

B. Sc 4th Semester (Non CBCS) Home Assignment
Subject: Chemistry

Last Date of Submission: 10/08/2020

Total Marks: 50

Question No 1: Answer the following questions

1X10=10

- a) Write the structural formula of 2, 2, 4-Trimethylhexan-3-ol.
- b) What happens when phenol is treated with dil. HNO_3 ?
- c) Name the amino acid that doesn't possess any asymmetric carbon atom?
- d) What is Mutarotation?
- e) What is CMC?
- f) Define rate law.
- g) What will be the pH value of 10^{-10} M solution of NaOH?
- h) What is the unit of zero order reaction?
- i) Define activation energy.
- j) What is the pH and pOH value of neutral solution?

Question No 2: Answer the following questions

2X5=10

- a) Convert propan-1-ol to propan-2-ol.
- b) Explain why alkyl ethers undergo electrophilic substitution faster than arenes.
- c) Why PK_b value of aniline is higher than that of methanamines?
- d) Why aldehydes and ketones have lower b.p compared to alcohols and acids?
- e) Why acetic acid is stronger acid than ethyl alcohol?

Question No 3: Answer the following questions

5X3=15

- a) Write the differences between order and molecularity of reaction.
- b) Write a short note on Diazo coupling reaction.
- c) Explain the cyclic structure of Glucose.

Question No 4: Write down the physical properties of fats and oils. Differentiate fats and oils.

2+3=5

Question No 5: Define rate of the reaction. Write down the factors that affect the rate of the reaction. What is order of a reaction?

1+2+2=5

Question No 6: What is solubility and solubility product? Derive their relationship with examples.

2+3=5