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Your Roll No.

1918

1121

B.Sc. (Prog. III

E

LS-201 : BIODIVERSITY-I-PLANTS

(Admission of 2008 and onwards)

Time : 3 Hours

Maximum Marks : 75

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

Attempt any Five questions.

All questions carry equal marks.

All parts of a question must be answered together.

1. (a) . Answer the following : 10×1=10

- (i) Person who gave phylogenetic system of classification
- (ii) Source of penicillin
- (iii) A nitrogen-fixing alga
- (iv) A moss with peristome

P.T.O.

- (v) A living fossil
 - (vi) Botanical name of horse tail
 - (vii) AIDS causing organism
 - (viii) Type of pollination in *Cycas*
 - (ix) Tuberculosis causing agent
 - (x) Source of chilgoza (dry fruit) seeds.
- (b) Discuss salient features of 'Archegoniatae' with special reference to the advancement over algae. 5
2. (a) Give a graphic sketch of the life cycle of a diplohaplontic alga studied by you. 7½
- (b) Discuss sexual reproduction in *Funaria*. 7½
3. Write short notes on (any three) : 3×5=15
- (i) Economic importance of gymnosperms
 - (ii) Ultrastructure of a bacterial cell
 - (iii) Different types of endosperm
 - (iv) Salient features of Bentham and Hooker's system of classification
 - (v) Xerophytic characters of *Equisetum*.

4. (a) Why is *Puccinia* called heteroecious fungus ?

Discuss any two stages of its life cycle with suitable diagrams. $7\frac{1}{2}$

- (b) Explain the sexual reproduction of *Vaucheria*. $7\frac{1}{2}$

5. Draw well-labelled diagrams of the following (any three) :

$3 \times 5 = 15$

- (i) T.S. of coralloid root of *Cycas*.

- (ii) V.S. of the strobilus of *Selaginella*.

- (iii) V.S. of the sporophyll of *Pteris*.

- (iv) L.S. of the archegoniophore of *Marchantia*.

- (v) V.S. of *Ectocarpus* thallus.

6. (a) Why is the group bryophyta considered as 'amphibians of plant kingdom' ?

- (b) List the primitive characters of *Cycas*.

- (c) Describe asexual reproduction in *Albugo*. $3 \times 5 = 15$

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7. Differentiate between the following (any *three*) : 3×5=15

- (i) Artificial and natural system of classification
- (ii) Prothallus and protonema
- (iii) Apogamy and apospory
- (iv) Heterotrichous and heterothallic habit
- (v) Male cone of *Cycas* and *Pinus*
- (vi) Simple and Cleavage polyembryony.