Code No:**21BS1105** **RM21** **SET -2**

I B.Tech I Semester Supply Examinations, October -2022

APPLIED CHEMISTRY

(Com. to CSE, CSE-AI, AI & DS Branches)

Time :3 Hours Max.Marks:70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT -I

1	A)	Write a brief account on the following a) Types of Polymerization b) Biodegradable polymers	7M
	B)	Explain the preparation, properties and applications of the following polymers. a) PVC b) Buna-S C) Bakelite	7M
		OR	
2	A)	What is vulcanization? How does it improve the properties of natural rubber?	7M
	B)	What are Fibre reinforced plastics? Explain their characteristic features and applications.	7M

UNIT –II

3	A)	Differentiate primary, secondary and fuel cells with suitable examples.	7M
	B)	Describe the mechanism of electrochemical corrosion	7M
		OR	
4	A)	How do you calculate the pH of a solution by making use of hydrogen electrode and calomel electrode?	7M
	B)	Give in detail the various factors influencing the rate of corrosion.	7M

UNIT -III

5	A)	What are carbon nanotubes? Write any one synthetic method?	7M
	B)	Give an account of the applications of liquid crystals.	7M
		OR	
6	A)	Explain the properties and applications of fullerenes.	7M
	B)	Make use of the concept superconductors and explain the properties and applications of the superconductors.	7M

UNIT -IV

7	A)	Elaborate two synthetic methods of green chemistry.	7M
	B)	Relate the terms Catenanes and Rotaxanes to molecular switches.	7M
		OR	
8	A)	Discuss any six principles of green chemistry.	7M
	B)	Explain the terms Rotaxanes and Catenanes with suitable diagrams.	7M

UNIT -V

9	A)	Make use the concept of solar energy and write the advantages, disadvantages and applications of solar cells.	7M
	B)	Explain the basic principle involved in NMR spectroscopy.	7M
		OR	
10	A)	Summarize the process of generation of electricity using ocean thermal energy.	7M
	B)	Write the applications of IR spectroscopy.	7M