

B.Sc. Semester - 3 (CBCS) Examination
December. -2020 [OLD COURSE]
BOTANY(CORE)

Time: 1:30 Hours

Marks: 42

Instructions:

1. Figure to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

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- Q – 1 Give the answer of following questions. (14)**
- (A) Answer any one question in detail (07)**
- (1) Describe mature structure of spermatangium and carpogonium in *Batrachospermum*.
 - (2) Discuss post fertilizations changes and carpospores germination in *Batrachospermum*.
- (B) Shortly answer any one question (04)**
- (1) Describe thallus structure of *Batrachospermum*.
 - (2) Describe cell structure of *Batrachospermum*.
- (C) Answer the following question very shortly (any three) (03)**
- (1) State difference between “Akinete” and “Heterocyst”.
 - (2) Why the color of *Batrachospermum* is violet or green even though it comes under Rhodophyceae class?
 - (3) Give the two names of un-branched filaments algae.
 - (4) Give the classification of *Nostoc*.
 - (5) The term algae was coined by _____
- Q – 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) Define relationship between phialides and sterigmata in *Aspergillus*?
 - (4) Give the name of any two diseases caused by *Aspergillus*.
 - (5) Which two types of enzymes secreted by Yeast for nutrition?
- Q – 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) How many thalluses can produce by germination of Gamete in *Marchantia*?
 - (2) During which phase in life cycle of *Marchantia* reduction division occurs?
 - (3) How can we morphologically differentiate male and female thallus of *Marchantia*?
 - (4) How many neck canal cells are present in the neck of the archegonium of *Funaria*?
 - (5) How many peristome teeth are present in *Funaria*?

- Q – 4 Give the answer of following questions. (14)**
- (A) Answer any one question in detail (07)**
- (1) Discuss importance of heterospory
 - (2) Describe Protostele and Haplostele
- (B) Shortly answer any one question (04)**
- (1) Describe L. S. of *Selaginella* strobilli.
 - (2) Describe internal structure of *Adiantum* sporophyll.
- (C) Answer the following question very shortly (any three) (03)**
- (1) Define ligule
 - (2) Which type of stele is observed in root of *Adiantum*?
 - (3) Which type of steles is present in monocot plants?
 - (4) In *Selaginella*, xylem is usually made of tracheids and vessels are absent. - True or False?
 - (5) How many flagella are present in antherozoids of *Adiantum*?

- Q – 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 Comretaceae family
 - (2) Give the general characteristic of Euphorbiaceae family
- (C) Answer the following question very shortly (any three) (03)**
- (1) Give the botanical name of Harde
 - (2) State the name of the family comes under epigynae series.
 - (3) Give the floral formula of Commelinaceae family.
 - (4) Excurrent habit in *Pinus* is best suited for wind pollination - True or False?
 - (5) Which types of leaves are present in *Pinus*?
