

SUBJECT: PHARMACEUTICAL ANALYSIS-IV

Day: Wednesday  
Date: 14/11/2018

W-2018-4092

Time: 10.00 A.M. TO 01.00 P.M.  
Max. Marks: 60

**N.B:**

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining solve **ANY TWO** questions each from Section-I and Section-II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to the both section should be written in **SEPARATE** answer book.

**SECTION-I**

- Q.1** Attempt **ANY FIVE** of the following: (10)
- a) Why can iodine be used in the visualization of TLC spots?
  - b) List out atleast four reasons for analyzing food.
  - c) Compare between HPTLC and TLC.
  - d) What could happen if you use ink to draw in your baseline and letters on the TLC plate?
  - e) How adulterants are analyzed in spices?
  - f) Name a few adsorbents used as stationary phase in TLC.
- Q.2** a) Discuss in detail development techniques in TLC. (07)  
b) Describe the duties of food safety officer. (03)
- Q.3** a) Discuss in detail steps involved in HPTLC. (07)  
b) Give the various tests for checking the adulterants present in Tea powder. (03)
- Q.4** Write short notes on **ANY TWO** of the following: (10)
- a) Densitometric measurement in HPTLC
  - b) Adulterants of milk and milk products
  - c) Applications of HPTLC

**SECTION-II**

- Q.5** Attempt **ANY FIVE** of the following: (10)
- a) Give the properties of super critical fluids used in SFC.
  - b) Which type of HPLC technique is most widely used and why?
  - c) What do you understand by isocratic and gradient elution?
  - d) Give the difference in the instrumentation of HPLC and GC.
  - e) What is critical point in SFC?
  - f) Define the term resolution and capacity factor.
- Q.6** a) Discuss in detail the columns used in HPLC. (07)  
b) What do you understand by a bulk property detector and solute property detector in HPLC? (03)
- Q.7** a) Discuss the types of sample injector system used in HPLC. (07)  
b) Discuss the principle of separation used in HPLC. (03)
- Q.8** Write short notes on **ANY TWO** of the following: (10)
- a) Instrumentation of SFC
  - b) Quantitation methods in HPLC
  - c) Applications of SFC

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