M. Sc. (Chemistry) Examination, 2018

(3rd Semester)

Organic Chemistry Practical

Paper – L-VI-O

Duration: One day

Time: Six hours ***Full marks: 50***

1. Prepare the organic compounds according to the following methods. 20
2. Sessional. 20
3. Viva voce and laboratory note book. 10

Direction for preparation of organic compounds

Step – I

Grind the supplied Organic compound marked '**A**' thoroughly with 3 gm of solid KOH in a dry mortar with a pestle to make an easy flowing powder. Take this material in a hard glass test tube/conical flask, then put a piece of cotton at the mouth and heat it on a boiling water bath for 25 minutes. Cool the pinkish reaction mixture to room temperature and dissolve the solid mass in a minimum amount of water. Remove un-dissolved material, if any, by filtration. Acidify the aqueous solution with conc. HCl with thorough cooling in ice. Filter the precipitate, wash with little cold water and crystallize the entire product from hot water. Collect the crystalline product $\mathbf{P_1}$ and dry on a steam bath. Record the yield and melting point of $\mathbf{P_1}$.

Step – II

Take 2 g of $\mathbf{P_1}$, 1 gm of "**B**" and 5 gm of "**C**" in a 50 mL round-bottomed flask fitted with a reflux condenser, and add 12 mL of Glacial acetic acid into it. Reflux the mixture for 1 h. Then filter the solution under hot condition and pour the hot filtrate into an excess of water. Filter off the solid product $\mathbf{P_2}$, wash with water and crystallize from rectified sprit. Record the yield of the crystallized product $\mathbf{P_2}$ and melting point.

Submit crystallized $\mathbf{P_1}$ and crystallized $\mathbf{P_2}$ in labeled containers.