U7468

Reg. No.: .....

Name:.....

University of Kerala

First Semester Degree Examination,November 2024

Four Year Under Graduate Programme

Multi Disciplinary Course

CHEMISTRY

UK1MDCCHE101- POLYMERS & BIO POLYMERS

Academic Level: 100-199

Time:1½ Hours **Max. Marks: 42**

Part A.

Answer All Questions Objective Type.1 Mark Each.

(Cognitive Level: Remember/Understand)

6 Marks. Time:6 Minutes

Qn No	Question	Cognitive Level	Course Outcome (CO)
1.	Write two examples of fibers.	Remember	CO-1
2.	Write any two uses of PVC.	Remember	CO-2
3.	What is isoprene?	Understand	CO-3
4.	Give two functions of protein.	Understand	CO-4,5
5.	Which polymer is used in optical devices?	Understand	CO-2
6.	Give two examples for polymer formed by addition polymerization.	Understand	CO-1

Part B.

Answer All Questions,Short Answer. 2 Marks Each.

(Cognitive Level: Understand/Apply)

8 Marks. Time: 24 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
7.	What are block polymers?	Understand	CO-1

8.	Write the monomers of terylene.	Understand	CO-2
9.	How will you prepare SBR?	Apply	CO-3
10.	What is lignin?	Apply	CO-4

Part C.
Answer all 4 Questions, choosing among options within each question.
Long Answer. 7 marks each.
(Cognitive Level: Understand/Apply)
28 Marks. Time: 60 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
11.	a) Explain the functionality of polymers, describing how their structure and properties influence their various applications in daily life and industry. **OR** b) Describe the classification of polymers based on molecular forces, explaining how these forces influence the properties and uses of different types of polymers.	Understand	CO-1
12.	a) Explain the applications of polyenes. **OR** b) Discuss the applications of Nylon 66 and Terylene, explaining how their specific properties make them suitable for various industrial and everyday uses.	Understand	CO-2
13.	a) Describe the physical and chemical properties of natural rubber and explain how these properties influence its applications in different industries. **OR** b) Explain the process of vulcanization and discuss how it enhances the properties of rubber for various industrial applications.	Apply	CO-3
14	a) Discuss the applications of cellulose and cotton in the textile industry, highlighting their properties and how they contribute to the production of various textile products. **OR** b) Compare the synthesis and applications of poly lactic acid and aliphatic polyesters.	Apply	CO-4,5