

**63/1 (SEM-4) BOT HC 4096 (CC 9)**

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**BOTANY**

Paper : CC-9

**( Plant Ecology and Phytogeography )**

*Full Marks : 60*

*Time : 3 hours*

*The figures in the margin indicate full marks  
for the questions*

1. Choose the correct answer : 1×5=5

(a) The Lincoln index measures

(i) population mortality rate

(ii) population natality rate

(iii) population size

(iv) population density

(b) Which is a 'k' selected species?

(i) *Aspergillus*

(ii) Human

(iii) *Taraxacum*

(iv) Grass

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(c) The eggshell of birds becomes thin by the pollution from pesticides due to the interference in the activity of

(i) calmodulin

(ii) MgATPase

(iii) CaATPase

(iv) Calcium

(d) Which of the following lake zones has phytoplanktons in abundance?

(i) Littoral zone

(ii) Benthic zone

(iii) Limnetic zone

(iv) Profundal zone

(e) In thermal stratification, the middle region which shows vertical temperature change is called

(i) mesolimnion

(ii) epilimnion

(iii) metalimnion

(iv) hypolimnion

2. Answer the following questions :  $2 \times 5 = 10$

(a) Define pedogenesis.

(b) What is standing crop? Give one example.

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(c) What is hypervolume niche?

(d) Distinguish between mor and mull humus.

(e) Differentiate between autecology and synecology.

3. Answer any *five* of the following questions :

$5 \times 5 = 25$

(a) Describe the morphological and ecological adaptations of hydrophytes.

(b) State the different climatic zones of India citing examples.

(c) Write an account of different types of ecological pyramids.

(d) Write on the importance of soil conservation.

(e) Write a short note on plant association.

(f) Describe the quadrat method for studying vegetation.

(g) Write an account on the non-renewable energy resources.

4. Answer any *two* of the following questions :

$10 \times 2 = 20$

(a) What is climate stage? Write the stages of ecological succession.  $2 + 8 = 10$

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( Turn Over )

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- (b) Define community. Write the analytical and synthetic characters used in community structure.  $2+8=10$
- (c) Define endemism. Describe the different theories of endemism.  $2+8=10$

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