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- (c) Write the note on the reproduction in *Cycas*.
- (d) Give an account of the economic importance of Algae.
5. (a) Give an account of the xerophytic and hydrophytic features of *Equisetum*. (5)
- (b) Discuss and illustrate the life cycle of *Puccinia* in primary host only. (5)
- (c) Give an account of the structure and mode of multiplication of Bacteriophage. (5)
6. (i) Describe the general characters and range of thallus organization in algae. (8)
- (ii) Describe in details the genetic recombination in bacteria. (7)
7. (a) What are Lichens? Describe various modes of their reproduction. (8)
- (b) Discuss the role of fungi in industry. (7)

(200)

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[This question paper contains 4 printed pages.]

06.01.2024(E)
Your Roll No.....

Sr. No. of Question Paper : 3580

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Unique Paper Code : 32165101

Name of the Paper : Biodiversity (Microbes, Algae, Fungi and Archegoniatae)

Name of the Course : B.A. (Hons.) / B.Sc. (Hons.) / B.Com. (H) Generic Elective

Semester : I

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions in all, including Question no. 1 which is compulsory.
3. **All** questions carry equal marks.
4. All parts of a question must be answered together.
5. Draw diagrams wherever required.

1. (a) Define any **five** of the following : (1×5=5)

(i) Soredia

(ii) Elater

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- (iii) Plasmid
- (iv) Isogamy
- (v) Circinate Vernation
- (vi) Capsid

(b) Fill in the blanks (**any five**) : (1×5=5)

- (i) The storage product of most algae is
- (ii) Name of the non-vascular embryophyte is
- (iii) Father of Indian Bryology is
- (iv) In Pteridophytes, the dominant generation is
- (v) Name of the living fossil
- (vi) Winged pollen grains are found in

(c) Match the following : (1×5=5)

- | | |
|----------------------------------|--------------------------|
| (i) Ovuliferous scale | (a) <i>Selaginella</i> |
| (ii) Eyespot | (b) <i>Nostoc</i> |
| (iii) Resurrection Plant | (c) <i>Cycas</i> |
| (iv) Heterocyst | (d) <i>Pinus</i> |
| (v) Accessory transfusion tissue | (e) <i>Chlamydomonas</i> |

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2. Distinguish between : (3×5=15)

- (a) Smooth and Tuberculate rhizoids
- (b) Gram positive and Gram negative Bacteria
- (c) Uredospore and Teleutospores
- (d) Homospory and Heterospory
- (e) Long and Dwarf shoots of *Pinus*

3. Draw the well-labelled outline diagram and cellular details of any **three** of the following : (3×5=15)

- (a) V.S. *Cycas* leaflet
- (b) L.S. Sporophyte of *Funaria*
- (c) T.S. of Rachis of *Pteris*
- (d) V.S. Apothecium of Lichen

4. Attempt any **three** : (3×5=15)

- (a) Discuss the economic importance of Gymnosperm.
- (b) Write a note on the Gemmae cup and its importance in *Marchantia*.

P.T.O.