

BACHELOR OF SCIENCE (CBCS-2018 COURSE)
F. Y. B. Sc. Sem-I : WINTER- 2022
SUBJECT : MICROBIOLOGY : INTRODUCTION TO MICROBIOLOGY

Day : Monday

Time : 10:00 AM-01:00 PM

Date : 5/12/2022

W-18304-2022

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
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Q.1 Attempt **ANY TWO** of the following. **(12)**

- a) Elaborate on –‘Controversy over spontaneous generation’.
- b) What are chemical reactions? Give two examples.
- c) Classify carbohydrates with suitable examples.

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

- a) Discuss the principle, working and applications of Fluorescence Microscope.
- b) Comment on – DNA as the genetic material.
- c) What is the principle, procedure and applications of Gram’s Staining?

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

- a) Explain the principle, working and applications of Transmission electron microscope.
- b) Write a note on Anton Van Leeuwenhoek’s contribution.
- c) What is the scope and future of Microbiology?

Q.4 Write short notes on **ANY THREE** of the following. **(12)**

- a) Quaternary structure of Proteins
- b) Ionic bonding
- c) Pure culture technique
- d) Applications of Dark Field Microscope
- e) Koch’s Postulates

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

- a) Comment on – Microorganisms as cells.
- b) What is the unit of measurement of a bacterial cell size?
- c) Define the terms – mordant, stain and decolorizer.
- d) Discuss the significance of ATP in a living cell?
- e) Which are the mechanical parts of a light microscope? Give their functions.
- f) How atoms form molecules?

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