

# Adichunchanagiri University

## Model QP :PART-II: PHARMACEUTICAL ANALYSIS SPECIALISATION 60M

### SEC- A

**Note: Answer any 20 questions. Each question carries ONE mark**

**20x1=20**

1. Define primary standard, give example?
2. What are neutralization indicators?
3. Which indicator is used in Mohr's precipitation method.
4. Define titration.
5. What are neutralization curves?
6. Give any two complexometric indicators.
7. Write the chemicals used in the preparation of Karl Fischer reagent.
8. Name any two oxidizing agents used as standard solution in redox titration.
9. What are pM indicators.
10. Give one example for displacement titration.
11. Define aquametry.
12. What are residual titrations?
13. Define gravimetric analysis.
14. Give any two examples for diazotization titrations.
15. Define ash value.
16. Residual Solvent.
17. Internal Standard.
18. Define chromophore
19. Define calibration
20. Bacterial Enumeration test.
21. Unit of Nepheloturbidimetry.
22. Difference between pH meter and Potentiometer.
23. Example of ion selective electrode.
24. Define Limit test.
25. Types of water in Pharmaceutical Analysis.
26. Difference between  $K_a$  and  $pK_a$  value.
27. Ionic product of water
28. Common ion effect
29. Types solvents of Non-Aqueous titration.
30. Solubility product.

### SEC- B

**Note: Answer any 10 questions. Each question carries TWO marks**

**10x2=20**

1. Application of Thermo gravimetric analysis
2. Differentiate Nephelometry and Turbidimetry.

3. Describe the difference between UV-Visible Spectroscopy and Fluorimetry.
4. Define metastable ion.
5. Define molecular ion peak.
6. Write the difference between atomic emission spectroscopy and atomic absorption spectroscopy.
7. Write the types of ionization techniques in Mass spectroscopy.
8. Give IR values for following functional groups: a) -COOH, b) -NO<sub>2</sub>, c) -CH, d) -Cl.
9. Classify non-aqueous solvents.
10. Give types of Complexometric titration.
11. Give composition of Karl Fischer reagent.
12. Classify indicators.
13. Define Conductometric titration?
14. What is pM indicator?
15. Name any two indicators used in argentometric titration.

### SEC- C

**Note: Answer any 5 questions. Each question carries FOUR marks**

**5x4=20**

1. Explain the factors affecting on chemical shift.
2. Write briefly about spin-spin coupling and spin-spin splitting in proton NMR.
3. What is Fourier transformation theory? Explain FTIR
4. Write about the solvent effect in UV-Visible Spectroscopy.
5. Characterize the following molecules by IR and H<sup>1</sup> NMR a) Ethanol b) 2-Bromo phenol
6. Write the principle and types of conductometric titration.
7. Write the principle and types of Electrophoresis.
8. Write the theory of Chromatography
9. Define validation and different parameters in method validation.
10. Principles and procedures involved in the use of the following reagents in pharmaceutical analysis: a) MBTH (3-methyl-2-benzothiazolone hydrazone) reagent, b) FC (Folin Ciocalteu) reagent.