

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2019 - 20 Examination

Semester: 3rd
Subject Code: 203103201
Subject Name: Chemistry-II

Date: 25/11/2019
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**(15)**

- 1) Which of the following is not a common property of plastic?
 - a) Non-reactive
 - b) Light in weight
 - c) Durable
 - d) Good conductor of electricity
- 2) Which catalyst is used for reductive amination of carbonyl group?
 - a) NaBH_4
 - b) NaBH_3CN
 - c) AlCl_4
 - d) None of these
- 3) Chromatography is used to separate
 - a) Solution
 - b) Mixture
 - c) Molecules
 - d) Atoms
- 4) Only one 'benzene ring' is present in compounds of
 - a) aryl
 - b) acryl
 - c) carboxylic acid
 - d) ketone
- 5) An acceptor of pair of electron is termed as
 - a) nucleophilic
 - b) electrophilic
 - c) carbocation
 - d) anion
- 6) In the reaction one of the reactant itself works as catalyst then it is known as _____.
- 7) A polymer is a chain of many small units joined together which are called _____.
- 8) Acyl Group is represented as _____
- 9) Methyl group is electron _____ group.
- 10) In nitration reaction temperature must be maintain and it is _____.

11) Mobile phase is always composed of _____ or _____ component.

12) Define : Catalysis

13) It is risky to wear synthetic clothes while working in the kitchen. True/False?

14) Give one Application of Sulphonation reaction.

15) Define: Catalytic inhibitor

Q.2 Answer the following questions. (Attempt any three) **(15)**

A) What is the meaning of alkylation and acylation explain with example.

B) Explain catalysis by organometallic complexes.

C) Write uses and application of polyester.

D) Short note on Statistical aspect.

Q.3 A) Explain the following and give their example with uses. i) polypropylene ii) polyethylene **(07)**

B) Explain Principles of green chemistry. **(08)**

OR

B) Write reaction and mechanism of the following i) sulphonation of benzene. ii) nitration of Benzene **(08)**

Q.4 A) Write mechanism of acylation reaction and explain o-acylation and c-acylation of phenol. **(07)**

OR

A) Explain analytical chemistry with classical method and instrumental method. **(07)**

B) Classification of substitution group. Give reactions of alkylation and acylation of toluene. **(08)**