversity
- (viii) The species of plants that play vital role in controlling the relative abundance of other species in a community are called \_\_\_\_\_
  - [a] Edge species [b] Link species
  - [c] Pioneer species [d] Keystone species

- Q.2. Attempt any Seven of the following 2x7= 14
- (a) Explain the term extinct and threatened species.
  - (b) Enlist the Abiotic components of ecosystem.
  - (c) Explain the term carrying capacity.
  - (d) Enlist the types of succession.
  - (e) Define the term Biome and enlist types of biomes?
  - (f) Define Mortality and Natality
  - (g) Enlist the types of wetlands.
  - (h) Why biodiversity is rich in tropics?
  - (i) Explain the term Sacred groves.
- Q. 3. [a] Enlist different types biomes and explain any one in detail. [06]  
 [b] Write in detail the various types of interactions included under parasitism with suitable examples. [06]
- OR**
- Q. 3. [b] Discuss in brief Niche and factors affecting the niche and its parameters. [06]
- Q. 4. [a] Write in detail the Factors affecting the population density [06]  
 [b] Explain in detail the Xerosere. [06]
- OR**
- Q. 4. [b] Discuss in detail Evolutionary strategies – r & K-strategies. [06]
- Q. 5. [a] Explain in detail the various causes of the loss of biodiversity. [06]  
 [b] Explain in brief the economic importance of mammals with suitable examples. [06]
- OR**
- Q. 5. [b] Write a note on : (i) Hotspots of Biological Diversity [03]  
 (ii) Importance of Biodiversity. [03]
- Q. 6. [a] Enlist the biospheres reserves in India and give detail account on any one Biosphere reserve. [06]  
 [b] Explain in detail the In-situ conservation methodology. [06]
- OR**
- Q. 6. [b] Explain the Goals, Objectives and Guiding Principles of Environmental Education in India. [06]

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