

FINAL YEAR B.PHARM. SEMESTER-VIII (2011 Course) :

WINTER - 2018

SUBJECT: PHARMACEUTICAL ANALYSIS-VI

Day : Wednesday

W-2018-4147

Time : 02.00 PM TO 05.00 PM

Date : 14/11/2018

Max. Marks: 80.

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Answer the following (Any Five) (10)

- a) What is the connection between nuclear angular momentum and magnetic moment? Write down the equation.
- b) What is the Larmor frequency?
- c) Write the flame absorption profiles in AAS.
- d) Write the steps involved in flame atomization.
- e) Write the principle of FES.
- f) Explain integration in NMR.

Q.2 a) Discuss the chemical shift in NMR and explain the factors influencing chemical shift. (08)

b) Discuss the shielding and deshielding in NMR with examples. (07)

Q.3 a) Explain the atomizers used in AAS. (08)

b) Classify the interferences in AAS and explain how to minimize these interferences. (07)

Q.4 Write short notes on any **THREE** of the following: (15)

- a) Quantitative application of FES
- b) Spin-spin coupling
- c) Hollow cathode lamp
- d) Burners in FES

SECTION-II

Q.5 Answer the following (Any Five) (10)

- a) List out analytical method validation parameters as per ICH guidelines.
- b) When and why analytical method validation is required?
- c) Write the principle of DTA.
- d) Define Immunoassay and list out various immunoassay techniques.
- e) Define base peak and molecular ion peak.
- f) What do you mean by tandem mass spectrometry?

Q.6 a) Discuss the various mass analyzers in detail. (08)

b) Write the fragmentation pattern for alcohols and esters. (07)

Q.7 Discuss the principle, instrumentation and applications of DSC. (15)

Q.8 Write short notes on any **THREE** of the following: (15)

- a) Radioimmunoassay
- b) Application of TGA
- c) ELISA
- d) MALDI