


RAN-2203230201040001
PGDMLT (Sem. I) Examination November - 2025
1004 - A : Basics and Microbiology
Time: 3 Hours]
[Total Marks: 70
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book.
- (2) Draw neat and labelled diagrams wherever necessary.
- (3) Figures to the right indicate full marks of the question.

Seat No.:

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Student's Signature

Q. 1. Answer in Short: (Any Seven) (14)

1. What is endospore? Show the diagrammatic representation of its structure.
2. Define refraction & refractive index.
3. What are the sterilization condition of autoclave?
4. What is the principle of Mac Conkey agar?
5. Enlist the normal flora of the mouth.
6. Give full form of HEPA & LAF.
7. Mention different growth patterns in broth culture.
8. What is fixative? Give example. Why is important to carry out fixation before staining?

Q. 2. Attempt any TWO of the following: (14)

1. Give the contribution of Robert Koch and also highlight Koch's Postulate.
2. Explain general structure and characteristics of virus.
3. Define a parasite. Enlist its types.

Q. 3. Answer any TWO of the following: (14)

1. Explain principle and components and use of dark field microscope.
2. Discuss the components and use of fluorescence microscope.
3. Write a note on: TEM

Q. 4. Attempt any TWO of the following: (14)

1. Describe the role of non-ionizing radiation in sterilization.
2. Explain the role of hypochlorite as a chemical sterilizer. Give its practical applications.
3. Write a short note on: Liquid Filtration.

Q-5 Answer any TWO of the following: (14)

1. Explain principle, composition & use of Simon's citrate agar slant.
2. Explain broth and stab culture method for cultivation of bacteria..
3. Write a note on streak plate technique and pour plate technique.