647510 **BSc4BotC0401** **Seat No :_____**

B.Sc. Semester - 4 (*CBCS*) Examination
March/April-2023 [OLD COURSE]
BOTANY(CORE)

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

Instructions:

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

Q.1(A) Answer the following questions. (Any Three) **(03)**

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?
5. **True or false?** Age of plant can be determined with the help of an instrument called increment borer.

Q.1(B) Answer the following question. (Any One) **(04)**

1. Explain: Significance of secondary growth.
2. Distinguish between: Dorsiventral leaf and Isobilateral leaf

Q.1(C) Answer the following question. (Any One) **(07)**

1. Describe with diagram: Anomalous secondary growth in *Dracaena* stem.
2. Draw V.T.S. of monocot root and describe its structure.

Q.2(A) Answer the following questions. (Any Three) **(03)**

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.
5. **Define the term:** Cap block

Q.2(B) Answer the following question. (Any One) **(04)**

1. Explain: Formation of male gametes in Microgemetogenesis.
2. Discuss the entry of pollen tube into ovule with diagram.

Q.2(C) Answer the following question. (Any One) **(07)**

1. Enumerate with the help of labelled illustrations the variation in Chrysanthemum type of embryo sac.
2. Discuss with diagram: Steps of megasporogenesis.

Q.3(A) Answer the following questions. (Any Three) **(03)**

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?
5. In which form food material is transported?

Q.3(B) Answer the following question. (Any One) (04)

1. Distinguish between: Imbibition and Diffusion
2. Discuss advantages of seed dormancy.

Q.3(C) Answer the following question. (Any One) (07)

1. What is osmosis? Give significance of osmosis in plants
2. Describe mechanism of vernalization in plants.

Q.4(A) Answer the following questions. (Any Three) (03)

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?
5. **Name the process:** The soil is covered with dried grasses, leaves and other crop residues.

Q.4(B) Answer the following question. (Any One) (04)

1. Explain the Sheet erosion of soil.
2. Write notes on: Applications of remote sensing.

Q.4(C) Answer the following question. (Any One) (07)

1. What is Paedogenesis? Describe the process of Paedogenesis.
2. Discuss the various mechanical methods used for the soil conservation.

Q.5(A) Answer the following questions. (Any Three) (03)

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*?
5. Give the full form: DDT

Q.5(B) Answer the following question. (Any One) (04)

1. Write notes on: Advantages of pure line selection.
2. Explain cytoplasmic inheritance in *Yeast.*

Q.5(C) Answer the following question. (Any One) (07)

1. Discuss allopolyploidy in detail with examples.
2. Explain meaning of artificial seed and distinguish between natural and synthetic seed.

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