



HCU-003-1013006 Seat No. _____

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

October / November – 2017

B-301 : Botany
(Plant Biodiversity)
(New Course)

Faculty Code : 003
Subject Code : 1013006

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

[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) Write the name of pigments found in *Batrachospermum*.
(2) Write the name of palmelloid form of algae.
(3) Give the name of the *Nostoc* species found in India.
(4) Give the name of Psuedobranched form of algae.
- (b) Answer in brief : (any 1 out of 2) 2
(1) Define Heterocyst.
(2) What is chatriasis stage?
- (c) Answer in detail : (any 1 out of 2) 3
(1) Write the mode of asexual reproduction in *Nostoc*.
(2) Write down the structure of female reproductive structure of *Batrachospermum*.
- (d) Write a note on : (any 1 out of 2) 5
(1) Describe various forms of thallus organization in 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) Aspergillus, also called _____.
 - (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 the industrial application of Aspergillus.
- 3** (a) Objective type question : **4**
- (1) Name the protective layers of sporophyte of Marchantia form outside to inside.
 - (2) Which kind of chloroplast is found in Marchantia?
 - (3) How many peristomial teeth are produced in the capsule of Funaria?
 - (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 internal structure of leaf 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 illustrated account of the sporophyte of Funaria.
- 4 (a) Objective type question : 4
- (1) How Pteridophytes differ from bryophytes?
 - (2) The development of sporophyte without fertilization 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 cryptograms 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 Selaginella leaf.
 - (2) What is significance of heterospory?
- (d) Write a note on : (any 1 out of 2) 5
- (1) Describe cones of Selaginella.
 - (2) Describe structure of sporangium and spore of Adiantum (with diagram)
- 5 (a) Objective type question: 4
- (1) Write the scientific name of nagdamun/sukhadarshan plant belong to Amaryllidaceae family.
 - (2) Write the scientific name of motu sismudiyu plant belong to Commelinaceae family.
 - (3) Write the scientific name of arduci plant belong to Acanthaceae family.
 - (4) Write the scientific 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 Euphorbiaceae family.
- (c) Answer in detail : (any 1 out of 2) **3**
- (1) Write the distinguishing characters of Combretaceae family.
 - (2) Write the distinguishing characters of Fabaceae family.
- (d) Write a note on : (any 1 out of 2) **5**
- (1) Write the distinguishing characters and three plants scientific name of Verbenaceae family
 - (2) Write the distinguishing characters and three plants scientific name of Amaryllidaceae family.
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