

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

Day : Saturday
Date : 2/7/2022

S-18304-2022

Time : 11:00 AM-02:00 PM
Max. Marks : 60

N. B.

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

- a) Describe the principle, working and applications of Scanning Electron Microscope.
- b) Describe various types of lipids.
- c) Enlist the contributions made by Scientist Robert Koch.

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

- a) What is differential staining? Discuss the principle, procedure and significance of Gram staining.
- b) What are various types of chemical reactions? Add a note on reversible reactions.
- c) Discuss the theory of spontaneous generation.

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

- a) Differentiate between Dark field and Phase Contrast Microscope.
- b) What are High energy compounds? Explain with a suitable example.
- c) Write on "The development of Microbiology in 19th century".

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

- a) Units of measurement of bacterial cell
- b) Chemical bonds
- c) Normal microflora of human beings
- d) Chemotherapy

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

- a) What is special staining? Discuss the staining of bacterial endospores.
- b) Describe the role of microbes to clean up the pollutants.
- c) Describe the various types of RNA.
- d) How is a smear prepared before staining?
- e) What are the modern developments in Microbiology?
- f) Discuss the secondary structure of protein.