647510 **BSCcryCC5010** **Seat No :_____**

B.Sc. Semester - 5 (*CBCS*) Examination
Oct/Nov. - 2023(Old Course)
CRYPTOGAMIC BOTANY AND PLANT PATHOLOGY (CORE)

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

Instructions:

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

Que-1(A) Answer in very short. (Any Three): (03)

1. Fill in the blank: The zoospores of Ectocarpus, produced in _____ sporangia, give rise to haploid thalli.
2. True or False: *Caulerpa* taxifolia is largest unicellular aquatic algae.
3. What is the name of the long neck present in the oogonium of *Coleochaete*?
4. Name male reproductive structure of *Chara*?
5. Complete the Statement: In physiological anisogamy, the fusing gamets are morphologically identical but may differ in their _____ behaviour.

Que-1(B) Answer in brief. (Any One): (04)

1. What are the characteristics of oogamous type of sexual reproduction?
2. Draw the labelled diagram and discuss the structure of nucule in Chara.

Que-1(C) Answer in detail. (Any One): (07)

1. Explain: Sexual reproduction in *Caulerpa*.
2. Describe Asexual reproduction in *Ectocarpus*.

Que-2(A) Answer in very short. (Any Three): (03)

1. True or False: A mature conidia is multicellular, obclavate and beaked in *Alternaria*.
2. Fill in the blank: The number of ascospores in the ascus of *Peziza* is _____.
3. Give the term: Non-motile asexual spores that are produced in sporangia.
4. Name the innermost region of the apothecium which is composed of asci and paraphyses.
5. Name the thick walled, resting spores formed in *Peziza* to pass on the unfavourable condition.

Que-2(B) Answer in brief. (Any One): (04)

1. Writes notes on: Asexual – exogenous spores in Fungi.
2. Explain: Asexual reproduction in *Peziza.*

Que-2(C) Answer in detail. (Any One): (07)

1. Describe the vegetative structure and reproduction in *Alternaria*.
2. Explain: Sexual reproduction process and structure of Apothecium in *Peziza*.

Que-3(A) Answer in very short. (Any Three): (03)

1. Complete the statement: In *Pellia*, at the base of the capsule sterile cells radiate from the base upwards is called _____.
2. Name the complete collar like or incomplete flap like sheath which surrounds the cluster of archegonia in *Pellia*.
3. True or False: In *Sphagnum* dispersal of spores takes place by peristomial teeth.
4. Name the two types of cells present in the leaf of *Sphagnum.*
5. What is Pseudopodium?

Que-3(B) Answer in brief. (Any One): (04)

1. Explain: Vegetative Reproduction-Innovation in *Sphagnum*.
2. Draw only labelled diagram: V.L.S. of *Pellia* sporophyte.

Que-3(C) Answer in detail. (Any One): (07)

1. Describe: Sexual reproductive organs of *Pellia*.
2. Explain: External and internal structure of *Sphagnum* sporangium.

Que-4(A) Answer in very short. (Any Three): (03)

1. True or False: It is regarded that *Rhynia gwynne-vaughanii* is the gametophytic phase of *Rhynia major*.
2. Fill in the blank: In *Lepidodendron*, each leaf-scar there are _____ parichnos strands.
3. Name the canal representing the protoxylem was present in each vascular bundle of calamites stem.
4. Due to the presence of large number of leaf traces, which type of stele is found in rhizome of *Ophioglossum*.
5. Name the spore producing bodies of *Marsilea*.

Que-4(B) Answer in brief. (Any One): (04)

1. Writes notes on: *Rhynia* reproductive structure - sporangia.
2. Explain: T.S. of *Marsilea* rhizome.

Que-4(C) Answer in detail. (Any One): (07)

1. Describe the fructification of *Calamites*.
2. Discuss the spore producing organs in *Ophioglossum*.

Que-5(A) Answer in very short. (Any Three): (03)

1. Give the term: The process of infection or the actual way in the disease develops in plant body.
2. Fill in the blank: The pathogens responsible for _____ disease is Tobacco virus - 16 or Nicotiana virus - 10.
3. Name the causal organism of whip smut of Sugarcane.
4. True or False: The pathogens responsible for Citrus canker is a bacterium *Xanthomonas citri*.
5. Complete the statement: More or less circular, rough or crustaceous lesions developed on the infected parts are known as ……..

Que-5(B) Answer in brief. (Any One): (04)

1. Explain: Symptoms and control of red rot of Sugarcanes.
2. Writes notes on: Necrosis.

Que-5(C) Answer in detail. (Any One): (07)

1. Explain: Tikka disease of groundnut according to following points 1. Symptoms 2. Causal organisms 3. Disease cycle.
2. Comment briefly on the chemical control of plant diseases.

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