



MCC-003-018204

Seat No. _____

M. Sc. (Sem. II) (CBCS) Examination

April/May – 2018

Zoology : ZOOL-210

(Analytical Techniques) (Old Course)

Faculty Code : 003

Subject Code : 018204

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following very briefly : (any seven) **2×7=14**

- (a) What is tissue fixation ? Why it is needed ?
- (b) Give few uses of GC-MS.
- (c) What is Ionization ?
- (d) Write the difference between true fluorescence and phosphorescence.
- (e) Define the term isothermal and gradient elution.
- (f) What is spectroscopy ?
- (g) What are progressive and regressive staining ?
- (h) Give the step for southern blotting and its application.
- (i) Write the principle of Centrifugation.
- (j) Define absorption and Emission.

2 Answer of the following : (any two) **7×2=14**

- (a) Discuss the principle of GC-MS and its advantages.
- (b) Describe centrifugation techniques and their uses.
- (c) Describe the significance of UV-VIS spectrophotometer.

3 Answer the following : **7×2=14**

- (a) Describe the applications of Ion exchange chromatography.
- (b) Describe the applications of fluorescence microscopy.

OR

3 Answer the following : **7×2=14**

- (a) Describe the applications of Spectroscopy techniques.
- (b) Describe the principles of Phase Contrast Microscopy.

4 Answer the following : **7×2=14**

(a) Describe few fixative mixtures, their composition and application.

(b) Briefly describe the principles and applications of SEM.

5 Answer the following : (any two) **7×2=14**

(a) Describe the applications of isoelectric focusing.

(b) Describe the principle and applications of Gel Filtration Chromatography.

(c) Describe the principles and applications of TEM.

(d) Describe the principles and applications of Autoradiography.
