

I Semester B.Sc. Examination, December 2018
(Semester Scheme) (CBCS)
MICROBIOLOGY – I
Basic Microbiology

Max. Marks : 70

Time : 3 Hours

Instructions : 1) Answer **all** the Sections.
2) Draw diagrams **wherever** necessary.

SECTION – A**(5×2=10)**

I. Answer the following :

- 1) How did Edward Jenner develop Vaccination ?
- 2) What is working distance in Microscopy ?
- 3) What are fluorochromes ?
- 4) Differentiate between dis-infectant and antiseptic.
- 5) What is the mode of action of chloramphenicol ?

SECTION – B**(4×5=20)**II. Answer **any four** of the following :

- 6) Explain any two branches of microbiology.
- 7) Explain the working principle and application of Phase-contrast microscope.
- 8) What is simple staining ? Explain why basic dyes are used more frequently than acidic dyes in staining.
- 9) What is the difference between the Seitz filter and membrane filter ?
- 10) Explain the mode of action of Cephalosporins.

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SECTION - C

III. Answer **any three** of the following :

(3×10=30)

- 11) Explain the contribution of Alexander Fleming and Anton Von Leewenhock.
- 12) Discuss the principle and applications of spectrophotometer.
- 13) Discuss the antimicrobial activity of alcohol, halogens and aldehydes.
- 14) What are antimicrobial agents ? Explain the source, mode of action and adverse effect of polymyxin and tetracycline.
- 15) Describe the construction, working principle and applications of TEM.

SECTION - D

IV. Answer in **one** or **two** sentences :

(10×1=10)

- 16) Swan-necked flask.
- 17) Lazzaro Spallanzani.
- 18) Beer-Lambert's Law.
- 19) Abbe Condenser.
- 20) Acidic Dyes.
- 21) Auxochrome.
- 22) Sanitizer.
- 23) MIC.
- 24) Narrow-spectrum Antibiotic.
- 25) Silver.