

F.Y.B.Sc. SEM – I (CBCS 2018 COURSE) : SUMMER - 2019
SUBJECT : MICROBIOLOGY : INTRODUCTION TO MICROBIOLOGY

Day : Friday
Date : 12/04/2019

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

S-2019-0770

N. B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw well labelled diagrams **WHEREVER** necessary.

Q.1 Attempt **ANY TWO** of the following: **(12)**

- a) What are Lipids? Describe various types of Lipids.
- b) What is differential staining? Describe the principle and procedure of Acid Fast staining.
- c) Describe the principle, working and applications of Phase contrast microscope.

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

- a) Explain the principle and procedure for any one method of Endospore staining. Give two examples of endospore producing bacteria.
- b) Describe the structure of ATP and add a note on the energy generated by an ATP molecule.
- c) Describe the principle, working and applications of Scanning Electron Microscope.

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

- a) Comment on –“Use of microbes as Biopesticides and Biofertilizers”.
- b) What are the various types of chemical reactions?
- c) Differentiate between Fluorescence and Electron Microscopes.

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

- a) Cell wall of a Bacterial cell.
- b) Contribution of Louis Pasteur.
- c) Negative staining.
- d) Carbohydrates.

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

- a) Define the terms- Normal flora, Pathogen and Infectious disease.
- b) What is the future of microbiology?
- c) Describe the Optical parts of a light microscope.
- d) What are the Covalent bonds?
- e) Explain the principle of Monochrome staining.
- f) Describe the primary structure of Proteins.

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