

[This question paper contains 2 printed pages]

Sr. No. of Question Paper : 7047
 Unique Paper Code : 2162581101
 Name of the Paper : Microbial World and Plant Diversity
 Name of the Course : B. Sc. ALS with Agro-Chemicals and Pest Management
 Semester : I
 Duration : 2 Hours
 Maximum Marks : 60

Instructions for Candidates:

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt Four questions in all including Question No. 1, which is compulsory.
3. All questions carry equal marks.
4. Attempt all parts of the question together.

Q 1: (a) Match the followings:

(1×5=5)

- | | |
|----------------|------------------------|
| (i) Elaters | (a) <i>Penicillium</i> |
| (ii) Phialides | (b) <i>Pteris</i> |
| (iii) Stomium | (c) <i>Agaricus</i> |
| (iv) Coenobium | (d) <i>Volvax</i> |
| (v) Hymenium | (e) <i>Marchantia</i> |

(b) Define the followings:

(1×5=5)

- (i) Genetic Drift
- (ii) Capsid
- (iii) Cleistothecium
- (iv) Inflorescence
- (v) Peristome

(c) Fill in the blanks:

(1×5=5)

- i. The Fungi store reserve material in the form of _____.
- ii. Major constituent of the wall of Gram-positive bacterium is _____.
- iii. The ovule bearing structure in the megasporophyll of *Pinus* is called _____.
- iv. Vallecular canals are found in the stem of _____.
- v. In *Funaria* _____ are branched with oblique septa.

Q.2 Differentiate between the following (*any three*):

(3×5=15)

- (i) Transformation and Conjugation
- (ii) Natural and Phylogenetic system of classification
- (iii) Dwarf shoot and long shoot of *Pinus*.
- (iv) L- forms and Mycoplasma
- (v) Allopatric and sympatric Speciation

Q3. Write short notes on the following (*any three*):

(3×5=15)

- (i) Asexual reproduction in *Volvox*
- (ii) General characteristics of Bryophytes
- (iii) Sporophyte of *Funaria*
- (iv) Life cycle of *Rhizopus*
- (v) APG-IV classification system

Q4. Draw well labelled diagram of the following (*any three*):

(5×3=15)

- (i) L.S. Cone of *Equisetum*
- (ii) Cell wall of Gram-Negative bacterium
- (iii) L.S of *Pinus* male cone
- (iv) Conidiophores and conidia of *Penicillium*
- (v) Structure of *Volvox* daughter colony

Q5. (a) Describe the life cycle of *Agaricus* with suitable diagrams.

(10)

(b) Describe the post fertilization changes in *Polysiphonia*.

(5)

Q6 (a) Draw the labelled diagram of bacteriophage and write an account of its mode of reproduction.

(10)

(b) Describe the structure of sporophyte of *Pteris*.

(5)

(200)