FINAL YEAR B.PHARM. SEMESTER-VIII (CBCS - 2015 Course) :
SUMMER - 2019

SUBJECT: PHARMACEUTICAL ANALYSIS – VI

Day: Thursday | Time: 02.00 PM TO 05.00 PM
Date: 25/04/2019 | **S-2019-4413** | Max. Marks: 60

N.B.:

1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
2) Figures to the right indicate **FULL** marks
3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Answer any **FIVE** questions: **(10)**

a) Explain n+1 rule in NMR.
b) Explain 'Integration' in NMR.
c) Write chemical shift values for vinylic, carboxylic, acetylinic and hydroxyl protons.
d) Explain the structure of flame.
e) Write the principle of AAS.
f) Write applications of Flame photometry.

Q.2 Discuss in detail the instrumentation of AAS. **(10)**

Q.3 Explain chemical shift and discuss various parameters influencing chemical shift in NMR. **(10)**

Q.4 Write short notes on any **TWO** of the following: **(10)**

a) Mechanism of atomization in flame photometry
b) Instrumentation of Flame photometer
c) C^{13}NMR

SECTION-II

Q.5 Answer any **FIVE** questions: **(10)**

a) Define analytical method validation.
b) Write the Bragg's law.
c) What is the principle of DTA?
d) Enlist any four sources of Ionization used in mass analyzers
e) Explain the term 'Base peak' in MS spectra.
f) Derive the molecular formula of a compound having MW 96.

Q.6 Classify mass analyzers. Describe various aspects of any one magnetic sector mass analyzer. **(10)**

Q.7 Describe theory, Instrumentation and applications of DSC technique. **(10)**

Q.8 Write short notes on any **TWO** of the following: **(10)**

a) Instrumentation of XRD
b) Fragmentation rules for alcohols and Aldehydes in MS
c) Any three analytical method validation parameters as per ICH

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