

(25) Seat No.: \_\_\_\_\_

No. of Printed Pages : 2

**Sardar Patel University,**

Course: Environmental Biology and Restoration Ecology Course no: PS01CEST07

Date: 22<sup>nd</sup> October, 2016

Time: 10.00<sup>am</sup> - 1.00 pm

Max. Marks: 70

Semester I

- N.B: i. Draw neat and labelled diagrams wherever necessary to score full marks.  
ii. All questions are compulsory.

**Q1. Answer the following multiple choice questions (8X1)**

- a. Which one of the following is limiting factor for population of Diatoms  
i. Chloride ii) Nitrate iii. Sunlight iv. None
- b. Name the succession where succession starts from fungi and lichens  
i. Progressive succession ii. Autotrophic succession iii. Retrogressive succession  
iv. Heterotrophic succession
- c. The region between high and low tides in marine environment called as  
i. Shoreward region ii. Intertidal zone iii. Benthic region iv. None
- d. Which one of the following is not limiting factor  
i. D O ii) Nitrate iii. Temperature iv. none
- e. Which wavelength of light has high penetration capacity in water  
i. Violet ii. Indigo iii. UV iv. Red
- f. Which one of the following is not the part of Marine environment  
i. Shoreward region ii) Pelagic iii. Neritic iv. None
- g. Variation of any factor from one layer to another layer is called .  
i) Thermocline ii) Littoral zone iii) Profundal zone iv) none
- h. Name the example for warm blooded animal  
i. Earthworm ii. Reptile iii. Birds iv. i & ii.
- i. Shannon's indices number 3.0 indicates  
i. Rich diversity ii. Low diversity iii. Moderate diversity iv. None

**Q2. Answer any SEVEN of the following (7X2)**

- a) Ecosystem and its components  
b) Describe Foundation species and Key-stone species  
c) Shelford's law of Tolerance  
d) Process of Ecological succession  
e) Diagnostic characters of Mangrove environment  
f) Sources and structure of PAHs  
g) Relation between salinity and temperature in the coastal Oceans

(P.T.O.)

- h) Elaborate the terms-spatial, temporal, diurnal variations and intrinsic characters
- i) Discuss thermal stratification

- Q3. A. Describe the effects of Temperature on plants (6)
- B.i. Explain Ecological pyramids and how they vary from one to another ecosystem (3+3)
  - ii. Explain Food chain in in brief

**OR**

- B.i. What is Mutualism ? Explain various suitable examples for Mutualism. (3+3)
- ii. Describe different methods to measure Primary Productivity.

- Q4.A. Define Autecology and describe the various stages of biological clock of a plant.(6)
- B.i. Define Population Ecology and explain charcters of population. (3+3)
  - ii. Enumerate Primary succession

**OR**

- Bi. Define Hydrosere and explain various stages occur in this succession. (3+3)
- ii. Define community ecology and Describe the determination to study the community.

- 5.A. Discuss physical, and chemical characters of Lotic ecosystem (6)
- B.i. Enumerate criteria used for Ramsar site for the recognition of wetlands (3+3)
  - ii. Describe any four hydrochemical factors of fresh water environment

**OR**

- B. Define Eco restoration and explain exploitation , degradation , measurement and strategies for eco restoration of wetlands (6)

- 6.A. Write four examples of Mangrove species ? and explain principles to conserve and protect Mangrove Ecosystems (6)

- Bi. Discuss various physical properties of water in Marine environment which influence the biotic communities (3+3)

- ii. Describe the degradation of petroleum hydrocarbons ( oils) in water and terrestrial environments

**OR**

- Bi. Define and differentiate parts of Estuary and explain salinity and tides as limiting factors (3+3)
- ii. Enumerate Coral-reefs as unique environments and their bleaching.