



JAN-01400-3707

Seat No. _____

M. P. M. (Sem. VII) Examination
November - 2019
Pharmaceutical Analysis - V (Theory)

Faculty Code : 01400

Subject Code : 3707

Time : 3 Hours]

[Total Marks : 80

- Instructions :**
- (1) Answer and tie up both the sections separately.
 - (2) Figure to the right indicates marks.
 - (3) Answer the three (03) questions from each section.
 - (4) Question one (01) and question Five (05) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

- 1 Write any seven out of eight : 14
- (a) Define magnetic moment and shielding.
 - (b) Comment "TMS is used as reference compound in NMR" ?
 - (c) Explain the principle of Mass spectroscopy.
 - (d) Enlist various Thermal method of analysis.
 - (e) Enlist application of Electrophoresis.
 - (f) Write classification of Electrophoresis Techniques.
 - (g) Enlist Applications of PMR spectroscopy.
 - (h) Define chemical shift and Analyzer.
- 2 Answer the following :
- (a) Briefly Explain factors affecting chemical shift. 7
 - (b) Discuss time of flight as mass analyzers detail. 6

- 3 Answer the following :
- (a) Explain chemical ionization as ionization technique in mass spectroscopy. 7
 - (b) Write theory, principle and applications of zone electrophoresis. 6

- 4 Answer the following :
- (a) Explain theory and Instrumentation of PMR spectroscopy. 7
 - (b) Explain X-ray diffraction in detail. 6

SECTION - II

- 5 Write any two out of three : 14
- (a) Discuss Bragg's law in detail.
 - (b) Explain Rearrangement in mass spectroscopy.
 - (c) Write a note on coupling constant.

- 6 Answer the following :
- (a) Explain Applications of mass spectroscopy. 7
 - (b) Write a note on principle and Applications of X-ray spectroscopy. 6

- 7 Answer the following :
- (a) Discuss at length about chemical shift. 7
 - (b) Write a short note on DSC(differential scanning calorimetry). 6

- 8 Answer the following :
- (a) Write a short note on Instrumentation of mass spectroscopy. 7
 - (b) Discuss spin spin coupling at length. 6