

**2023**

**Time - 3 hours**

**Full Marks - 60**

*Answer **all groups** as per instructions.*

*Figures in the right hand margin indicate marks.*

*Draw labelled diagrams wherever necessary.*

**GROUP – A**

1. Fill in the blanks. (all) [1 × 8]
- (a) Pyramid of \_\_\_\_\_ is always upright.
  - (b) The phosphorous cycle lacks \_\_\_\_\_ components.
  - (c) The transition area between two communities is \_\_\_\_\_.
  - (d) The primary consumers are \_\_\_\_\_.
  - (e) The plant colonize in barren area is called \_\_\_\_\_ succession.
  - (f) Hydrilla is a \_\_\_\_\_ hydrophyte.
  - (g) \_\_\_\_\_ is a soil forming process.
  - (h) Taxonomic group of any rank is known as \_\_\_\_\_.

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**GROUP – B**

2. Answer any eight of the following questions within two to three sentences each. [1½ × 8]

- (a) What is edge effect ?
- (b) Define physiognomy.
- (c) Flora
- (d) Keys
- (e) What is secondary production ?
- (f) Binomial nomenclature
- (g) Define biogeochemical cycle.
- (h) Author citation
- (i) Define community.
- (j) What is precipitation ?

**GROUP – C**

3. Write notes on any eight of the following within 75 words each. [2 × 8]

- (a) Soil profile
- (b) Relative humidity

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- (c) Endemism
- (d) Nitrogen fixation
- (e) Detritus food web
- (f) Documentation
- (g) Functions of Herbarium
- (h) Valid publication
- (i) Primary productivity
- (j) Shelford's law of tolerance

**GROUP – D**

Answer *all* questions within 500 words each.

4. Describe the causes, types and processes of ecological succession. [6]

OR

Describe the adaptation of Xerophyte.

5. Describe the various types of ecological pyramids. [6]

OR

Discuss the phytogeographical zone of India.

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6. Discuss the importance and functions of Herbarium. [6]

OR

Describe the fundamental components of plant taxonomy.

7. Describe the Hutchinson's system of classification. [6]

OR

Describe the family *Malvaceae*.