DJJ-003-018204 Seat No. _____

M. Sc. (Botany / Zoology / Microbiology) (Sem. II) (CBCS) Examination

May / June – 2015

210 : Analytical Techniques

Faculty Code : 003
Subject Code : 018204

Time : Hours] [Total Marks : **70**

Q.1. Answer the following very briefly (***any seven)*** 2 x 7 = **14**

(a) Role of fixation of tissue
(b) Simple fixatives
(c) Difference between 'Stain' and 'Dye'
(d) Definition of autoradiography
(e) Definition of chromatography
(f) Types of chromatography
(g) Principles of Spectroscopy
(h) Applications of NMR
(i) Principles of Electrophoresis
(j) Applications of 2D-PAGE

Q.2. Answer of the following (***any two)*** 7 x 2 = **14**

(a) Write a short note on HPLC
(b) Write a short note on the principles and applications of mass spectrometry.
(c) Write a short note on various centrifugation techniques and their uses

Q.3. Answer the following: 7 x 2 = **14**

(a) Write a short note on the gadgets used in fluorescence microscopy
(b) Briefly describe western blotting technique.

OR

Q.3. Answer the following : 7 x 2 = **14**

(a) Briefly describe the principles of Phase Contrast Microscopy
(b) Write the principles and applications of different types of Spectroscopy

Q.4. Answer the following: 7 x 2 = **14**

(a) Write a short note on Transmission Electron Microscopy (TEM)
(b) Write a note on few fixative mixtures.

Q.5. Answer the following (***any two***) : 7 x 2 = **14**

(a) Describe the principles and applications of Autoradiography
(b) Describe the principles and applications of SEM
(c) Write a short note on the principles and applications of NMR and ESR
(d) Write a note on isoelectric focussing and its applications