

Seat No. : _____

AJ-103

April-2023

B.Sc., Sem.-IV

**204 : Bio chemistry
(Advance Techniques)**

Time : 2:30 Hours]

[Max. Marks : 70

SECTION – I

1. (a) Write difference between light and electron microscope. 7
- (b) Write a note on – Dark Field Microscopy. 7

OR

- (a) Explain in detail SEM. 7
 - (b) Write principle and working of Phase Contrast Microscopy. 7
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2. (a) Explain - Centrifugation Principle and types. 7
 - (b) Short note on Density Gradient Centrifugation. 7

OR

- (a) Write - Ultracentrifugation, Principle and Applications. 7
 - (b) Short note on Rotors used in Centrifuges. 7
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3. Explain principle and working with diagram – GM Counters. 14

OR

- (a) Give uses of Radioactivity/Radioisotopes – in bio-sciences. 7
 - (b) Note on – Bio – Hazards of Radioactivity. 7
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4. Explain with own example – Representation of Data by Tally, Histogram. 14

OR

- (a) Give importance of sample size and sampling methods in biological research. 7
- (b) Write a note -SD, MEAN, Co-efficient of variation. 7

SECTION – II

Write answers of any 7 questions.

14

- (1) Define NA, and Resolving power.
 - (2) Give functions of condenser in microscope.
 - (3) Define angular aperture.
 - (4) Write importance of cellular fractionation.
 - (5) What are different types of medium used in centrifuge ?
 - (6) Name 2 books used for instrumentation in bio-science.
 - (7) Define - isotope and give example.
 - (8) What is radioactive decay ?
 - (9) Give 2 units used in Radiation science.
 - (10) Full form of – MD, SD.
 - (11) What is mode of data – 0, 5, 8, 2, 8, 6, 8, 8, 8, 3, 3, 1, 4, 8, 2, 0 ?
 - (12) What is mean of data – 10, 8, 9, 10, 2, 1, 0, 10 ?
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