Enrollment No. _____

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

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER – 2017

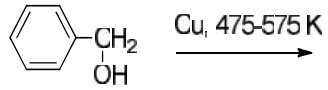
B.Voc. Chemical Technology

BVCT-301 - FUNDAMENTAL CHEMISTRY-II

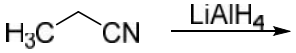
Duration of Exam – 2:30 hrs ***Semester – III*** ***Max. Marks – 70***

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

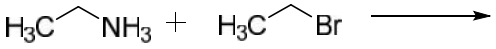
1. Complete the following reaction



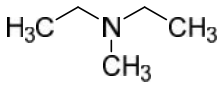
2. Enlist any four Nucleophiles.
3. Complete the reaction:



4. Draw correct chemical structure of 2,4,6-trimethylheptane.
5. Complete the reaction:



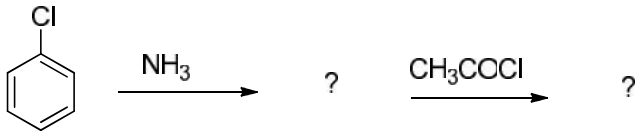
6. Give IUPAC name of



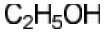
7. Give any 1 example of rearrangement reaction with nomenclature.
8. Write synthesis of paracetamol.
9. Boiling point of CH_3OH ____ Boiling point of CH_3OCH_3 (>, <, =)
10. Give any 1 preparation of cyclohexane.

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

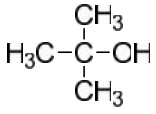
1. Complete the following reaction:

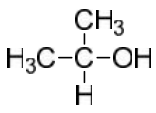


2. Explain the reaction of 3-Hydroxybutanal with Sodium borohydride with reaction.
3. Define and classify carboxylic acids with examples.
4. Classify electrophiles with example.
5. Arrange the following compound in decreasing order of acidity.

(a) 

(b) 

(c) 

(d) 

6. Complete the reaction: CH3CH2NO2 + HCHO → ?
7. Explain physical properties of ethers.
8. Name any 2 nitrogen containing compounds used in printing inks.
9. Draw all possible compounds having molecular formula C_4H_8.
10. Explain classification of alcohols with example.

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

1. Write a detailed note on Ketones with their preparation, reaction and general properties.
2. Aliphatic amines are more basic than the aromatic amines. Justify with reason.
3. Draw all possible structures of compound with molecular formula C_4H_8.
4. Explain chemical properties of alkanes.
5. Draw and explain the resonance structure of Aniline.
6. Explain the method to identify the 1°, 2°, and 3° amines by Hindsberg test.

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

1. Explain chemical properties of carboxylic acids.
2. Explain importance of phenols with representative examples and their applications.
3. Explain reduction reaction of carbonyl compounds.
4. Write a detailed note on S_N^2 reactions.
5. Write detailed note on Free Radicals.
6. Draw all possible structures of compound with molecular formula C_4H_6.