Enrollment No. _____

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER – 2017

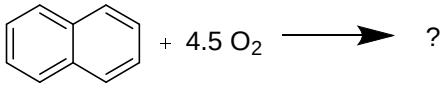
B.Voc. Chemical Technology

BVCT - 303 – INDUSTRIAL UNIT PROCESS & OPERATIONS

Duration of Exam – 2:30 hrs ***Semester – III*** ***Max. Marks – 70***

Que. 1 (A) – Answer the following Questions **[10]**

1. Define nitration reaction.
2. Define Sublimation.
3. Define halogination.
4. Give structure of freon F-12.
5. Complete the reaction.



6. Which catalyst is used for hardening of fats?
7. Give equation for thermodynamics of sulphonation reaction.
8. Define absorption.
9. Enlist any two type of oxidation reaction.
10. Define hydrogenation.

Que. 1 (B) – Answer the following Questions **[20]**

1. Enlist any four chlorinating agents.
2. Give physical and chemical factors involved in sulphonation reaction.
3. Discuss destructive distillation.
4. Give various methods for reduction reaction.
5. Write mechanism for sulphonation of benzene.
6. Discuss factors affecting on hydrogenation reaction.
7. Enlist the types of oxidation reagents.
8. Enlist any four hydrogenation catalyst.
9. Discuss desorption with an example.
10. Differentiate distillation and Evaporation.

Que. 2 – Answer the following Questions (Any Four) **[20]**

1. Explain continuous sulphonation of benzene with schematic diagram.
2. Describe the sulphonation of dodecyl benzene with schematic diagram.
3. Describe the manufacturing process of chlorobenzene with schematic diagram.
4. Give difference between physical absorption and chemical absorption.
5. Explain liquid phase oxidation of acetaldehyde to acetic acid.
6. Describe the manufacturing benzene to nitro benzene with diagram.

Que. 3 – Answer the following Questions (Any Four) **[20]**

1. Discuss chlorination of methane.
2. Explain preparation of p-nitro acetanilide from acetanilide with schematic diagram.
3. Explain fractional distillation of a mixture of liquid.
4. Explain preparation of chloral from ethanol.
5. Explain relative volatility.
6. Explain the principle of simple distillation. Explain the construction and working principle of simple distillation assembly of lab scale with figure.

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