

B.Sc. Semester - 3 (CBCS) Examination
July-2025 (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 - Heterosporous
- 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 monoclamydeae.
- 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 _____?
