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PRESIDENCY UNIVERSITY BENGALURU

SCHOOL OF ENGINEERING MID TERM EXAMINATION - DEC 2023

Semester: Semester I - 2023 Date: 09-DEC-2023

Course Name : Applied Chemistry

Program : B.TECH

Max Marks : 50

Weightage : 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Question paper consists of 3 parts.

(iii) Scientific and non-programmable calculator are permitted.

(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS

(5 X 2 = 10M)

1. Give any two examples each for thermopolymers and thermosetting polymers

(CO1) [Knowledge]

2. Write the name and the structure of the monomer present in natural rubber.

(CO1) [Knowledge]

3. Mention the functionality of the following monomers

(i) phenol (ii) Glycerol (iii) ethylene (iv) vinylchloride

(CO1) [Knowledge]

4. What is degree of polymerization? Mention its significance.

(CO1) [Knowledge]

5. List the engineering applications of polymers/plastics

(CO1) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

(4 X 5 = 20M)

6. Give the synthesis, properties and applications of Teflon

(CO1) [Comprehension]

7. Write short notes on polymer composites along with their advantages and applications.

(CO1) [Comprehension]

8. How is BUNA-S synthesized? List the applications of BUNA-S

(CO1) [Comprehension]

9. With examples, discuss the classification of polymers based on (i) structure and (ii) monomeric units. (CO1) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION

 $(1 \times 20 = 20M)$

- **10.** a) Write a note on vulcanization of Natural rubber. Explain how the properties have improved in vulcanized rubber along with applications (12 Marks)
 - b) List the differences between addition and condensation polymerization (8 Marks)

(CO1) [Application]