

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal College of Pharmaceutical Sciences

B Pharm Semester I- Make up End sem Examination January 2023

Pharmaceutical Analysis I ( PQA BP102T)

Date: 18/01/2023

Duration: 180 mins

Max. Marks: 75 marks

I	Multiple Choice Questions (20 x 1 = 20 marks)
1	Estimation of Primary aromatic amines can be done by _____ a) Mohr's method b) Volhard's method c) Diazotisation titration d) Gay Lussac's method
2	Free Mordant Black II in solution is _____ in colour e) Blue f) Red g) Brown h) Purple
3	Potassium nitrate is example for _____ a) Coagulant b) Sequestering agent c) Indicator used in complexometric titration d) Weak-base adsorption indicator.
4	If a complexing agent can form more than one bond with polyvalent ion, then it is considered as _____ a) Unidentate b) Tridentate c) Bidentate d) Polydentate
5	Crucible furnace holds _____ crucible at a time and uses less electricity a) Ten b) Five c) Twenty d) One
6	Masking and demasking techniques are used for improving _____ in complexometric titration a) Endpoint b) Speed c) Selectivity d) Reproducibility
7	Non indicator method is also called as _____ a) Mohr's method b) Volhard's method c) Fajan's method d) Gay Lussac's method
8	Modified Mohr's precipitation titration should be carried out in pH range _____ a) 6.6 to 9.0 b) 9.6 to 12.0

	<p>c) 6.6 to 8.0 d) 2.6 to 5.0</p>
9	<p>If the complex formed is soluble in water, then it is called as _____</p> <p>a) Digestion b) Occlusion c) Peptization d) Sequestering agent</p>
10	<p>Potassium permanganate is a commonly used self-indicator, but one of the following is also a self-indicator</p> <p>a) Iodine b) Ferriin c) Starch d) Starch iodide paper</p>
11	<p>10 ml 0.5N sodium hydroxide consumed 15 ml of hydrochloride. What is the normality of hydrochloric acid</p> <p>a) 0.35 b) 0.33 c) 0.36 d) 0.31</p>
12	<p>In one of the below mentioned instrumental methods of analysis, absorption of electromagnetic radiation is measured</p> <p>a) UV spectroscopy b) Fluorimetry c) Flame photometry d) Nephelometry</p>
13	<p>.....is the molecular weight of anhydrous oxalic acid</p> <p>a) 126 b) 100 c) 90 d) 85</p>
14	<p>Concentration of strong acids that are available commercially are usually expressed in</p> <p>a) % v/v b) % w/w c) % w/v d) Formality</p>
15	<p>Assay of Thyroid tablets are done by</p> <p>a) Cerimetry b) Iodimetry c) Iodometry d) Permangometry</p>
16	<p>The pH at neutralization for the titration of 0.1 M acetic acid (pKa: 4.76) with 0.1 M sodium hydroxide solution is</p> <p>a) 7.0 b) 8.7 c) 4.7 d) 4.5</p>
17	<p>Protophilic solvents are</p> <p>a) basic in nature and normally react with acids to form solvated protons b) acidic in nature and enhances the ability to donate a proton to enhance the strength of weak bases</p>

	<ul style="list-style-type: none"> <li>c) acidic &amp; basic nature</li> <li>d) slightly basic in nature</li> </ul>
18	<p>Isoniazid is assayed by -----</p> <ul style="list-style-type: none"> <li>a) Cerimetry</li> <li>b) Bromatometry</li> <li>c) Potassium iodate titrations</li> <li>d) Dichrometry</li> </ul>
19	<p>Calculate the amount to be weighed to prepare 0.0167 M <math>\text{KBrO}_3</math> 1 litre solution. (Mol. Wt. of <math>\text{KBrO}_3</math> is 167 g/mol)</p> <ul style="list-style-type: none"> <li>a) 2.28 gm</li> <li>b) 3.78 gm</li> <li>c) 2.78 gm</li> <li>d) 2.58 gm</li> </ul>
20	<p>Aqueous <math>\text{I}_2</math> solution can be determined by</p> <ul style="list-style-type: none"> <li>a) Bromatometry</li> <li>b) Cerimetry</li> <li>c) Potassium iodate titrations</li> <li>d) Dichrometry</li> </ul>

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**II LONG ANSWERS**

**ANSWER ALL THE QUESTIONS ( 2 X 10 Marks)**

1	a) Explain the principle in the assay of Bleaching powder by iodometry. (5 marks) b) Explain the principle in the assay of Ferrous sulphate. Add a note on standardization of titrant used. (3+2 marks)
2	Define titration. Explain the various theories for acid-base titrations
III	<b>Short Answers</b> <b>Answer all the questions ( 7 x 5 Marks)</b>
1	Discuss Volhard's method of precipitation titration
2	Discuss any three steps of gravimetric analysis
3	Explain direct complexometric titration
4	List the requirements of primary standards
5	Classify with examples indicators used in various titrations
6	Write the types of non-aqueous solvents with suitable example
7	Write the applications for Potassium iodate titration