

BSc. Sem.4 Examination**CC-204 Biochemistry****Adv. Techniques**

May-2025

Time : 2-30 Hours]

[Max. Marks : 70

- Instruction : (1) All questions carry equal marks.
 (2) All question are compulsory.

1. Explain/describe specimen preparation for TEM and give uses of TEM-in detail. 14

OR

1. (a) Explain dark field microscopy. 7
 (b) Briefly explain – Numerial aperture and resolving power 7
 2. Explain-principle, working of ultracentrifugation. 14

OR

- (a) Short note on sedimentation. 7
 (b) Explain types & uses of Rotors in centrifuge 7
 3. (a) Explain – Radioactivity & radioactive decay. 7
 (b) What is autoradiography – explain briefly. 7

OR

3. Giving examples explain role (functions) of radio isotopes in biosciences. Also give hazards of its uses. 14
 4. Explain types of data, standard deviation and uses of biostate in Biosciences. 14

OR

- (a) Calculate = standard deviation for data below. 7
 C.I. 0-10 10-20 20-30 30-40 40-50
 f 20 5 6 6 4
 (b) Calculate mean, mode, median for data 7
 Observations. 7, 7, 10, 15, 12, 14, 7, 8, 7, 18
 5. **Answer following. (Any 7)** 14

- 1) Name lenses of simple, compound microscopes.
- 2) What is RPM ?
- 3) Give example of radio isotope used in Nucleic acid.
- 4) What is co-efficient of variance?
- 5) Give role/use of condenser in microscope.
- 6) Define radio activity, give its units.
- 7) Give 2 precautions of uses of radioisotopes.
- 8) Give uses of scientillation counter.
- 9) Define – ultra centrifugation.
- 10) Name scientist associated with – Microscope.
- 11) Name medium used in density gradient centrifugation.
- 12) Define-frequency of data-giving simple example.