Printed Pages: 01 **Sub Code: MPH 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 is isobestic point?

b. What do you mean by wagging? Mention its significance.

c. What is matrix interference? Give examples.

d. What do you understand by chemical shift reagent?

e. What is APPI in MS technique?

f. Briefly explain micro bore columns of HPLC.

g. Write the stationary phases used in Gel chromatography.

h. What is Nernst equation?

i. What do you know about derivative DTA technique?

j. What is Van-Deemter equation?

SECTION B

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

a. Discuss the construction and working of FT-IR spectrometer with its advantages over dispersive IR. What is an interferogram?

b. Describe the 2D NMR experiment with a neat sketch. Interpret the NMR spectra of propanol & paracetamol with its signals.

c. Explain the principle, procedure and applications of Radio immunoassay technique.

SECTION C

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

a. Calculate the NMR signals for n-butane and isobutane.

b. Write about interferences in AAS and FES. Mention the methods to correct it.

c. Discuss the types of paper chromatography with its applications.

d. Describe the working of tandem mass analyzer with its merits.

e. Write short notes on capillary electrophoresis.

f. Describe the principle & instrumentation of thermo gravimetric analysis.

g. Elaborate the factors for quenching with its counteracting measures to avoid it.