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| Name: |  UPES UNIVERSITY WITH A PURPOSE |
| Enrolment No: | |

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Online End Semester Theory Examination, January 2021

Course: Pharmaceutical Analysis I

Program: B. Pharm.

Course Code: BP102T

Instructions:

Semester: I

Time 03 hrs.

Max. Marks: 75

SECTION A

| S. No. | CO | Multiple Choice Questions or Objective type Questions | Marks |
|--------|-----|---|-------|
| Q1 | CO3 | Write an example of pM indicator | 2 |
| Q2 | CO3 | Perchloric acid is standardized by _____ (Benzoic acid, Tartaric acid, Potassium Hydrogen Pthalate, Oxalic acid) | 1 |
| Q3 | CO4 | Mohr's titration is a type of _____ (Direct/Residual) method in precipitation titrations | 1 |
| Q4 | CO4 | Define Ostwald Ripening | 1 |
| Q5 | CO4 | Metal-indicator complex should be stronger than metal-EDTA complex. True/False | 1 |
| Q6 | CO4 | Give primary standard for EDTA (Zinc, NaCl, oxalic acid, Potassium Hydrogen Pthalate) | 1 |
| Q7 | CO5 | Define Reference electrodes. Give any example of reference electrodes | 2 |
| Q8 | CO1 | Write the reaction involved in the limit test of iron | 2 |
| Q9 | CO4 | Mixed crystal, Occlusion and surface adsorption are terms related to _____ (Co-precipitates/ Post Precipitates) | 1 |
| Q10 | CO4 | Water determination is commonly done using _____ titration | 2 |
| Q11 | CO2 | Which color does phenolphthalein produce at acidic pH | 1 |
| Q12 | CO1 | What do you mean by term hygroscopic | 1 |
| Q13 | CO1 | Which of the following is not a primary standard a. Sodium Hydroxide b. Zinc c. NaOH d. Potassium hydrogen pthalate | 1 |
| Q14 | CO3 | Indicator used in Mohr's titration | 1 |
| Q15 | CO5 | Define conductance | 1 |
| Q16 | CO1 | How will you prepare 10% w/v solution of paracetamol | 1 |

SECTION B

Long Answers (Answer 2 out of 3) 2x10

20

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|--|-----|--|-----------|
| Q1 | CO2 | a. Discuss titration of strong acid and strong base with titration curve. | 10 |
| Q2 | CO4 | Give principle of complexometric titrations. Write the procedure for the preparation and standardisation of 1M disodium EDTA | 10 |
| Q3 | CO1 | a. Define accuracy and precision b. Define term assay c. Write about different methods to reduce errors. | 10 |
| SECTION C | | | |
| Short Answers (Answer 7 out of 9) 7X5 | | | 35 |
| Q1 | CO1 | Write about scope of pharmaceutical analysis | 5 |
| Q2 | CO2 | Write about non aqueous titration of weak acid by giving a suitable example | 5 |
| Q3 | CO5 | Classify two types of electrodes use in potentiometric titration (with one example each). | 5 |
| Q4 | CO4 | Explain Diazotization titration | 5 |
| Q5 | CO5 | Write the principle of conductometric titration with the help of titration curves | 5 |
| Q6 | CO5 | Explain end point determination in potassium dichromate titrations. | 5 |
| Q7 | CO4 | Write one line each about direct, indirect and adsorption method of precipitation titrations | 5 |
| Q8 | CO1 | How will you prepare 0.01M NaOH solution (1L). Also, comment on the accuracy of concentration of prepared NaOH solution. | 5 |
| Q9 | CO1 | Explain normality, molarity and parts per million | 5 |
| | | Total | 75 |