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I Semester B.Sc. (Theory) Degree Examination, August - 2021

**MICROBIOLOGY**

**Basic Microbiology**

**(CBCS Semester Scheme-Freshers & Repeaters)**

**Paper - I**

**Time : 3 Hours**

**Maximum Marks : 70**

**Instructions to Candidates :**

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

**SECTION - A**

**I. Answer the following.**

**(5×2=10)**

- 1) Magnification.
- 2) Origin of life.
- 3) Seitz filter.
- 4) Negative staining.
- 5) Cephalosporin.

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**SECTION - B**

**II. Answer any FOUR of the following.**

**(4×5=20)**

- 6) Write a short note on Tyndallization and boiling as method of sterilization.
- 7) Explain thin layer chromatography.
- 8) Define and explain - Resolving power and numerical aperture.
- 9) Classify Antibiotics based on their mode of action.
- 10) Describe filtration as a method of sterilization.

**SECTION - C**

**III. Answer any THREE of the following.**

**(3×10=30)**

- 11) Explain working principle and construction of fluorescent microscope with its applications.
- 12) Explain the principle and procedure of Endospore and capsule staining.
- 13) Discuss contributions of Ivanovsky and Robert Koch.
- 14) Describe the source and mode of action of Bacitracin and Chloramphenicol.
- 15) What is Centrifugation? Explain working principle and applications of centrifuge.

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**SECTION - D**

**IV. Answer in one word or a sentence:**

**(10×1=10)**

- 16) HTST.
- 17) Crystal - Violet - Iodine Complex.
- 18) Decolorizing agent.
- 19) Mycology.
- 20) Nystatin.
- 21) Basic dye.
- 22) Peptidoglycan.
- 23) Bright field microscopy.
- 24) Antony Van Leewenhoek
- 25) Secondary electrons.

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