

3 Answer the following : **2×7=14**

- (a) Define radioactivity. What are the biological effects of radiation?
- (b) Describe different types of microscopy and discuss any one type in detail.

OR

3 Answer the following : **2×7=14**

- (a) Describe the principle and working of TEM. Add a note on its usefulness in biological studies.
- (b) Discuss the principle and application of Flow Cytometry in biological system.

4 Answer the following : **2×7=14**

- (a) Describe the principle of UV and IR spectroscopy. Add a note on their application in biology.
- (b) Describe the principle and application of MALDI TOF-MS in biological Science.

5 Write short notes on any two of the following : **2×7=14**

- (a) Basic theory of sedimentation
 - (b) Agarose gel electrophoresis
 - (c) Gas chromatography
 - (d) Isoelectric focusing.
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