

UKA TARSADIA UNIVERSITY

M.Pharm. (PA) (1st Semester)

Subject :040060102 - Pharmaceutical Analysis - I

Duration: 3 Hours

Max. Marks: 70.

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

Section-1

Q-1 (A) Do as directed.

[07]

- I) Define the term Validation.
- II) What are α -rays?
- III) What do you mean by SIE?
- IV) What is meant by 'drift' in ISE measurements?
- V) What is the application of Silicotungstic Acid method?
- VI) What is the application of Dicyanide colorimetric method?
- VII) Write down the basic method used for the analysis of Progesterone

Q-1 (B) Answer the following in brief. (Any 4)

[08]

- I) Write down two basic method used for the analysis of Adrenocortical steroids.
- II) How can you cure a noisy electrode signal in ISE?
- III) Add note on *Eder and Ruckstuhl scheme*.
- IV) Add note on The Carr-Price method for the analysis of Vitamin A
- V) What are advantages of non-aqueous titration for the estimation of sulphonamide?
- VI) What is ISAB and when is it used?

Q-2 Answer the following.

[10]

- A) Describe the concept of analytical method development while using HPLC

OR

- A) Write the standard calibration procedure for IR spectrophotometer.
B) Give the applications of PDAB reagent as an analytical tool.

OR

- B) Explain the procedure for the microbiological assay of cyanocobalamine.

Q-3 Answer the following in detail. (Any 2)

[10]

- A) Describe the principle and procedure in the determination of the following functional Groups (i) hydroxyl (ii) Aldehyde
- B) Write the vital role of particle size analysis in pharmaceutical dosage forms and explain briefly
- C) Write the official analytical method for opium alkaloids

Section-2

Q-4 (A) Do as directed.

[07]

- I) What are $K\beta$ -rays?
- II) Why ammonia is required in extraction of Alkaloids.
- III) What is the application of Graf's method?

- IV) What is the application of Maltol test?
- V) Why ferric test is done in qualitative analysis of Chloramphenicol.
- VI) What is the application of hydroxamic acid method?
- VII) Write down the use of Girard's reagent T.

Q-4 (B) Answer the following in brief. (Any 4)

[08]

- I) Why diazotization is not done for the estimation of sulfoxazole.
- II) What do you mean by FINK index?
- III) Describe the typical method for analysis of ergot.
- IV) Write the various methods for determination of ester.
- V) Write the principle involved in the fluorimetric estimation of thiamine.
- VI) Write short note on Bragg's law.

Q-5 Answer the following.

[10]

- A) Write the standard calibration procedure for Uv-Vis. spectrophotometer.

OR

- A) Write the various methods for determination of amine group
- B) Give the applications of MBTH reagent as an analytical tool.

OR

- B) Add a detail note for the determination of streptomycin.

Q-6 Answer the following in detail. (Any 2)

[10]

- A) Explain the official methods for the determination of thiamine.
- B) Suggest the various methods involved in the determination of cinchona alkaloids.
- C) How the elements of iodine and bromine are determined.