**Q1 /**From toluene prepare *m*-bromo benzoic acid. **Q2 /**What does Sandmeyer reaction mean? Use chemical equations to explain this.

**Q3/** Draw the structure for each of the following compounds: **i.** Aspirin

**ii.** Salicylic acid **iii.** Acetic acid **iv.** Acetic anhydride **v.** Benzanilide.

**Q4/** Arrange the following compounds according to increase their:

**1)** Boiling points: Ethanoic acid, Ethanol, Water

**2)** Basicity: Aniline, Benzamide, RNH2

**3)** Reactivity toward nitration reaction: Benzene, Methyl benzoate, Phenol

**Q5/** Write the detail mechanism for benzamide hydrolysis in basic medium.

**Q6/** Write the suitable product for the reaction of (NaNO2/HCl) with each of the following compounds:

**1)** PhNH2  **2)** Ph2NH **3)** Ph3N **4)** R3N

**Q7/** What are the differences between each of the following

compounds:-

1)Nitronium & nitrosonium ion.

2)Classical & non- classical ion.