

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19 Examination

Semester: 4**Subject Code: 03103251****Subject Name: Organic Chemistry and Unit Process****Date: 29/04/2019****Time: 2:00pm to 4:30pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (All are compulsory) (Each of one mark)**(15)**

1. For Diazotization reaction reagents used are
 - a) NaNO_2 ; HCl
 - b) KI ; KCl
 - c) FeCl_3 ; H_2SO_4
 - d) NH_2NH_2
2. In Distillation Tower If we go from Lower end to Upper portion then temperature
 - a) Increases
 - b) Decreases
 - c) Remain same
 - d) None of these
3. Octane Number of Pure Iso-Octane is
 - a) 72
 - b) 0
 - c) 100
 - d) 84
4. For chlorination of benzene catalyst used is
 - a) KI
 - b) P_2O_5
 - c) NH_3
 - d) FeCl_3
5. When $-\text{COOH}$ is attached directly to the benzene ring the acid is called.
 - a) Aliphatic
 - b) Alicyclic
 - c) Carboxylic
 - d) Aromatic
6. hemolytic reaction are usually initiated by _____, _____ or _____.
7. Raney Nickel is commonly used as _____.
8. Organic ion which contain a positively charged carbon atom is called _____.
9. m-phenyl diamine is used in _____.
10. A five membered heterocyclic compound containing oxygen atom is called _____.
11. Write down structural formula of pyridazine.
12. carbon always forms how many covalent bonds?
13. Give the name of synthetic organic compound.
- 14 Which protein is present in muscles?
15. Full name of DNA.

- Q.2** Answer the following questions. (Attempt any three) **(15)**
- A) Explain the mechanism of Nitration and their uses with example.
 - B) Write a note on Baeyer-Villiger reaction.
 - C) Give classification of carbohydrates.
 - D) Write the synthesis of Congo Red & Crystal Violet.
- Q.3** A) Give example & mechanism of the Electrophilic substitution reaction & Electrophilic addition reaction. **(07)**
- B) What is esterification? Write a note on preparation & properties of carboxylic acids. **(08)**
- OR**
- B) Preparation, properties & uses of Thiophene & Furan. **(08)**
- Q.4** A) Give mechanism & application of Cannizzaro reaction & Wolf-Kishner reaction. **(07)**
- OR**
- A) Discuss the fractional distillation of crude oil & state the various important fractional & their uses. **(07)**
- B) What is Cracking. And explain catalytic cracking and explain synthetic gasoline. **(08)**