

M.Sc. (Part-I) Semester-I (C.B.C.S. Scheme) Examination

BIOCHEMISTRY

(Analytical Techniques)

Paper—II

Time : Three Hours]

[Maximum Marks : 80

Note :— All questions are compulsory and carry equal marks.

1. Describe in brief :

- | | |
|---|---|
| (a) Methods for sub cellular fractionation of mitochondria. | 6 |
| (b) Method for lysis of animal cell. | 5 |
| (c) Method for isolation of membrane proteins. | 5 |

OR

- | | |
|-------------------------------|---|
| (p) Freeze drying. | 6 |
| (q) Fractional precipitation. | 5 |
| (r) Marker enzymes. | 5 |

2. Describe principle and applications of the following :

- | | |
|----------------------------------|---|
| (a) Gel filtration. | 5 |
| (b) Affinity chromatography. | 5 |
| (c) Ion Exchange chromatography. | 6 |

OR

- | | |
|--------------------------------|---|
| (p) Thin layer chromatography. | 5 |
| (q) Paper chromatography. | 5 |
| (r) Gas chromatography. | 6 |

3. Explain in detail the principle, method and applications of PAGE. 16
- OR**
- Describe in brief Southern, Northern and Western blotting. 16
4. Describe in short :
- (a) UV-visible spectrophotometric technique. 8
 - (b) Mass spectroscopy. 8
- OR**
- (p) X-ray diffractions. 8
 - (q) Fluorescence. 8
5. Describe in detail principle and application of tracer technique and autoradiography. 16
- OR**
- Describe isotopic labelling and liquid scintillation counting. 16