2303000501026001-S
EXAMINATION MARCH-APRIL 2024
BACHELOR OF SCIENCE (FIRST SEMESTER) (ATKT)
MAJOR-2-MICROBIOLOGY PAPER - II THEORY (MICROSCOPY AND STAINING TECHNIQUES) - LEVEL 3

[**Time: As Per Schedule]** **[Max. Marks: 35]**

Instructions:

1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination: **BACHELOR OF SCIENCE (FIRST SEMESTER) (ATKT)**
   b. Name of the Subject: **MAJOR-2-MICROBIOLOGY PAPER - II THEORY (MICROSCOPY AND STAINING TECHNIQUES) LEVEL 3**
   c. Subject Code No: **2303000501026001-S**
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:

Student's Signature

Q.1 Answer in very short. (Any Five) **5**

a. Define: Focal point & Focal length
b. Give names of TWO basic dyes?
c. Write two differences between Phase-contrast & Dark-field microscopes.
d. Define: Intensifier. Give two examples of the same.
e. Write two functions of TEM.
f. What is the function of cantilever in Atomic Force Microscope?

Q.2 Answer the following in brief. (Any Two) **10**

a. Lenses play an important role in imparting an image. - Explain.
b. Explain Huygenian & Compensating eyepieces.
c. Describe in detail chromatic aberrations in objectives.

Q.3 Answer the following in brief. (Any Two) **10**

a. Explain in detail dyes and simple staining.
b. Give a detailed note on theories of staining. State examples of biological Dyes.
c. Explain detailed working of Confocal microscope & image formed by It.

Q.4 Answer the following in brief. (Any Two) **10**

a. Explain - Scanning probe Microscopy.
b. Write a detailed note on Electron cryotomography.
c. Explain - SEM: Working and applications.

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