

RAN-2403000501028003
B.Sc. Bioscience (Microbiology) (NCF-NEP) (Sem. - I)
Examination November - 2025
Major -2 : Basic Microbial Techniques (Paper - II)
Time: 1Hr 30 Min.]
[Total Marks: 38
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Figures to the right indicates full marks of the question
- (3) Draw a neat & labelled diagram whenever necessary.

Seat No.:

--	--	--	--	--	--

Student's Signature

Q. 1 Multiple choice questions: (Any eight)
08

1. Phase-contrast microscopy is mainly used to:
 - a. Observe fluorescence
 - b. View stained samples
 - c. Observe living cells without staining
 - d. Measure light absorption
2. The main function of the condenser is to:
 - a. Increase magnification
 - b. Focus light onto the specimen
 - c. Magnify the image
 - d. Reflect light from the specimen
3. The compound microscope consists of two lenses known as
 - a. Objective & Eyepiece.
 - b. Objective & Condenser.
 - c. Eyepiece & Ocular.
 - d. None.
4. Lipid contents are more in
 - a. Gram negative bacteria
 - b. Gram positive bacteria
 - c. Same in both
 - d. None of these
5. A colored negative ion of an acidic dye will stain the back ground of a bacterial smear is called
 - a. Indirect staining
 - b. Relief staining
 - c. Negative staining
 - d. All of the above
6. Which of the following is a primary stain in Gram stain
 - a. Safranin
 - b. Crystal violet
 - c. Iodine
 - d. None
7. Commonly used dry heat methods include:
 - a. Boiling and pasteurization
 - b. Autoclaving and Tyndalization
 - c. Hot air oven and incineration
 - d. Moist steam sterilization

8. Which of the following is ionizing radiation?
- a. UV
 - b. IR
 - c. -rays
 - d. None
9. A process that kills all bacteria and spores is called _____
- a. Preservation
 - b. Sanitization
 - c. Sterilization
 - d. Tyndalization

Q. 2 Answer the following questions. (Any two) 10

- 1. Discuss in detail about electron microscopy.
- 2. Describe in brief about parts of bright field microscopy.
- 3. Write a detail note on fluorescence microscopy.

Q. 3 Answer the following questions. (Any two) 10

- 1. Explain in brief about mordant, decolourizer & intensifier.
- 2. How to classify the Stain.
- 3. Describe in brief about Direct staining.

Q. 4 Answer the following questions. (Any two) 10

- 1. Explain in detail patterns of microbial death.
 - 2. Describe in detail on sterilization by moist heat.
 - 3. Describe in brief about microbial control methods.
-