



DCT-003-1013006

Seat No. _____

B. Sc. (Sem. III) (CBCS) Examination

August - 2022

B-301 : Plant Diversity-2
(Old Course)

Faculty Code : 003

Subject Code : 1013006

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) This question paper contains TEN questions. ANY FIVE questions are compulsory.
(2) Draw neat and labeled diagrams wherever necessary.
(3) Figures to the right side indicate full marks for the question.

- | | | |
|---|--|---|
| 1 | (A) Objective type questions | 4 |
| | (1) Write the name of Dendroid form of algae. | |
| | (2) Define Akinetes. | |
| | (3) Give the common name of Batrachospermum. | |
| | (4) Give any one name of Multicellular algae. | |
| | (B) Answer in brief. | 2 |
| | (1) Draw a labeled diagram of vegetative structure of Batrachospermum. | |
| | (C) Answer in detail | 3 |
| | (1) Write a short note on Unicellular thallus organization in algae. | |
| | (D) Write a note on : | 5 |
| | (1) Explain life cycle of <i>Nostoc</i> | |
| 2 | (A) Objective type questions | 4 |
| | (1) Write the name of Filamentous form of algae. | |
| | (2) Define Phycology. | |
| | (3) Give the classification of <i>Nostoc</i> | |
| | (4) True or false: Batrachospermum is commonly known as 'Frog Spawn' | |

	(B) Answer in brief	2
	(1) Write about Heterocyst.	
	(C) Answer in detail.	3
	(1) Draw a labeled diagram of ultrastructure algal cell.	
	(D) Write a note on.	5
	(1) Explain the harmful effects of algae.	
3	(A) Objective type questions	4
	(1) True or false : Cell wall of higher fungi is made up of Protein and lipid.	
	(2) Where Lomasomes are found in fungal cell?	
	(3) Give the common name of <i>Saccharomyces cerevisiae</i> .	
	(4) Write the Scientific name of <i>Eurotium</i> .	
	(B) Answer in brief.	2
	(1) Describe the vegetative cell structure of <i>Aspergillus</i> .	
	(C) Answer in detail.	3
	(1) Describe vegetative reproduction in Yeast.	
	(D) Write a note on.	5
	(1) Describe structure of fungal cell with diagram.	
4	(A) Objective type questions.	4
	(1) True or false: The structure first to enter a bud in yeast is Mitochondria.	
	(2) Give the name of cell organelles present in fungal cell'.	
	(3) Citric acid production takes place by which fungi in your course? (any one)	
	(4) The cell wall of higher fungi is made up of _____.	
	(B) Answer in brief.	2
	(1) Give the classification of <i>Yeast</i>	
	(C) Answer in detail	3
	(1) Draw a labeled diagram of fungal cell.	
	(D) Write a note on	5
	(1) Describe asexual reproduction in <i>Aspergillus</i> with labeled diagram of mature conidiophore	
5	(A) Objective type questions	4
	(1) True or false: In <i>Marchantia</i> , Asexual reproduction takes place by gemmae.	
	(2) How many peristomial teeth are produced in the capsule of <i>Funaria</i> ?	

- (3) *Funaria* belongs to _____ class.
- (4) True or false: the diploid zygote is the first cell of the sporophytic generation.
- (B) Answer in brief. 2
- (1) Give any two differences between rhizoids and scale in *Marchantia*.
- (C) Answer in detail 3
- (1) Explain internal thallus structure of *Marchantia*.
- (D) Write a note on 5
- (1) Explain the vegetative reproduction in bryophytes.
- 6** (A) Objective type questions. 4
- (1) Give the name of rhizoids present in *Marchantia*.
- (2) What is secondary protonema?
- (3) *Marchantia* belongs to _____ order.
- (4) True or false: Moss is referred as *Funaria*.
- (B) Answer in brief 2
- (1) Explain the external structure of *Marchantia* thallus.
- (C) Answer in detail. 3
- (1) Explain the internal structure of stem of *Funaria*.
- (D) Write a note on. 5
- (1) Describe *Funaria* capsule with diagram.
- 7** (A) Objective type questions. 4
- (1) Heterospory is the production of _____ type of spores.
- (2) The term vascular cryptogames is used for which plant group?
- (3) True or false: The main plant in pteridophyta is Sporophyte.
- (4) Why *Adiantum* plant is called as Maiden hair fern?
- (B) Answer in brief. 2
- (1) Give the systematic position of *Selaginella*.
- (C) Answer in detail 3
- (1) Explain heterospory and biological importance of heterospory.
- (D) Write a note on. 5
- (1) Describe the various types of stele found in pteridophytes

- 8 (A) Objective type questions. 4
- (1) Adiantum is homosporous or heterosporous?
 - (2) Trabecule is present in which plant you studied?
 - (3) True or false: Prothallus is a heart shaped structure.
 - (4) In pteridophytes, which plant shows heterospory that you studied?
- (B) Answer in brief. 2
- (1) Draw a labeled diagram of L.S of strobillus of *Selaginella*.
- (C) Answer in detail. 3
- (1) Explain telome theory.
- (D) Write a note on 5
- (1) Explain structure of sporangium, spore and prothallus in Adiantum.
- 9 (A) Objective type questions 4
- (1) Write the name of one plant belonging to Apiaceae family.
 - (2) Write the scientific name of one plant belonging to Combretaceae family.
 - (3) True or false: In gymnosperms pollination is exclusively by wind.
 - (4) Cleavage polyembryony occurs in _____ plant.
- (B) Answer in brief. 2
- (1) Write classification of Fabaceae family with reasons
- (C) Answer in detail. 3
- (1) Describe female cone of *Pinus*.
- (D) Write a note on 5
- (1) Describe Verbinaceae family with floral diagram
- 10 (A) Objective type questions. 4
- (1) Write the scientific name of one plant belonging to Amaryllidaceae family.
 - (2) Lantana plant belongs to which family?
 - (3) True or false: Pinus is the state tree of Himanchal Pradesh
 - (4) Give the common name of one plant belonging to *fabaceae* family
- (B) Answer in brief. 2
- (1) Write systematic position and plant name belonging to Commelinaceae family
- (C) Answer in detail. 3
- (1) Give the distinguishing characters of Amaryllidaceae family with floral formula.
- (D) Write a note on 5
- (1) Explain the internal structure of Pinus needle with labeled diagram