Reg. No. | | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., CHEMISTRY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
VI	PART-III	CORE ELECTIVE	U21CH6E2A	POLYMER CHEMISTRY

Date & Session: 16.11.2024/AN **Time : 3 hours** **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	**SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.**
CO1	K1	1.	Find the condensed polymer. a) PVC b) Nylon c) Teflon d) PE
CO1	K2	2.	Choose the thermosetting polymer in the following. a) Terylene b) neoprene c) Polystyrene d) Bakelite
CO2	K1	3.	Melting is the property of ____ polymers. a) crystalline b) amorphous c) solution d) viscous
CO2	K2	4.	The number n of repeating unit in polymer molecule is called _____. a) oligomer b) heavy polymer c) repeating unit d) degree of polymerization
CO3	K1	5.	Which of the following is prepared from using suspension polymerization? a) BUNA-S b) Polymethyl methacrylate c) Teflon d) polyethylene
CO3	K2	6.	Identify, which of the following moulding process use air to create hollow plastics. a) compression moulding b) extrusion moulding c) injection moulding d) blow moulding
CO4	K1	7.	The commercial name of polyacrylonitrile is _____. a) Dacron b) Gum-arabic c) Orlon d) Pevicol
CO4	K2	8.	------- is prepared when Novolac is heated with excess of formaldehyde at higher temperature. a) Dacron b) Nylon c) Melamine d) Bakelite
CO5	K1	9.	Artificial blood cell are made up of ____. a) PFC b) PVC c) LDPE d) PP
CO5	K2	10.	Indicate, which one of the following conduct electricity. a) polyacrylonitrile b) polystyrene c) polypyrrole d) polyvinyl chloride

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	11a.	Describe the classification of polymer based on thermal behaviour. **(OR)**
CO1	K3	11b.	Write any two methods of polymerization with suitable example.
CO2	K3	12a.	How can we calculate the molecular weight of polymers. Give one example. **(OR)**
CO2	K3	12b.	Compute the process of vulcanisation of rubber with an example.
CO3	K4	13a.	Illustrate the process of bulk polymerization. **(OR)**
CO3	K4	13b.	Examine polymer processing of reinforcing.
CO4	K4	14a.	Compare the polymers nylon and polyester. **(OR)**
CO4	K4	14b.	Analyse the preparation and uses of polycarbonate.
CO5	K5	15a.	Predict the biopolymers used in contact lens and dental. **(OR)**
CO5	K5	15b.	Justify the polymer industry in India.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	Describe the classification of polymer based on structure. **(OR)**
CO1	K3	16b.	Develop the mechanism of free radical polymerization.
CO2	K4	17a.	What is meant by glass transition temperature? Comment on the factors affecting it. **(OR)**
CO2	K4	17b.	Examine the basic idea of different types of polymer degradation processes.
CO3	K4	18a.	Illustrate on calendaring and die-casting. **(OR)**
CO3	K4	18b.	Write your inference on injection moulding and blow moulding.
CO4	K5	19a.	Prioritize the preparation, properties and uses of polystyrene and polyacrylonitrile. **(OR)**
CO4	K5	19b.	Appraise the preparation, properties and uses of styrene and neoprene rubber.
CO5	K5	20a.	Justify silicones are the high temperature and fire resistant polymers. **(OR)**
CO5	K5	20b.	Justify polypyrrole and polyacetylene are in the class of conducting polymers.