III Year Pharm-D Degree Examination – Sep 2012

# Time: Three Hours Max. Marks: 70 Marks

#### pharmaceutical Analysis

### Q.P. CODE: 2862

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

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| **LONG ESSAYS**  | **2 x 10 = 20 Marks** |
| 1. | Derive Beer’s and lamberts law. Write its applications, advantages and limitations of Beer’s law  |
| 2. | Write principles of gas liquid chromatography and draw neat labeled diagram of GC instrumentation and explain the different parts of it  |
| 3 | 1. Explain the theory and nebulisaton of flame photometry
2. What are the interferences in flame photometry
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| **SHORT ESSAYS**  | **6 x 5 = 30 Marks** |
| 4. | What are the factors affecting fluorescence in fluorimetric analysis  |
| 5. | Write a note on photometric titration  |
| 6. | Explain different types of ion exchanges  |
| 7. | How will you select adsorbents and solvents for TLC  |
| 8. | What is validation? What are the requirements of analytical instrument validation  |
| 9. | Explain deformation vibration in IR spectroscopy  |
| 10. | What is the effect of solvent and conjugation in UV spectroscopy  |
| 11. | Karl Fischer titration  |

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| **SHORT ANSWERS** | **10 x 2 = 20 Marks** |
| 12. | What are indicator electrodes  |
| 13. | Define molar conductivity and specific conductance  |
| 14. | Define quality control and quality assurance  |
| 15. | What are sililyting agents  |
| 16. | Values in paper chromatography  |
| 17. | Importance of fingerprint region in IR spectroscopy  |
| 18. | Classify of paper chromatography  |
| 19. | Applications of atomic emission spectroscopy  |
| 20. | Define and classify monochromators  |
| 21. | What are the ideal characters of mobile phase used in gas chromatography  |

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II Year B.Pharm Degree Examination – Sep 2012

# Time: Three Hours Max. Marks: 80 Marks

#### PHARMACEUTICAL ANALYSIS (OS & RS)

### Q.P. CODE: 1862

Your answers should be specific to the questions asked

 Draw neat labeled diagrams wherever necessary

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| **LONG ESSAYS (Answer any Two)** | **2 x 10 = 20 Marks** |
| 1. | Explain the principle involved in Mohr’s and Fajan’s precipitation titrations and add a detailed note on adsorption indicators  |
| 2. | Explain the Ostwald theory of neutralization indicators. Also explain the neutralization process of strong acid versus strong base  |
| 3. | Discuss the calibration of analytical balance and graduated glass wares. Explain the methods of avoiding or minimizing errors  |

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| **SHORT ESSAYS (Answer any Eight)** | **8 x 5 = 40 Marks** |
| 4. | Describe the primary and secondary standard solutions  |
| 5. | Give the principle involved in permanganometry and dichromatometry titrations  |
| 6. | Explain the gravimetric estimation of zinc sulphate and zinc oxide  |
| 7. | Discuss about interfering radicals with suitable examples and their reactions  |
| 8. | Briefly explain the methods involved in gravimetric incineration and digestion  |
| 9. | With suitable examples explain the types of solvents used in non aqueous titrations  |
| 10. | Explain the principle and procedure involved in the assay of calcium gluconate  |
| 11. | Explain the theory involved in the estimation of CO and N2O  |
| 12. | With suitable examples explain the concept of error, precision and accuracy  |
| 13. | Write the ionic equations for interaction of potassium permanganate with potassium iodide in presence of sulphuric acid  |

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| **SHORT ANSWERS** | **10 x 2 = 20 Marks** |
| 14. | X ml of 1.5 N HCL is required for the complete neutralization of 10ml of 0.75 N sodium hydroxide. Calculate x  |
| 15. | Write suitable reaction of cerimetry  |
| 16. | How the reactivity is related to concentration. Mention any two methods of expressing concentration.  |
| 17. | Computation of anticipated errors  |
| 18. | Name two organic precipitants and give their applications  |
| 19. | Write a short note on occlusion  |
| 20. | What are absolute standard solutions  |
| 21. | Give the Nerns’t equation  |
| 22. | Write a note on standard deviation  |
| 23. | Any four commonly used complexometric indicators  |

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IV Year B.Pharm Degree Examination – Sep 2012

# Time: Three Hours Max. Marks: 80 Marks

#### INSTRUMENTAL METHODS OF ANALYSIS

#### (OS & RS)

### Q.P. CODE: 1876

Your answers should be specific to the questions asked

 Draw neat labeled diagrams wherever necessary

|  |  |
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| **LONG ESSAYS (Answer any Two)** | **2 x 10 = 20 Marks** |
| 1. | Write a note on principle and the instrumentation of spectro fluriometer  |
| 2. | Explain potentiometric titrations with suitable examples  |
| 3. | Write the instrumentation of HPLC  |

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| **SHORT ESSAYS (Answer any Eight)** | **8 x 5 = 40 Marks** |
| 4. | Write the applications of IR spectroscopy  |
| 5. | Explain the types of transitions of organic molecules in UV spectroscopy  |
| 6. | Write the applications of flame photometry  |
| 7. | Write the applications of potentiometric titrations  |
| 8. | Explain the principles of any two detectors of IR spectroscopy  |
| 9. | Write the applications of X-ray crystallography  |
| 10. | Different techniques and applications of paper chromatography  |
| 11. | Principle involved in Amperometric titrations  |
| 12. | Note on dropping mercury electrode  |
| 13. | Explain prism and grating monochromators  |

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| **SHORT ANSWERS** | **10 x 2 = 20 Marks** |
| 14. | Write a note on polarographic manima  |
| 15. | Classify the conductometric titrations  |
| 16. | Note on NMR solvents  |
| 17. | Classify ionexchange resins  |
| 18. | Explain Chromophore and Auxochrome  |
| 19. | Write the limitations of TLC  |
| 20. | Explain the term electrophoresis  |
| 21. | Write a note on gel filtration  |
| 22. | Explain ESR  |
| 23. | Write the applications of nephlo-turbidimetry  |

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II Year B.Pharm Degree Examination – Sep 2012

# Time: Three Hours Max. Marks: 80 Marks

#### PHARMACEUTICAL ANALYSIS (OS & RS)

### Q.P. CODE: 1862

Your answers should be specific to the questions asked

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| **LONG ESSAYS (Answer any Two)** | **2 x 10 = 20 Marks** |
| 1. | Explain the principle involved in Mohr’s and Fajan’s precipitation titrations and add a detailed note on adsorption indicators  |
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| 3. | Discuss the calibration of analytical balance and graduated glass wares. Explain the methods of avoiding or minimizing errors  |

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IV Year B.Pharm Degree Examination – Sep 2012

# Time: Three Hours Max. Marks: 80 Marks

#### INSTRUMENTAL METHODS OF ANALYSIS

#### (OS & RS)

### Q.P. CODE: 1876

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| 3. | Write the instrumentation of HPLC  |

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| **SHORT ESSAYS (Answer any Eight)** | **8 x 5 = 40 Marks** |
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| 7. | Write the applications of potentiometric titrations  |
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| 9. | Write the applications of X-ray crystallography  |
| 10. | Different techniques and applications of paper chromatography  |
| 11. | Principle involved in Amperometric titrations  |
| 12. | Note on dropping mercury electrode  |
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| 17. | Classify ionexchange resins  |
| 18. | Explain Chromophore and Auxochrome  |
| 19. | Write the limitations of TLC  |
| 20. | Explain the term electrophoresis  |
| 21. | Write a note on gel filtration  |
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