

**M. Sc. (Chemistry) Examination, 2017**

**(3<sup>rd</sup> 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**

Add the supplied organic compound **A** to 15 mL of **B** taken in a dry conical flask and cool in ice-bath. Prepare a mixture of 8 mL of **B** and 10 mL of **C** in a dry test tube or conical flask and cool in ice-bath. Add the aforesaid mixture dropwise with stirring to the solution of **A** in **B** maintaining the temperature below 20°C. After complete addition, remove the reaction mixture from the ice-bath and keep it at room temperature for further 20 minutes with occasional stirring. Then pour the reaction mixture slowly dropwise on crushed ice with vigorous stirring. Filter the solid product **P<sub>1</sub>** and wash it thoroughly with water. Crystallize the entire product from minimum amount of hot methanol (10-15 mL). Filter the crystallized product **P<sub>1</sub>** and dry in air. Record the yield and the melting point of **P<sub>1</sub>**.

**Step – II**

Take 4 g of **P<sub>1</sub>** in a 50 mL round-bottomed flask fitted with a reflux condenser and add 8 mL of **D** to it. Heat the reaction mixture for 10 minutes on a steam bath. Then cool the reaction mixture to room temperature and strongly acidify it by adding conc. HCl with thorough cooling in ice. Filter the solid and wash with a little ice-cold water. Dry the product **P<sub>2</sub>** on a steam bath adding a little amount of rectified spirit to the product to facilitate removal of the trapped water. Record the yield of **P<sub>2</sub>**. Crystallize a little amount of **P<sub>2</sub>** from minimum amount of hot water. Filter the crystallized product **P<sub>2</sub>**, dry on steam bath and record the melting point.

Submit crystallized **P<sub>1</sub>**, crude **P<sub>2</sub>** and crystallized **P<sub>2</sub>** in duly labeled containers.