

This question paper contains 4 printed pages]

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S. No. of Question Paper : 72

Unique Paper Code : 217375

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Name of the Paper : 10-Biology of Life Forms

Name of the Course : B.Sc. (App. Life Sciences) Agrochemical and Pest Management

Semester : III

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Question No. 1 is compulsory.

Attempt five questions in all including question No. 1.

Attempt all parts of the question together.

1. (a) Define the following (any five) :

5×1=5

(i) Karyogamy

(ii) Coenobium

(iii) Plasmid

(iv) Transduction

(v) Elaters

(vi) Endarch stele

(vii) Antheridia

P.T.O.

(b) Write one function of (any *five*) :

5×1=5

- (i) Peristome teeth
- (ii) Transfusion tissue
- (iii) Oidia
- (iv) Casparian strip
- (v) Cambium
- (vi) Heterocysts
- (vii) Mesosome

(c) Match the following :

5×1=5

- | | |
|--------------------------|-----------------------|
| (i) Plakea stage | (a) Protein coat |
| (ii) Dolipore septa | (b) Dicotyledons |
| (iii) Septate conidia | (c) Basidiomycetes |
| (iv) Capsid | (d) <i>Alternaria</i> |
| (v) Open vascular bundle | (e) <i>Volvox</i> |

2. Draw well labelled diagram of (any *three*) :

3×5=15

- (a) T.S. Monocot stem
- (b) V.S. *Pinus* needle

(c) V.S. thallus *Marchantia*

(d) V.S. sporophyll *Pteris*

(e) *Nostoc* filament.

3. (a) How are daughter colonies form in *Volvox* ? 5

(b) What are L-forms ? Explain in brief. 5

(c) How does *Marchantia* reproduce vegetatively ? 5

4. Write short notes on (any three) : 3×5=15

(a) Economic importance of Algae

(b) Recombination in Bacteria

(c) Alternation of generation

(d) Parasexuality

(e) Archaeobacteria

5. Differentiate between the following (any five) : 5×3=15

(a) Gram positive and gram negative bacteria

(b) Isogamy and Oogamy

(c) Bryophytes and Pteridophytes

(d) Lytic and Lysogenic cycle

- (e) Homothallic and Heterothallic fungi
 - (f) Anatomy of monocot and dicot leaf.
6. (a) Give a detailed account of life cycle of *Pteris*. 8
- (b) What are Lichens ? Discuss their types and mode of reproduction. 7
7. (a) Give a detailed account of sexual reproduction in *Rhizopus*. 7
- (b) Explain the process of fertilization in *Pinus*. 8