

B.Sc. Semester - 6 (CBCS) Examination
March/April-2023 (NEW COURSE)
Cryptogamic Botany & Gymno. (Core (New))

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 question. (04)

1. Which structure is produced due to post-fertilization changes in *Coleochaete*?
2. **Complete the statement:** Antheridial filaments of *Chara* are also known as
3. Which type of sporangia is produced only on the sporophytic plants in *Ectocarpus*?
4. Name the species of *Caulerpa* is growing as epiphytes on the roots of Mangroves.

Q.1(B) Answer the following question. (Any One) (03)

1. Giving suitable examples, explain morphological and physiological anisogamy.
2. Describe the organization of the thallus in *Caulerpa*.

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

1. Give an illustrated account of the male reproductive organs of *Chara*.
2. Give in detail the organization of thallus and sexual reproduction in *Coleochaete*.

Q.2(A) Answer the following question. (04)

1. **True or false:** In *Penicillium* the conidia show acropetal arrangement.
2. What is the nature of the spores formed in ascus?
3. Name two genera to whom perfect stages of *Penicillium* has been assigned.
4. **Fill in the blank:** Aeciospores of *Puccinia* are produced on the _____
5. Surface of _____ leaf.

Q.2(B) Answer the following question. (Any One) (03)

1. Write a note on ascocarp of *Penicillium*.
2. Write short note on T.S. of leaf through aecidium of *Puccinia*.

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

1. Describe the process of asexual reproduction in *Penicillium*.
2. Give an account of the Uredospore and Teleutospore stage with diagram in *Puccinia*.

Q.3(A) Answer the following question. (04)

1. What is the function of Pseudo elaters in *Anthoceros*?
2. **True or false:** The antheridial jacket is two layered and has stomata in *Anthoceros*.
3. How will you differentiate between the antheridial and archegonial branches of *Sphagnum*?
4. Name the central sterile tissue found in certain capsules of *Bryophytes*.

- Q.3(B) Answer the following question. (Any One) (03)**
- 1. Explain:** Elaters, Pseudo elaters and Elaterophore.
 2. Draw a labeled diagram of *Sphagnum* leaf.
- Q.3(C) Answer the following question. (Any One) (07)**
1. Give an account of internal structure of *Anthoceros* sporophyte.
 2. Describe the structure of sex organs in *Sphagnum*.
- Q.4(A) Answer the following question. (04)**
1. From where do the spikes originate in *Ophioglossum*?
 2. What type of stele is formed in *Marsilea* rhizome?
 3. How the collar is formed in the *Gnetum* at the base of the male strobilus.
 4. Name the part of the plant which performs the function of photosynthesis in *Ephedra*.
- Q.4(B) Answer the following question. (Any One) (03)**
1. **Write short note on:** *Gnetum* ovule
 2. **Write short note on:** The Sporocarp of *Marsilea* as seen in H.L.S.
- Q.4(C) Answer the following question. (Any One) (07)**
1. Describe the male and female reproductive structure of *Ephedra*.
 2. Describe the external and internal structure of *Ophioglossum* spike.
- Q.5(A) Answer the following question. (04)**
1. From which locality fossils of *Rhynia* were discovered?
 2. **True or false:** Fossils of *Calamites* were found in the form of impressions and pith casts.
 3. What was the characteristic of the outer cortex of *Lyginopteris* stem?
 4. In which form Microsporangia were present in *Cycadeoidea*?
- Q.5(B) Answer the following question. (Any One) (03)**
1. Describe briefly fructification of *Calamites*.
 2. Describe the stem of *Pentoxylae*
- Q.5(C) Answer the following question. (Any One) (07)**
1. Describe the spore producing organs of *Cordaitaceae*.
 2. Give the morphology and anatomy of *Lepidodendron*.
