

**2203230201040001**  
**EXAMINATION FEBRUARY-MARCH 2024**  
**POST GRADUATE DIPLOMA IN MEDICAL LABORATORY**  
**TECHNOLOGY (FIRST SEMESTER)**  
**BASICS OF MICROBIOLOGY (THEORY)-LEVEL 4**

[Time: As Per Schedule]

[Max. Marks: 70]

**Instructions:**

- 1. Fill up strictly the following details on your answer book**
  - a. Name of the Examination : **POST GRADUATE DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY (FIRST SEMESTER)**
  - b. Name of the Subject : **BASICS OF MICROBIOLOGY (THEORY)-LEVEL 4**
  - c. Subject Code No : **2203230201040001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

**Q.1 Answer in Short: (Any Seven)**

**14**

1. Mention different arrangements of cocci shape bacteria.
2. Define a) Magnification b) Resolving power
3. Define disinfection.
4. Give uses of WB agar.
5. Explain parasitism and symbiosis.
6. Enlist components of fluorescence microscope.
7. Give examples of instruments used for dry heat and moist heat sterilization?
8. Mention the composition of chocolate agar.

**Q.2 Attempt any TWO of the following:**

**14**

1. Define virus. Explain morphology of virus in detail.
2. Describe the contribution of Robert Koch.
3. Explain bacterial cell structure in brief.

**Q.3 Write short notes on any TWO of the following: 14**

1. Applications of dyes and stains
2. Phase contrast microscope: Principle and Components
3. Sample preparation in TEM

**Q.4 Explain any TWO of the following: 14**

1. Radiation as a physical method for sterilization.
2. The role of Alcohol as a sterilizing agent.
3. Mode of action of disinfectants.

**Q.5 Attempt any TWO of the following: 14**

1. Slant culture v/s stab culture method.
2. Mention the principle, composition and use of Mac Conkey agar.
3. Explain streak plate method and spread plate method for cultivation.

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