

[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 6911

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Your Roll No.....

Unique Paper Code : 216351

Name of the Course : **B.Sc. (Prog.) Life Science**

Name of the Paper : Biodiversity I – Microbes (LSPT-304)

Semester : III

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.
3. Q. No. **1** is compulsory.
4. **All** questions carry equal marks.

1. (a) Define the following terms (**any ten**) :

- (i) Coenobium
- (ii) Heterocyst
- (iii) Mesosomes
- (iv) Soredia
- (v) Heterothallism
- (vi) Mycotoxins
- (vii) Haustorium

P.T.O.

(viii) Endospore

(ix) Dictyospores

(x) Cleistothecium

(xi) Sphaeroplast

(b) Fill in the blanks (**any 5**) :

(i) Conjugation in bacteria was discovered in _____ .

(ii) Cap cells are present in _____ .

(iii) Main chemical component of bacterial cell wall is _____ .

(iv) Akinetes are formed in _____ .

(v) Nucleic acid in TMV is _____ .

(vi) White rust is caused by _____ . (5)

2. Write short notes on (**any 3**) with suitable diagram)

(a) Bacteriophage

(b) Conjugation

(c) Apothecium of lichen

(d) Asexual mode of reproduction in *Penicillium*.

(e) Sexual reproduction in *Volvox* (15)

3. Differentiate between (**any 3**), with suitable diagram) :

(a) Prokaryotes and Eukaryotes

- (b) Foliose and Fruticose lichens
 - (c) Transformation and Transduction
 - (d) Ascomycetes and Basidiomycetes
 - (e) Isogamy and Ogamy (15)
4. Draw well labelled diagrams (**any 3**) :
- (a) E.M. of *Chlamydomonas* cell
 - (b) V.S. of Brassica leaf showing *Albugo Candida* infection
 - (c) HIV
 - (d) *Rhizopus* asexual reproduction
 - (e) Polysiphonia cystocarp (15)
5. (a) Describe range of thallus organization in algae. (5)
- (b) Give an account of mycorrhizae and its significance. (5)
- (c) Discuss the causal organisms symptoms and control measures of Black rust of wheat. (5)
6. (a) Write an illustrated account of Sexual reproduction in *Fucus*. (5)
- (b) Describe the basidiocarp of *Agaricus*. (5)
- (c) Economic importance of bacteria in agriculture and industry. (5)

7. (a) Describe the various types of plasmodium in Myxomycetes. (5)
- (b) Discuss symptoms and control measures of viral diseases. (5)
- (c) Comment on the Citrus canker disease. (5)