

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**F. Y. B. Sc. Sem-I : WINTER- 2022**  
**SUBJECT : MICROBIOLOGY : STRUCTURE OF PROKARYOTES &**  
**EUKARYOTES**

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 7/12/2022

**W-18305-2022**

Max. Marks : 60

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**N.B.:**

- 1) All questions are **COMPULSORY**
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat diagrams **WHEREVER** necessary.
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**Q.1** Attempt **ANY TWO** of the following: (12)

- a) Enlist characteristics of viruses.
- b) Discuss the structure and functions of cell wall of 'Gram negative bacteria'.
- c) Describe general properties and significance of *Coxiella*.

**Q.2** Attempt **ANY TWO** of the following: (12)

- a) Give the composition and functions of bacterial capsule.
- b) Describe general properties and significance of *Chlamydia*.
- c) Discuss virus cultivation using 'Primary cell cultures'.

**Q.3** Attempt **ANY TWO** of the following: (12)

- a) Giving suitable diagram, explain the structure and functions of 'Gas vacuole'.
- b) Give general properties of 'Protozoa'.
- c) Explain different arrangements of bacterial flagella.

**Q.4** Write short notes on **ANY THREE**: (12)

- a) Continuous cell cultures.
- b) General properties of *Actinomycetes*
- c) T4 bacteriophage
- d) Prions

**Q.5** Attempt **ANY FOUR** of the following: (12)

- a) Draw a neat labelled diagram of bacterial flagellum.
- b) What are 'Carboxysomes'? Give their significance.
- c) Discuss different factors regulating thermal resistance in bacterial endospore.
- d) With suitable examples, explain significance of fungi.
- e) Give merits and demerits of 'Embryonated Egg Technique'.
- f) Enlist different types of 'Pili' with representative examples.

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