



PBA-003-1013006

Seat No. _____

B. Sc. (Sem. III) (CBCS) (W.I.F. 2016) Examination

November / December - 2018

Botany : B - 301

(Plant Diversity - II)

Faculty Code : 003

Subject Code : 1013006

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

[Total Marks : 70

- Instructions :**
- (1) This question paper contains five questions. All questions are compulsory.
 - (2) Write answers of all the questions in main answer sheet.
 - (3) Draw neat and labelled diagram wherever necessary.
 - (4) Figures to the right indicate full marks for the questions.

- 1 (a) Answer the following objective type questions : 4
- (1) *Batrachospermum* also called as _____.
 - (2) Write the methods of reproduction in *Nostoc*
 - (3) Give the examples of psuedobranched and dendroid forms of algae.
 - (4) In eukaryotic algae the flagella are of _____ arrangement.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Describe chantratia stage of *Batrachospermum*.
 - (2) Draw the labelled diagram of eukaryotic algal cell.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Thallus structure of *Nostoc*.
 - (2) Asexual reproduction in *Batrachospermum*.
- (d) Write note on : (any 1 out of 2) 5
- (1) Explain: -Thallus organization in algae.
 - (2) Explain:-Sexual reproduction in *Batrachospermum*.

- 2 (a) Answer the following objective type questions : 4
- (1) Which type of hypha is present in *Aspergillus*.
 - (2) The yeast cells are rich source of vitamin.
 - (3) Which species of *Aspergillus* produce the kojic acid ?
 - (4) Which types of flagella are found in the zoospore of fungi ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write the classification of *Aspergillus*.
 - (2) Write the occurrence of yeast.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe the nucleus of fungal cell.
 - (2) Describe any two industrial application of *Aspergillus*.
- (d) Write note on : (any 1 out of 2) 5
- (1) Explain:- Asexual and sexual reproduction in Yeast.
 - (2) Explain:- Sexual reproduction in *Aspergillus*.
- 3 (a) Answer the following objective type questions : 4
- (1) Write any three names of genera that belong to division Hepaticopsida.
 - (2) Which kind of arrangement of leaves is found in *Funaria* ?
 - (3) Write both species names of *Marchantia* that are found in western Himalaya and Kashmir.
 - (4) How many peristome teeth are found in capsule of *Funaria* ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Describe the vegetative reproduction through tubers in Bryophyta.
 - (2) Draw the labelled diagram of *Funaria* leaf (T.S).
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe the external characters of *Marchantia* thallus.
 - (2) Describe external characters of *Funaria* thallus.
- (d) Write note on : (any 1 out of 2) 5
- (1) Explain: - Alternation of generation in *Marchantia*.
 - (2) Explain: - Sporophyte of *Funaria*.

- 4 (a) Answer the following objective type questions : 4
- (1) The male gametophyte of *Sellaginella* shed in how many celled stage? Give the name of those cells.
 - (2) The stele with central xylem has radiating ribs known as _____.
 - (3) Who proposed the telome theory ? When ?
 - (4) The gametophyte of *Adiantum* is called _____.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Define heterospory.
 - (2) Define telome and mesome.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe : Microsporangia and Megasporangia of *Sellaginella*.
 - (2) Describe: structure of Sporangia and spore of *Adiantum*.
- (d) Write note on : (any 1 out of 2) 5
- (1) Explain:- Various types of stele.
 - (2) Explain:- Gamatophytic generation of *Sellginella*.
- 5 (a) Answer the following objective type questions : 4
- (1) Write two scientific names of plants belonging to family Combretaceae.
 - (2) Write the name of smallest Gymnosperm.
 - (3) The pollen grain of *Pinus* shed in how many celled stage condition ? Give the names.
 - (4) Write the floral foumula of family Commelinaceae.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Why *Pinus* plant is called monoecious and autoecious ?
 - (2) Draw floral diagram of *Acacia nilotica*.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe anatomy of *Pinus* needle.
 - (2) Describe the classification with reason of family Verbenaceae
- (d) Write note on : (any 1 out of 2) 5
- (1) Explain: - Male and female cone of *Pinus*.
 - (2) Explain: - Family Euphorbiaceae.