

BSc4BotC401x
B.Sc. Semester - 4 (CBCS) Examination
March/April-2025 [NEW COURSE]
Botany-B401(Core)

Seat No : _____

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer the following questions as per instruction.
- (A) Answer in very short: (04)
1. Complete the statement: Endodermal cells possess lignified and suberized bands of thickening called.....
 2. Give technical term: Bark formed early or in spring season.
 3. Define the term: Inter fascicular cambium
 4. Who take part in radial conduction of materials?
- (B) Answer in brief (any one): (03)
1. Explain: Significance of secondary growth.
 2. Distinguish between: Dorsiventral leaf and Isobilateral leaf
- (C) Answer in detail (any one): (07)
1. Describe with diagram: Anomalous secondary growth in *Salvadora* stem.
 2. Draw V.T.S. of monocot stem and describe its structure.
- Que.2 Answer the following questions as per instruction.
- (A) Answer in very short: (04)
1. How many micro sporangia does each anther have?
 2. Which type of embryo sac is characterised by the absence of synergids and antipodals?
 3. Complete the statement: Carpels are modified leaves and also called the.....
 4. True or False: *Oenothera* type of embryo sac usually develops from the micropylar mega spore.
- (B) Answer in brief (any one): (03)
1. Explain: Formation of male gametes in Microgametogenesis.
 2. Discuss the entry of pollen tube into ovule with diagram.
- (C) Answer in detail (any one): (07)
1. Enumerate with the help of labelled illustrations the variation in fritilaria type of embryo sac.
 2. Discuss with diagram: Steps of megasporogenesis.
- Que.3 Answer the following questions as per instruction.
- (A) Answer in very short: (04)
1. What is explained by the donnan equilibrium theory?
 2. Give the term: The solid adsorbent particles which cause imbibition are called.
 3. Define the term: Diffusion pressure
 4. Which term is used for promotion of flowering under low temperature treatment?
- (B) Answer in brief (any one): (03)
1. Distinguish between: Imbibition and Diffusion
 2. Discuss advantages of seed dormancy.
- (C) Answer in detail (any one): (07)
1. What is osmosis? Give significance of osmosis in plants
 2. Describe mechanism of vernalization in plants.

- Que.4 Answer the following questions as per instruction. (04)
- (A) Answer in very short; (04)
1. Who fixed different name for soil particles of different sizes?
 2. Name the process in which leached minerals get accumulated at lower horizon of soil.
 3. Define the term: Regoliths
 4. Which Horizon is also known as zones of eluviation?
- (B) Answer in brief (any one): (03)
1. Explain the Gully erosion of soil.
 2. Write notes on: Applications of remote sensing.
- (C) Answer in detail (any one): (07)
1. What is Paedogenesis? Describe the process of Paedogenesis.
 2. Discuss the various mechanical methods used for the soil conservation.
- Que.5 Answer the following questions as per instruction. (04)
- (A) Answer in very short: (04)
1. True or false: Plant press is locked for 90 hours this is called sweating period.
 2. Give the term: The total self-duplicating hereditary material of cytoplasm
 3. Complete the statement: An encapsulated single somatic embryo is called.....
 4. Who first time discover plastid in heritance in *Mirabilis*?
- (B) Answer in brief (any one): (03)
1. Write notes on: Advantages of pure line selection.
 2. Explain cytoplasmic inheritance in Yeast.
- (C) Answer in detail (any one): (07)
1. Discuss autoopolyploidy in detail with examples.
 2. Explain meaning of artificial seed and distinguish between natural and synthetic seed.
