Code: 15R00401

R15

B.Pharm II Year II Semester (R15) Supplementary Examinations September 2022
PHARMACEUTICAL ANALYSIS – I

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)
*****

1   Answer the following: (10 X 02 = 20 Marks)
   (a)   Define accuracy and precision.
   (b)   Define mean, median, standard deviation and variance.
   (c)   What is iodometry and iodimetry?
   (d)   Name the indicators used in Mohr's method, Fajan's method, Volhard's method and Gay Lussac method.
   (e)   Write ilkovic equation.
   (f)   Give any two applications of amperometry.
   (g)   Why two monochromators are used in fluorometry.
   (h)   Give any two applications of nepheloturbidometry.
   (i)   Write the ingredients of Karl Fisher reagent.
   (j)   What do you mean by LR and AR grade?

PART – B
(Answer all the questions: 05 X 10 = 50 Marks)

2   (a)   What are errors? Classify them with examples.
    (b)   Write the procedure and principle involved in the standardization of perchloric acid.
OR
3   (a)   Write a note on acid base indicator theories.
    (b)   What is common ion effect? Explain with examples.

4   (a)   Write a note on masking and demasking agents.
    (b)   Explain Mohrs method of determination to estimate quantity of chloride in tap water.
OR
5   (a)   Write the procedure for determination of $CuSO_4$ by iodometry with reactions.
    (b)   Calcium gluconate is estimated by which method? Explain the principle and procedure.

6   (a)   Describe the apparatus for amperometry with the help of a diagram.
    (b)   Discuss the conductometric titration for acid and base.
OR
7   (a)   Define potentiometry. Discuss the general procedure involved for the estimation of acid-base by potentiometry.
    (b)   Briefly explain the apparatus used in polarography.

8   (a)   Explain the estimation of chlorides and sulphates by nepheloturbidimetry.
    (b)   What is the fate of sample in flame photometry? Explain.
OR
9   (a)   Explain the instrumentation and working of atomic absorption spectroscopy.
    (b)   Discuss the factors affecting the fluorescence.

10 (a)   Explain the construction and working of Half-shade polarimeter.
    (b)   Draw neat and labeled diagram of instrument used in Karl Fischer titration. Write the application of Karl Fischer titration.
OR
11 (a)   What is molar refraction? Explain the factors influencing refractive index.
    (b)   Explain optical activity and specific rotation. Write applications of polarimetry.
*****

Code: 15R00401

B.Pharm II Year II Semester (R15) Supplementary Examinations March 2022
PHARMACEUTICAL ANALYSIS – I

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)
*****

1   Answer the following: (10 X 02 = 20 Marks)
     Write short notes on:
   (a) Concept of errors.
   (b) Ostwald theory of indicators.
   (c) Volhards method.
   (d) Uses of adsorption indicators.
   (e) pH curve and EMF curve.
   (f) Identification and quantification of metals.
   (g) Principle of UV light emission.
   (h) Quantum efficiency.
   (i) Uses of reagents in quality control laboratory.
   (j) IR balance.

PART – B
(Answer all the questions: 05 X 10 = 50 Marks)

2   (a) Explain in detailed about acidimetry and alkalimetry.
     (b) Write the principle, theory, applications of non-aqueous titrations.
                              OR
3   (a) Discuss the role & applications of analytical chemistry and pharmaceutical analysis in
         pharmaceutical industry.
     (b) Write calibration of burette, pipette and volumetric flask in volumetric analysis.

4   (a) Explain principle, theory and examples of oxidation-reduction titrations.
     (b) Discuss about complexometric titrations.
                              OR
5   (a) Describe about masking & demasking agents and their applications.
     (b) Discuss the role, uses & applications of indicators. Note on self indicators & adsorption indicators.

6   (a) Give the principle, theory and types of conductometric titrations.
     (b) Write the concepts, apparatus and principles of polarography.
                              OR
7   (a) Explain in detailed about amperometric titrations.
     (b) Discuss about pH curve, EMF curve & derivative curve and their applications.

8   (a) Write principle, theory, instrumentation & applications of fluorimetry.
     (b) Explain role, uses & applications of emission spectra and absorption spectra.
                              OR
9   (a) Write principle, instrumentation & applications of nepheloturbidometry.
     (b) Briefly describe pharmaceutical applications for determination of chlorides & sulphates.

10   (a) Discuss about importance and applications of Karl-Fisher method.
     (b) Describe about refractometry.
                              OR
11   (a) Write uses & applications of various grades of reagents used in QC laboratory.
     (b) Write a short note on: (i) AR grade. (ii) LOD. (iii) LR grade.
                              *****

Code: 15R00401   **R15**

B.Pharm II Year II Semester (R15) Regular & Supplementary Examinations October/November 2020

PHARMACEUTICAL ANALYSIS – I

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
*****

1   Answer the following: (10 X 02 = 20 Marks)
- (a) Define analytical chemistry and its application.
- (b) Write concept of error in analytical chemistry.
- (c) Write ceriometry indicators.
- (d) Write application of adsorption indicators.
- (e) What is pH curve?
- (f) Define polarographic maxima with examples.
- (g) What is quenching?
- (h) Write emission-of UV light by elements.
- (i) Define LR Grade and AR grade solvents with examples.
- (j) What is QC and QA?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) Discuss about Non-aqueous titration and write application in pharmaceutical analysis.
   (b) Explain theory of acid-base titrations with examples.

OR

3   Discuss about theories of indicators and write about self indicators.

UNIT – II

4 (a) Write general principles, theory and examples of oxidation-reduction titration.
   (b) Discus the general principles, methods and solvent used in precipitation titration.

OR

5 (a) Discuss about complexometric titration. Write its pharmaceutical application.
   (b) Define iodometry and iodimetry indicators. And give a note on its pharmaceutical application.

UNIT – III

6 (a) Describe the Amperometric titrations and its applications in pharmaceutical analysis.
   (b) Explain principle of potentiometry. Give neat diagram and application of its.

OR

7 (a) Write principle, apparatus and different currents used in polarography analysis.
   (b) Write basic concepts, conductivity cell, different types of conductometric titration.

UNIT – IV

8 (a) Discuss about Atomic absorption spectroscopy instrumentation, applications in pharmaceutical analysis.
   (b) Describe the quantum efficiency, factors affecting the intensity of fluorescence.

OR

9 (a) Discuss principle, instrumentation of Nephelo and turbidimeter, pharmaceutical application.
   (b) Describe instrumentation and application of fluorimetry.

UNIT – V

10 (a) Write principle, detectors and application of refractometry.
   (b) Write about Karl-Fisher reagents and give account of its application.

OR

11 (a) Discuss principle, detectors and applications of HPLC.
    (b) Write a note on polarimetry.

*****

R13

B.Pharm II Year I Semester (R13) Supplementary Examinations November/December 2019
PHARMACEUTICAL ANALYSIS – I

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
*****

1   Answer the following: (10 X 02 = 20 Marks)
 (a)   Define precision and accuracy.
 (b)   What are significant figures?
 (c)   Why $KMnO_4$ solution cannot be filtered through filter paper?
 (d)   What is chelating agent?
 (e)   What is Nernst equation?
 (f)   Describe conductance.
 (g)   What is half wave potential?
 (h)   What do you mean by residual current?
 (i)   Which filter papers are used in paper chromatography?
 (j)   Describe various stationary phases used in column chromatography.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)
UNIT – I

2 (a)   What is an error? How can you minimize the systematic error?
  (b)   Explain common ion effect giving suitable examples.
                                   OR
3 (a)   Explain the Quinonoid theory of indicators.
  (b)   Discuss the various types of solvents used in non-aqueous titrations.
UNIT – II

4 (a)   Permanganate ion in acid solution is a strong oxidizing agent. Explain.
  (b)   Discuss the indicators used in redox titrations.
                                   OR
5 (a)   Discuss Volhard's method of precipitation titration.
  (b)   Explain the various indicators used in Complexometric titration.
UNIT – III

6 (a)   Describe the Hydrogen electrode used in Potentiometry.
  (b)   Discuss the basic concept of Conductometric titration.
                                   OR
7 (a)   Enumerate and describe the applications of polarography in pharmaceutical identification and quantification.
  (b)   What is the principle of Amperometric titrations? Give its application in pharmaceutical analysis.
UNIT – IV

8 (a)   Write principle, instrumentation and application of Refractometry.
  (b)   Describe Karl- Fisher method.
                                   OR
9 (a)   Write the principle and applications of Differential Scanning Calorimetry (DSC).
  (b)   Write a short note on Thermogravimetric Analysis (TGA).
UNIT – V

10 (a) What is meant by chromatography? Give its classification.
   (b) How will you prepare a column? Discuss the concept of theoretical plates.
                                   OR
11 (a) Describe Thin Layer Chromatography. How can you determine R_f value of a component?
   (b) What are the different techniques employed in Paper Chromatography?
*****