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| SCHOOL OF PHARMACY | | E:\Blank format\AJU LOGO.jpg | | | | | | | | **1ST INTERNAL EXAMINATION** | | | |
| Program Name | | **BACHELOR OF PHARMACY** | | Program Code | | | | | | **B.PHARM** | | | |
| Course Name | | **Pharmaceutical Analysis - I** | | Semester | | | | | | **1st Semester** | | | |
| Course Code | | **-------** | | Year | | | | | | **2023/Odd** | | | |
| Time: 1 Hours | | **Answer all Questions of Section A**  **Answer Any one of Section B**  **Answer Any two of Section C** | | Maximum Marks | | | | | | **30** | | | |
| Knowledge Level (KL) | | **K1 :** Remembering | **K3 :** Applying | | | | **K5 :** Evaluating | | | | | | |
| **K2 :** Understanding | **K4 :** Analysing | | | | **K6 :** Creating | | | | | | |
| **Section A**  **All the Questions are COMPULSORY**  **Short Answer type Question [1 x 10 = 10 Marks]** | | | | | | | | | | | | | |
| **Q. No.** | **Questions** | | | | **Marks** | | | **COs** | | | **KL** | **PO** | |
| **1(i)** | **The number of moles of a solute per liter of a solution is**   |  |  | | --- | --- | | 1. Molality | 1. Normality | | 1. Molarity | 1. None | | | | | **1** | | | **CO2** | | | **K2** | **PO1** | |
| **1(ii)** | **Which method is used for the Limit test for arsenic**   |  |  | | --- | --- | | 1. Gutzeit method | 1. Oswald method | | 1. Arrhenius method | 1. Karl-Fischer method | | | | | **1** | | | **CO2** | | | **K2** | **PO1** | |
| **1(iii)** | **The equivalent weight of NaoH is**   |  |  | | --- | --- | | 1. 36 | 1. 20 | | 1. 40 | 1. 13 | | | | | **1** | | | **CO3** | | | **K4, K5** | **PO2** | |
| **1(iv)** | **Solution of known concentration**   |  |  | | --- | --- | | 1. Standard solution | 1. Concentration | | 1. Solution | 1. Concentrated solution | | | | | **1** | | | **CO3** | | | **K4** | **PO2** | |
| **1(v)** | **Acid is a substance which dissociates in water to produce hydrogen ions**   |  |  | | --- | --- | | 1. Arrhenius theory | 1. Lewis theory | | 1. Bronsted theory | 1. Lowry theory | | | | | **1** | | | **CO2** | | | **K4** | **PO1** | |
| **1(vi)** | **\_\_\_\_\_\_\_\_\_\_used as titrant in non-aqueous titration.**   |  |  | | --- | --- | | 1. EDTA | 1. Perchloric acid | | 1. Sodium nitrite | 1. Silver nitrite | | | | | **1** | | | **CO3** | | | **K4, K5** | **P01** | |
| **1(vii)** | **pH is defined as**   |  |  | | --- | --- | | 1. -log [OH-1] | 1. -log [H+] | | 1. pH +pOH | 1. log pOH | | | | | **1** | | | **CO3** | | | **K4,K5** | **PO1** | |
| **1(viii)** | **A Bronsted-Lowry acid is defined as a substance that**   |  |  | | --- | --- | | 1. donates a proton | 1. releases OH (aq) | | 1. accepts a proton | 1. none of the above | | | | | **1** | | | **CO2** | | | **K2** | **PO5** | |
| **1(ix)** | **Non aqueous titration is carried out for**   |  |  | | --- | --- | | 1. Water insoluble drug | 1. Weakly acidic drug | | 1. Weakly basic drug | 1. All the above | | | | | **1** | | | **CO2** | | | **K4,K5** | **PO1** | |
| **1(x)** | **Protogenic solvent is**   |  |  | | --- | --- | | 1. Sulphuric acid | 1. Hydrochloric acid | | 1. Nitric acid | 1. All the above | | | | | **1** | | | **CO1** | | | **K2** | **PO1** | |
| **Section B**  **Answer any One out of Two [1 x 10 = 10 Marks]** | | | | | | | | | | | | | |
| **2** | **Define error. Classify and explain types of error.** | | | | | **10** | | | **CO3** | | **K3,K4** | | **PO1** |
| **3** | **Write down the importance of non-aqueous titration. Give a brief note on solvents used in non-aqueous titration.** | | | | | **10** | | | **CO3** | | **K3,K4** | | **PO1** |
| **Section C**  **Answer any Two out of Three [2 x 5 = 10 Marks]** | | | | | | | | | | | | | |
| **4** | **Explain in detail about neutralization curves.** | | | | | **05** | | | **CO3** | | **K4,K5** | | **PO1** |
| **5** | **Give a note on theory of indicators.** | | | | | **05** | | | **CO2** | | **K2,**  **K3,K4** | | **PO1** |
| **6** | **Write about the theories involved in acid-base titration.** | | | | | **05** | | | **CO2** | | **K2, K3, K4** | | **PO1** |

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

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| --- | --- | --- |
| Course Outcomes | CO01 | Develop the ideas with the fundamental of analytical chemistry |
| CO02 | Know the sources of mistakes and errors in analysis and their minimizing techniques |
| CO03 | Develop the fundamentals of volumetric analytical skills. |
| CO04 | Understand the fundamentals and mechanism of precipitation, and complexometric titration |
| CO05 | Understand the fundamentals and types of redox titration. |
| CO06 | Acquire the basic knowledge in the principles of electrochemical analytical techniques |

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Note : This above figure is only Example and must prepare this type of figure in these two column