


RAN-2503001302046005

B.Sc. Biotechnology (NCF - NEP) (Sem. II) Examination April - 2026
BT MDC - 204 : Bioinstrumentation (External Theory)

Time: 2 Hours]
[Total Marks: 50
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
 Fill up strictly the above details on your answer book.

Seat No.:

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Student's Signature

Q. 1 Short Question/One-Word Answer (Any 10 out of 12)
(10)

- Define Mobile phase.
- Define Analyte.
- State True or False:- Rf value is the ratio of distance travelled by solvent to the distance travelled by sample.
- State True or False:- The ratio of acceleration to velocity is called Svedberg unit.
- What is chromatic Aberration.
- Give Examples of Basic (Alkaline) dyes, used for specimen staining for bright field microscopy.
- Total magnification of (bright field) microscope is the product of _____ ?
- With respect to DIC microscopy, the Prism used to split light into e-ray and o-ray is called _____ ?
- Give mathematical relation between angular velocity and linear velocity.
- Give examples of non polar solvent.
- Write Abbe's Equation for Resolution.
- Define Hydrogen bonding.

Q. 2 Short Note. (Any 2 out of 3)
(10)

- Elaborate : How diffraction of light by sample affects resolution of microscope.
- Explain different staining techniques used for Bright field microscopy.
- Write a Short note on Phase contrast Microscopy.

Q. 3 Short Note. (Any 2 out of 3)
(10)

- Compare and contrast:- Fluorescence Microscopy and Confocal Microscopy.
- Explain function of "Scanning Electron Microscopy".
- Explain sample preparation and working of Transmission Electron Microscope.

(10)

- (10)

(10)

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