

**S.Y. B.Sc. (Industrial Chemistry) Examination**  
**April - 2016**  
**Paper- IC-202: Fundamentals of chemical engineering & analytical chemistry**  
**Paper Code: 8394**

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Time: 2.00 Hours

Maximum Marks: 75

- Que.1 Find out the % of C, H and O in following. (any three) [18]
1. Benzoic acid
  2. Acetone
  3. Styrene
  4. Formaldehyde
  5. Ethylene oxide
- Que.2 (A) What is distillation? Explain simple distillation in detail. [10]  
(B) NaCl weighting 600 kg is mixed with 200 kg KCl. Find the composition of mixture in (I) weight % and (II) mole %. [09]
- OR
- Que.2 (A) Discuss industrial production of oxalic acid. [10]  
(B) Write short note on DMF and THF. [09]
- Que.3 (A) Give industrial production of  $\text{Na}_2\text{CO}_3$  with flow sheet diagram. [10]  
(B) Find out equivalent weight of  $\text{Na}_2\text{CO}_3$ ,  $\text{FeCl}_3$  and KCl. [09]
- OR
- Que.3 (A) What do you mean by Fisher Tropsch synthesis? Explain it in detail. [10]  
(B) Give application of tetrazolium blue, sodium ethoxide and potassium chloride. [09]
- Que.4 (A) Write a note on formic acid production. [10]  
(B) How synthetic glycerol is manufactured? [09]
- OR
- Que.4 (A) Write a note on chlorination of methane. [10]  
(B) Give application of Karl – fisher reagent and Fehling A & B solution. [09]