



Seat No. _____

H AJ-003-1013006
B. Sc. (Sem. III) (CBCS)
(W.E.F. 2016) Examination
May - 2023
Botany
B-301 : Plant Biodiversity - 2
Faculty Code : 003
Subject Code : 1013006

Time : $2\frac{1}{2}$ / Total Marks : 70

Instructions:

- (1) Write answers of all questions in main answer book.
- (2) Draw neat and labeled diagrams wherever necessary.
- (3) Figures to the right side indicate full marks for the questions.

- 1 (A) Objective type question : 4
1. Define: Akinetes.
 2. Give the name of the Nostoc species found in India.
 3. Chantrelia stage found in which red algae?
 4. Write the name of palmelloid form of algae
- (B) Answer in brief : (any 1 out. of 2) 2
1. Define Heterocyst.
 2. Write the name of pigments found in Batrachospermum.
- (C) Answer in detail : (any 1 out of 2) 3
1. Write the mode of asexual reproduction in Nostoc.
 2. Carpogonia of Batrachospermum.
- (D) Write a note on : (any 1 out of 2) 5
1. Describe ultra structure of eukaryotic algae.
 2. Explain the algal causing biological distribution.

- 2 (A) Objective type question : 4
1. The cell wall of fungi is made up of _____.
 2. Why the Aspergillus name was given by Pier Antonio Micheli, 1729.
 3. During sexual reproduction of yeast, two vegetative cells or ascospores behave as _____.
 4. Yeast is a _____.
- (B) Answer in brief : (any 1 out of 2) 2
1. Draw the labelled diagram of fungal cell.
 2. Describe the vegetative cell structure of Aspergillus.
- (C) Answer in detail : (any 1 out of 2) 3
1. Describe the reproduction by budding in yeast.
 2. Describe any two industrial use of Aspergillus.
- (D) Write a note on : (any 1 out of 2) 5
1. Describe the industrial application of yeast.
 2. Describe asexual reproduction in Aspergillus.
- 3 (A) Objective type question : 4
1. Name the protective layers of sporophyte of Marchantia from outside to inside.
 2. How many peristomial teeth are produced in the capsule of Funaria ?
 3. Which kind of chloroplast is found in Marchantia?
 4. Which types of rhizoids are present in Marchantia?
- (B) Answer in brief : (any 1 out of 2) 2
1. Write note on: Gemma cup of Marchantia.
 2. Explain leaf anatomy of Funaria.
- (C) Answer in detail (any 1 out of 2) 3
1. Explain internal structure of axis of Funaria.
 2. Explain: Sex organs of Marchantia.
- (D) Write a note on : (any 1 out of 2) 5
1. Describe economic importance of bryophytes.
 2. Give an account of the sporophyte of Funaria.

- 4 (A) Objective type question : 4
1. Who gives Telome theory ?
 2. The development of sporophyte without fertilizer from the vegetative cells of the gametophytes is called _____.
 3. A stele having xylem in radiating rows and phloem in patches is called _____.
 4. The term vascular cryptogames is used for which plant group ?
- (B) Answer in brief : (any 1 out of 2) 2
1. Write the systematic position and external morphology of Adiantum.
 2. which type of stele is found in Selaginella?
- (c) Answer in detail : (any 1 out of 2) 3
1. Explain the internal structure of Selaginella leaf.
 2. What is significance of heterospory?
- (D) Write a note on : (any 1 out of 2) 5
1. Describe cone of Selaginella.
 2. Describe structure of sporangium and spore of Adiantum
- 5 (A) Objective type question : 4
1. The phloem in Pinus lacks _____ cells.
 2. Define dimorphic leaves.
 3. Write the botanical name of Arduasi plant belong to Acanthaceae family.
 4. Write the botanical name of Dhana/kothmir plant belong to Apiaceae Family.
- (B) Answer in brief : (any 1 out of 2) 2
1. Draw the floral diagram of Acanthaceae family.
 2. Draw the floral diagram of Euphobiaceae family.

(C) Answer in detail : (any 1 out of 2) **3**

1. Describe - Pinus Male cone.
2. Describe - Pinus needle.

(D) Write a note on : (any 1 out of 2) **5**

1. Write the distinguishing characters and three scientific name of plants belongs to Combretaceae family.
 2. Write the distinguishing characters and three scientific name of plants belongs to Commelinaceae family.
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