Printed Pages:01 **Sub Code: MPL 101T**

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M PHARM
(SEM-I) THEORY EXAMINATION 2018-19
MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

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

a. What do you mean by fluorescence?

b. Give the pharmaceutical application of IR Spectroscopy.

c. Define auxochrome.

d. What do you mean by nuclear magnetic double resonance?

e. Write down the importance of atomic absorption spectroscopy.

f. How can you identify OH group with the help of IR spectrum?

g. Describe molecular peak.

h. Explain the working principle of ion exchange chromatography.

i. Write down the application of NMR spectroscopy.

j. Define reference electrode?

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a. Describe the theory of UV-Visible spectroscopy with derivation .Give the pharmaceutical application of UV-Visible spectroscopy.

b. Write the different types of ionization technique in mass spectroscopy.

c. Write a note on high performance liquid chromatography.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a Define Chemical shift. Write down the various factors influencing chemical shift.

b Write a note on instrumentation and applications of atomic absorption spectrophotometer.

c Explain different X ray methods and application of X-ray diffraction

d Write a short note on ultra high performance liquid chromatography.

e Give a brief idea on zone electrophoresis.

f. Write a note on Ion selective electrodes and application of potentiometry.

g Give the brief idea on RIA (Radio immune assay).