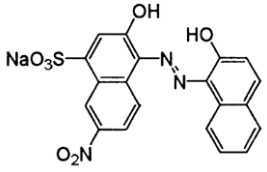
Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Theory Examination, December 2021

Course: Pharmaceutical Analysis I **Semester: I**
Program: B. Pharm. **Time 03 hrs.**
Course Code: BP102T **Max. Marks: 75**
Instructions:

SECTION A

S. No.	CO	Multiple Choice Questions or Objective type (20x1)	Marks
1	CO3	Glacial acetic acid is which type of solvent a. Protogenic b. Protophillic c. Both d. Aprotic	1
2	CO3	NaOH is standardized by _____ a. Benzoic acid b. Tartaric acid c. Potassium Hydrogen Pthalate d. Oxalic acid	1
3	CO4	Write the role of nitrobenzene in Volhard's titration.	1
4	CO4	In which type of precipitation titration involve adsorption of indicator as a secondary layer around the precipitate.	1
5	CO4	Metal indicator complex should be stronger than metal EDTA complex (True/False)	1
6	CO4	Give primary standard for Silver Nitrate a. Zinc b. NaCl c. Oxalic acid d. Potassium Hydrogen Pthalate	1
7	CO5	Give any example of reference electrode.	1
8	CO1	Name the apparatus used in the limit test of chlorides.	1
9	CO4	Mixed crystal, Occlusion and surface adsorption are terms related to _____ (Co-precipitates/ Post Precipitates).	1
10	CO4	Give the reaction conditions in Diazotization titration.	1
11	CO2	Which color does phenolphthalein produce at alkaline pH?	1
12	CO1	What do you mean by indeterminate errors?	1

13	CO1	Which of the following is a primary standard a. $KMnO_4$ b. NaOH c. HCl d. Potassium hydrogen pthalate	1
14	CO5	Write Ilkovics equation	1
15	CO3	Give an example of pM indicator	1
16	CO1	What is the laboratory concentration of sulfuric acid (in molarity).	1
17	CO3	Glacial acetic acid is a weak acid. True/False	1
18	CO2	Name any indicator used in Non aqueous titrations	1
19	CO1	What do you mean by qualitative analysis?	1
20	CO1	Define the term assay.	1
SECTION B			
Q2 **Long Answers (Answer two out of 3) 2x10**			20
1	CO1	How will you prepare 100ml of following solutions a. 0.1M NaCl solution b. 0.1M HCl solution c. 10ppm of calcium carbonate solution d. 0.1% w/v of $KMnO_4$ solution	10
2	CO4	Give principle of complexometric titrations. Write about indicators used in complexometric titrations	10
3	CO1	Define errors. Write about different types and sources of errors. Also, write ways to reduce errors.	10
SECTION C			
Q3 **Short Answers (Answer 7 out of 9) 7X5**			35
1	CO1	What is the industrial scope of pharmaceutical analysis?	5
2	CO2	Name the following compounds a. 	5

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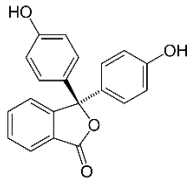
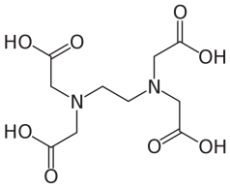
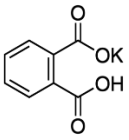
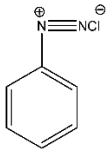
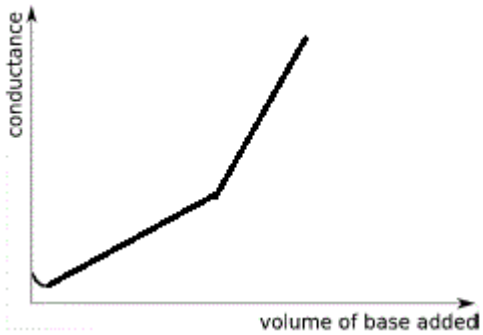
<tr><td></td><td></td><td>b. 
c. 
d. 
e.  </td><td></td></tr>
<tr><td>3</td><td>CO4</td><td>Write about Ostwald’s theory of indicators.</td><td>5</td></tr>
<tr><td>4</td><td>CO2</td><td>Explain leveling effect in non-aqueous titrations with a suitable example.</td><td>5</td></tr>
<tr><td>5</td><td>CO5</td><td>For the following conductometric titration. Give the name of titrand and titrant. Discuss various segments of the curve.
 
</td><td>5</td></tr>
<tr><td>6</td><td>CO5</td><td>Fill the blanks
<table><tr><th>Indicator</th><th>Type of titration</th></tr><tr><td>Solochrome Black T</td><td></td></tr><tr><td>Crystal Violet</td><td></td></tr><tr><td>Eosin/Fluorescein</td><td></td></tr><tr><td>Starch – KI paste</td><td></td></tr><tr><td>Sudden change in current</td><td></td></tr></table></td><td>5</td></tr>
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7	CO4	Write about Mohr's method of precipitation titrations	5
8	CO5	What type of electrode is used in pH meter. Discuss.	5
9	CO1	Analyze what is logically/scientifically wrong in the following statements. Justify your answer. a. 40 g NaOH in 100ml to prepare 10M NaOH solution. b. 0.1 M Silver nitrate is used for the determination of metal ions in the given sample. c. Dissolving 5g in 200ml to prepare 10%w/v solution of Diclofenac sodium (medicine) d. Using 0.01M NaOH to find the concentration of weakly acidic compound with conductometric end point. e. Diluting 18M sulfuric acid to 1M sulfuric acid (100ml) by adding 94.5 ml water onto 5.5ml sulfuric acid.	5
		Total	75