HEC-014-003506 Seat No. _____

M. P. M. (Sem. V) (CBCS) Examination

November / December - 2017

Pharmaceutical Analysis - III

Faculty Code : 014
Subject Code : 003506

Time : **3** Hours] [Total Marks : **80**

Instructions :

(1) Figures to the **right** indicate marks.
(2) Answers any **three** questions from each section, question one and question **five** are **compulsory**.
(3) Draw neat and clean diagram when required.

SECTION - I

1 Answer the following questions : (any **seven**) **14**

(a) What is Chomophore ?
(b) What is Bethochromatic shift ?
(c) Define: Wavelength.
(d) What is Stray light ? Enlist the source of stray light.
(e) Comment : Unsaturated compound give absorbance in UV region.
(f) What is Fermi Resonance Bands ?
(g) Explain Hooke's Law.
(h) Comment : Highly concentrated solution does not obey Beer Lambert Law.
(i) Comment : IR sample should be free from CO_2 and moisture.
(j) Comment: The heterocyclic compound like pyridine, imidazole do not show fluorescence.

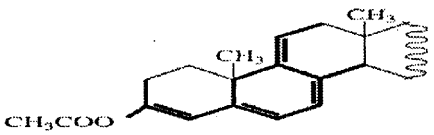
2 Answer the following questions :

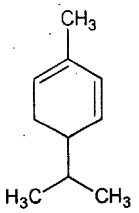
(A) Explain the Beer- Lambert Law. Enlist the limitation of Beer-Lambert Law. **7**
(B) Short note on Photomultiplier tube Detector for UV. **6**

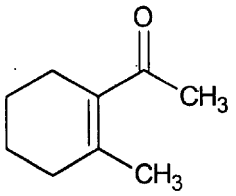
3 Answer the following question :

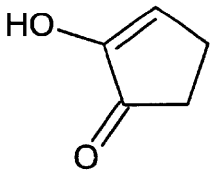
(A) Write a short note on absorption Filter. **7**

(B) Find out λ_{max} of given compound using woodward-fieser rule. (Any three compound) **6**









4 Answer the following questions

(A) Short note on: FTIR. **7**

(B) Explain the Principle of IR spectroscopy. **6**

SECTION - II

5 Answer any two out of three : **14**

(A) Explain Mechanism of fluorescence and phosphorescence with diagram.

(B) What is quenching of fluorescence? Explain environmental factors responsible for quenching.

(C) Describe the phenomenon of Tyndall effect.

6 Answer the following questions :

(A) Explain the Principle of Atomic Absorption Spectroscopy (AAS). **7**

(B) What is Interference in AAS ? Explain the type of it. **6**

7 Answer the following questions :

(A) Explain briefly Perrin-Jablonski diagram **7**

(B) Explain briefly sample preparation for IR **6**

Or Write a short note on Flame Photometry

8 Answer the following questions :

(A) Write a difference between Turbidimetry and Nephelometry. **7**

(B) Write a difference between Grating and Prism. **6**