

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov - 2023 (OLD COURSE)
BOTANY(CORE)

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 Give the answer of following questions. (14)
- A. Answer any one question in detail. (07)
1. Describe asexual reproduction in Nostoc
 2. Describe sexual reproduction in Batrachospermum.
- B. Shortly answer any one question. (04)
1. Discuss the asexual reproduction in Batrachospermum.
 2. Discuss vegetative reproduction in Nostoc
- C. Answer the following question very shortly (any three) (03)
1. The term algae was proposed by _____
 2. State the function of eye-spot in algae.
 3. Give the name of thallus organization in Nostoc and Batrachospermum.
 4. Nostoc is a prokaryotic and haploid algae - True or False?
 5. Which pigment is responsible for red colour in Rhodophyta algae?
- Que.2 Give the answer of following questions. (14)
- A. Answer any one question in detail. (07)
1. Discuss haplobiontic and diplobiontic life cycle of Yeast.
 2. Discuss the industrial applications of *Aspergillus*.
- B. Shortly answer any one question. (04)
1. Describe budding in Yeast
 2. Describe asexual reproduction in *Aspergillus*.
- C. Answer the following question very shortly. (any three) (03)
1. What is lomasomes?
 2. Give the scientific name of Yeast.
 3. Which two enzymes are secreted by Yeast cells?
 4. Give the name of male and female branch of *Aspergillus*.
 5. Who firstly describe the Yeast cells?
- Que.3 Give the answer of following questions. (14)
- A. Answer any one question in detail. (07)
1. Discuss sexual reproductive organs of *Funaria*.
 2. Discuss sporophytic phase of *Marchantia*.
- B. Shortly answer any one question. (04)
1. Describe the thallus anatomy of *Marchantia*.
 2. Describe the stem anatomy of *Funaria*.
- C. Answer the following question very shortly. (any three) (03)
1. What is secondary protonema?
 2. Give classification (excluding characters) of *Marchantia*.
 3. How male and female thallus of *Marchantia* can be morphologically identified?
 4. How many neck canal cells are present in the neck of the archegonium of *Funaria*
 5. Name the types of scales found in *Marchantia*.

- Que.4 Give the answer of following questions. (14)
- A. Answer any one question in detail. (07)
1. Describe sexual reproduction in *Adiantum*.
 2. Describe internal structure of *Selaginella strobilus*
- B. Shortly answer any one question. (04)
1. Shows anatomical peculiarities by drawing figure of *Selaginella* root T.S.
 2. Draw neat and clean labeled diagram of *Adiantum* petiole.
- C. Answer the following question very shortly. (any three) (03)
1. In 13 celled stage of male gametophyte of *Selaginella* - 12 celled of antheridium + 1 prothallial cell? Is it True or False?
 2. Megasporophyll of *Selaginella* is comparable to which structure of angiosperm?
 3. Sclerenchymatus hypodermis is present in _____ of _____ Plant.
 4. Define - Heterospory
 5. Which type of steles are present in monocot plants?
- Que.5 Give the answer of following questions. (14)
- A. Answer any one question in detail. (07)
1. Describe T.S. of *Pinus* needle
 2. Describe L.S. of male cone of *Pinus*.
- B. Shortly answer any one question. (04)
1. Give the general characteristic of Apiaceae family
 2. Give the general characteristic of Acanthaceae family
- C. Answer the following question very shortly. (any three) (03)
1. Give the botanical name of Baheda
 2. State the name of the family comes under monochlamydeae.
 3. Give the floral formula of Verbenaceae family.
 4. Excurrent habit in *Pinus* is best suited for wind pollination - True or False?
 5. Wood of *Pinus* is composed of _____?
