

2012 scheme

QP CODE: 412006

Reg. No:

Final Year B.Pharm Degree Supplementary Examinations May 2023

Pharmaceutical Analysis – II

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
 - Indicate the question number correctly for the answer in the margin space*
- Answer all parts of a single question together • Leave sufficient space between answers*
- Draw Diagrams wherever necessary.*

Essays

(3x10=30)

1. a) Explain mechanism of ion exchange chromatography with example
b) Explain the methods for the preparation of TLC Plates. (5+5)
2. a) Why only few chemical are fluorescent in nature
b) Explain the factors affecting the chemical shift in brief. (5+5)
3. a) Outline the use of UV /Visible spectroscopy in the qualitative and quantitative analysis
b) A Tissue homogenate sample expected to contain 0.05 µg/ml of calcium chloride. Suggest a quantification method for the same by Flame photometry with scientific justification. (6+4)

Short notes

(14x5=70)

4. List the advantages of potentiometric and conductometric titrations over titrations using indicators.
5. Explain the construction and working of conductivity cell.
6. Explain properties measured and apparatus used in various thermo analytical methods.
7. Explain the precautions to be observed while setting the dropping mercury electrode for the first time.
8. List the advantages and applications of amperometric titrations.
9. Explain the experimental requirements for paper electrophoresis.
10. Explain the principle and a brief procedure in the Nephelo-turbidometric estimation of sulphate ions.
11. Explain on photomultiplier detectors (PMT)
12. Explain the importance of ICH guidelines, write four categories of ICH topics.
13. Explain the working of an IR detector works on principle of expansion of gas.
14. Explain the information obtained from the proton NMR spectrum.
15. A sample containing six analytes was run on a 10 cm paper using paper chromatographic system along with corresponding standards. The results obtained showed following observations.
 - a) The solvent front was semi-circular not straight.
 - b) The solvent front ran only up to 6 cm after 3 hours.
 - c) Standard 3 showed a tear drop (oblong) shape after development.
 - d) Only 4 spots were seen in the sample.Suggest the remedies.
16. List and explain the working of any one each bulk property detector for HPLC and GC.
17. Calculate HETP and number of theoretical plates of the column using following data and recommend the column for further usage based on the results. ($tR = 21.8$ mm, $W_h = 0.3$ mm and length of the column = 150 mm)
