Sub Code:BOP475

Paper Id: 150705 Roll No:

B.PHARM
(SEM-VII) THEORY EXAMINATION 2019-20
PHARMACEUTICAL ANALYSIS-III
PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE

Time: 3 Hours ***Total Marks: 100***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. What is coupling constant?
b. Explain the effect of hydrogen bonding on IR absorption band.
c. Give the principle of mass spectrometry.
d. Explain bathochromic and hypsochromic shift.
e. Give the applications of gel electrophoresis.
f. Differentiate between QC and QA.
g. What is TQM?
h. Give the applications of ^{13}C NMR.
i. Discuss fast atom bombardment ionization technique.
j. Define phosphorescence.

SECTION B

2. Attempt any *three* of the following: 10x3=30

a. Explain SEM and TEM.
b. Discuss McLafferty arrangement. Add a note on MALDI.
c. Illustrate the principle and applications of ^{1}H NMR.
d. Explain the IR, NMR and Mass spectral interpretation of ethanol.
e. Discuss basic concept and types of validation.

SECTION C

3. Attempt any *one* part of the following: 10x1=10

a. Illustrate Lambert-Beer law. Add a note on applications of UV spectroscopy.
b. Discuss instrumentation and applications of IR spectroscopy.

4. Attempt any *one* part of the following: 10x1=10

a. Explain principle of mass spectrometry and discuss fragmentation rules.
b. Explain ISO 9000 series.

5. Attempt any *one* part of the following: 10x1=10

a. Explain quality audit and discuss its types.
b. Discuss batch manufacturing record and master formula record.

6. Attempt any *one* part of the following: 10x1=10

a. Give the principle, instrumentation and applications of atomic absorption spectroscopy.
b. Give the principle, instrumentation and applications of flame photometry.

7. Attempt any *one* part of the following: 10x1=10

a. Discuss instrumentation of ^{1}H NMR spectroscopy. Add a note on solvents used in ^{1}H NMR spectroscopy.
b. What is chemical shift? Discuss factors affecting chemical shift.