

M.Sc. (Part-I) (Environmental Science) (CBCS Pattern) Sem-I  
**PSENVT03 / PSCENVT03 - Paper-III : Ecology**

P. Pages : 1

Time : Three Hours



**GUG/W/22/11160**

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Illustrate your answers with suitable diagrams and examples.

1. Discuss temperature and light as a limiting factor. **16**

**OR**

- a) What is tolerance? Give the principles of tolerance. **8**  
b) Discuss objectives of ecology. Give the scope of ecology. **8**

2. Discuss positive interactions among organisms. **16**

**OR**

- a) Explain ecological classification of fresh water habitat. **8**  
b) Discuss benthos and periphytons as an indicators of water quality. **8**

3. What is ecological succession? Explain patterns of succession. Give significance of ecological succession. **16**

**OR**

- a) Discuss characteristics of community w.r.t. structure and dominance. **8**  
b) Explain natality, mortality and dispersion as characteristics of population. **8**

4. What is productivity? Discuss in detail methods of measurement of productivity. **16**

**OR**

- a) Explain pyramid of number and pyramid of energy. **8**  
b) Explain nitrogen cycle with neat sketch. **8**

5. a) What is Liebig's law of minimum and Shelford's law of tolerance? **4**

b) Explain concentration of biogenic salts in fresh water. **4**

c) Write a note on concept of carrying capacity. **4**

d) What is food chain and food web? **4**

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