

Reg. No.:



Name:

University of Kerala

U9334

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

POLYMER CHEMISTRY

UK2MDCPOC102 - CHEMISTRY IN EVERYDAY LIFE

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	What is the characteristic structural feature of nitroso dyes?	RE	4
2	Amla is a rich source of which vitamin?	RE	1
3	What you mean by the term "fastness" in dyeing ?	UN	4
4	What is the function of stabilizers in food?	UN	2
5	What are nucleotides ?	UN	3
6	What is the role of Zinc oxide and titanium dioxide in sunscreen?	UN	1

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Describe the use of flour treatment agents in baking.	UN	2
8	Explain the cleansing action of soap.	UN	1
9	Explain how temperature affects protein denaturation using the example of egg white.	AP	3
10	In histological studies, a researcher needs to selectively stain the nuclei of cells. Which dye should be used, and what is the underlying mechanism of staining?	AP	4

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer:7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) A textile company is developing a new line of fabrics that require long-lasting, vibrant colors with high resistance to washing and sunlight exposure. The company is considering different dye structures and wants to optimize dye performance. Explain different types of dyes based on structure and method of application. OR B) A paint manufacturing company is developing a new high-quality white paint for industrial and household applications. The company is considering different white pigments. Can you explain different types of white pigments commonly used	AP	4, 4
12	A) Analyse the major components of Talcum powder, Moisturizer, Sun screen lotion and explain the harmful effects of synthetic cosmetics. OR B) Examine the key bioactive compounds present in turmeric and analyze their functions	AN	1, 1
13	A) Evaluate the role and safety concerns of food additives in modern food processing with reference to food preservatives, antioxidants, fat emulsifiers and FSSAI regulations. OR B)	EV	2, 2

Qn No.	Question	CL	CO
	Evaluate the impact of using permitted and non-permitted food additives, such as food colours, artificial sweeteners, and flavour enhancers, on consumer perception and product development in the food industry		
14	A) Create a simple model that shows the main structural differences between DNA and RNA. Highlight differences in sugar types, Nitrogenous bases, strand arrangement and overall shape. OR B) (a) Explain the impact of protein denaturation on food digestion. For example, how does cooking an egg affect the proteins in the egg white, and why is this important for digestion? (b) Evaluate the differences between fibrous and globular proteins in terms of structure, function, and examples.	CR	3, 3