Printed Pages:02 **Sub Code: BOP475**

Paper Id: 150705 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM VII) THEORY EXAMINATION 2018-19
PHARMACEUTICAL ANALYSIS & QUALITY ASSURANCE

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

Note: Attempt all Sections.

SECTION A

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

a. What is Beer's law?
b. What is Monochromatic light?
c. What is NMR?
d. What are the four main Quantum numbers?
e. What are the different types of Mass spectrometer?
f. What are Mass spectra?
g. What is Fluorescence? (in electronic terms)
h. What is Quenching?
i. Define the Quality.
j. Write the difference between Quality control and Quality assurance.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. Write a detail note on UV detectors.
b. Write an introductory note on ^{13}C-NMR.
c. Discuss the principle and applications of Mass spectroscopy.
d. Write the principle and application Atomic absorption spectroscopy.
e. Discuss the basic concept of Validation.

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write a detail note on the instrumentation of IR spectroscopy.
(b) Write a descriptive note on the principle and application of UV spectroscopy.

4. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write a detail note on the instrumentation of NMR spectroscopy.
(b) What are the different internal standards used in NMR spectroscopy?

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write a note on ESI and MALDI ionization technique in Mass spectroscopy.
(b) Discuss the various types of peak in Mass spectroscopy.

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write a detail note on the Scanning electron microscopy (SEM).

(b) Discuss the principle and application of Fluorimetry.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write a detail note on BMR.

(b) Write a detail note on Quality audit.