Code: 15R00602

R15

B.Pharm III Year II Semester (R15) Supplementary Examinations July/August 2022

PHARMACEUTICAL ANALYSIS – II

Time: 3 hours | Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) What is HETP?
(b) Give the principle of thin layer chromatography.
(c) Write the principle of GSC.
(d) Define adsorption isotherm.
(e) Give the principles of DTA.
(f) What is robustness of analytical method?
(g) What is gradient elution?
(h) What is reverse phase HPLC?
(i) Give the principle of optical activity.
(j) Give the applications of RIA.

PART – B

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

2 (a) Give a detail account of paper chromatography with reference to principle and theory.
(b) Write a note on Ion Pair chromatography.

OR

3 (a) Give the detail classifications of chromatography. Add note on concept of theoretical plate.
(b) Write a note on size exclusion chromatography.

4 (a) Write a detail note on principle and theory of GC. Add note on types of GC.
(b) Add note on GC MS.

OR

5 (a) Enlist different detectors in GC. Write a note on any two.
(b) Explain different carrier gas used in GC.

6 (a) Add note on calibration of UV and IR.
(b) Give principle and applications of DSC.

OR

7 (a) What is validation? Enlist different validation parameters. Explain any three in detail.
(b) Give difference between quality control and quality assurance.

8 (a) Discuss in detail injection system in HPLC.
(b) Add a note on different detectors used in HPLC.

OR

9 (a) Write in detail applications of HPLC.
(b) Discuss in detail various parameters in HPLC chromatogram.

10 (a) Give principle and applications of ELISA.
(b) Discuss in detail Bragg's law and Octant rule.

OR

11 (a) Give principle of optical activity. Add note on optical rotatory dispersion.
(b) Discuss in detail instrumentation of XRD.

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Code: 15R00602

R15

B.Pharm III Year II Semester (R15) Supplementary Examinations January/February 2023

PHARMACEUTICAL ANALYSIS – II

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a) Mention any two uses of column chromatography.
(b) Define Rf value.
(c) Give the conditions for sample selection in GC.
(d) What are SCOT columns? Write their use.
(e) What is the principle behind TGA?
(f) Define limit of detection.
(g) Differentiate isocratic with gradient elution technique.
(h) How normal phase HPLC is different from reverse phase HPLC?
(i) Give the principle of ELISA.
(j) Define Bragg's law.

PART – B

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

2 Write short notes on: (i) Types of paper chromatography. (ii) Column packing in SEC.

OR

3 What are the components of a column chromatography? Describe how columns are prepared.

4 (a) With the help of neat labeled diagram briefly explain the working principle of gas chromatography.
(b) Discuss the various parameters used in GC analysis.

OR

5 (a) Write short notes on Tailing and fronting in GC.
(b) Explain the principle and applications of GC-MS.

6 Discuss the parameters to be checked for method validation of analytical equipment.

OR

7 Write short notes on: (i) ISO 9000. (ii) Calibration of UV spectrophotometer.

8 (a) Explain the column efficiency, resolution, capacity factor, and peak asymmetry in HPLC.
(b) What are the ideal characters of detectors used in HPLC? Explain fluorescence detector.

OR

9 (a) What is Rt? Explain the factors affecting the same.
(b) Write the use of Guard columns and Column thermostats in HPLC.

10 (a) Describe the principle and procedure for RIA.
(b) Explain the production of X – rays and law governing X – ray diffraction.

OR

11 Define cotton effect and octant rule, how would you relate stereo chemical features of a compound with them?

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Code: 15R00602

R15

B.Pharm III Year II Semester (R15) Supplementary Examinations March 2022

PHARMACEUTICAL ANALYSIS – II

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define Rf value.
(b) Mention two applications of paperchromatography in pharmacy.
(c) What are ideal characteristics of a GC carrier gas?
(d) What do you understand by tailing factor?
(e) Define limit of detection.
(f) Define glass transition temperature.
(g) What is the use of guard column in HPLC system?
(h) Name some stationary phases used in reverse phase HPLC.
(i) Define Bragg's law.
(j) Describe the principle of ELISA.

PART – B

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

2 What are the components of a column chromatography? Describe how columns are prepared.

OR

3 Describe the principle and instrumentation of a size exclusion chromatography.

4 Write down the working principle and application of gas chromatography. Add a short note on various detectors used in GC analysis.

OR

5 Describe the principle and instrumentation of a GC.

6 Write short notes on:

(a) ISO 9000.
(b) Calibration of UV spectrophotometer.

OR

7 (a) Describe how drug polymer interaction can be studied by using DSC.
(b) Differentiate between QA and QC.

8 How are you able to control the resolution obtained from a chromatographic separation?

OR

9 With a suitable diagram, describe the instrumentation of a HPLC.

10 Define cotton effect and octant rule, how would you relate stereo chemical features of a compound with them?

OR

11 Write short notes on:

(a) RIA.
(b) Interpretation of data from X-ray diffraction plots.

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Code: 15R00602

R15

B.Pharm III Year II Semester (R15) Regular & Supplementary Examinations September 2021

PHARMACEUTICAL ANALYSIS – II

Time: 3 hours | Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define Rm value.
(b) Mention any two uses of column chromatography.
(c) Define asymmetry factor.
(d) Mention the criteria of a substance to be analyzed by GC.
(e) Compare DTA with DSC.
(f) Describe principle behind TGA.
(g) What is the difference in isocratic and gradient programming?
(h) Name the different types of detectors used in a HPLC.
(i) Mention the utility of RIA in diagnosis of tumor.
(j) Describe the principle of X-ray defractrometry.

PART – B

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

UNIT – I

2 Mention the difference between TLC and HPTLC? Write down the various methods for preparation of TLC plates. What are its applications of HPTLC?

OR

3 Write short notes on:

(a) Types of paper chromatography.
(b) Column packing in SEC.

UNIT – II

4 What is the principle of working of a GC? Discuss in detail about the factors governing the resolution of peaks in the gas chromatogram.

OR

5 Write short notes on the following:

(a) Tailing and fronting in GC.
(b) Detectors used in GC.

UNIT – III

6 Discuss the fundamental points of GLP.

OR

7 Discuss the parameters to be checked for method validation of analytical equipment.

UNIT – IV

8 Write short notes on:

(a) Retention (Capacity factor).
(b) Isocratic and gradient elution in RP-HPLC.

OR

9 Describe the various components of a HPLC system.

UNIT – V

10 (a) Describe Bragg's law and mention its applications.
(b) Classify different types of electromagnetic waves based on energy associated with them. What is the application of X-ray in pharmacy?

OR

11 Describe the principle, types and procedures of ELISA. Mention its application in diagnosis of disease.

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