

**F. Y. B. SC. (BIOTECHNOLOGY) SEM – II (CBCS - 2015
COURSE) : SUMMER - 2018**

SUBJECT: INTRODUCTION TO MICROBIOLOGY

Day: **Saturday**
Date: **07/04/2018**

Time: **02.00 PM TO 05.00 PM**
Max Marks. 60

S-2018-1046

N.B.

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Attempt **ANY TWO** from questions 2, 3 & 4 and from 6, 7, & 8
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 Attempt **ANY FIVE** of the following **(10)**

- a) What are Koch's postulates?
- b) Define the term
 - i) Focal point
 - ii) Focal length
- c) What are various types of lenses present in bright field microscope?
- d) What are the functions of Pilli & fimbriae?
- e) Why Gram negative bacteria stains pink in color?
- f) What is numerical aperture? How it is calculated?

Q.2 Attempt the following questions **(10)**

- a) Explain the structure of cell wall of Gram negative bacteria.
- b) Describe principle and applications of dark field microscopy.

Q.3 Explain the following **(10)**

- a) Discuss the structure of flagella. Mention various flageller arrangements in bacteria.
- b) Discuss various contributions of Louise Pasteur in development of vaccines.

Q.4 Write short notes on **ANY TWO** of the following **(10)**

- a) SEM
- b) Structure and function of endospore
- c) Francisco Redi's experiment

SECTION - II

Q.5 Attempt **ANY FIVE** of the following **(10)**

- a) What do you mean by strain?
- b) Define:
 - i) Biovar
 - ii) Morphovar

P.T.O

- c) Mention various phases of growth curve.
- d) What is differential media? Give example.
- e) What is enriched media? Give example.
- f) Mention various types of bacteria on the basis of temperature.

Q.6 Attempt the following questions **(10)**

- a) Draw neat labelled diagram & explain the structure of prokaryotic cell.
- b) Explain moist heat sterilization.

Q.7 Write short notes on **(10)**

- a) Types of bacteria on the basis of source of nutrition
- b) Control of microorganisms using halogens

Q.8 Give an account on **ANY TWO** **(10)**

- a) Membrane filters
- b) Salient features of Bergey's manual systematic bacteriology.
- c) Radiation as method of sterilization

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