



Department of Biochemistry
Shivaji College, University of Delhi
B.Sc. (Hons.) Biochemistry, SEM –VI

Advanced Methodologies (UPC-32497601)

February 28, 2024

Marks = 20

Q1. Define the following terms (any three):

- A. Reporter assay
- B. Immunofluorescence
- C. Transfection

Q2. Write down the role of the following.

- A. Osmium tetroxide in electron microscopy
- B. Sheath Fluid in FACS
- C. Pre-hybridization buffer in blotting

Q3. With the help of schematic diagrams explain the methodology, advantages and limitations of the following techniques:

- A. Immunohistochemistry
- B. Flow cytometry
- C. ELISA

Discuss how non-invasive scanning of soft tissue can be carried out.

(3, 3, 12, 2)



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April 24, 2024

Q1. Differentiate between the following:

- i. Confocal microscopy and fluorescence microscopy
- ii. ChIP and 'ChIP on Chip'
- iii. Radioactive and Non-radioactive labeling method
- iv. In situ hybridization and Colony hybridization
- v. Southern blotting and Northern blotting
- vi. Pulse field Electrophoresis and Pulse Chase analysis

Anita