Code No: **R201115** **R20** **SET - 1**

I B. Tech I Semester Supplementary Examinations, July/August- 2023

APPLIED CHEMISTRY

(Common to ECE, EIE, ECT, CSE-AI&ML, CSE-AI, CSE-DS, CSE-AI&DS, AI&DS, AIML, CSD)

Time: 3 hours Max. Marks: 70

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

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UNIT-I

1.	a)	Define polymerization, explain mechanical properties of polymers.	[7M]
	b)	Give brief note on Fiber reinforced plastics.	[7M]
		(OR)	
2.	a)	Describe compression and injection methods of plastics fabrication.	[7M]
	b)	Give preparation, properties and applications Buna S and Thiokol rubbers.	[7M]
		UNIT-II	
3.	a)	What is Single electrode potential, explain electrochemical series.	[7M]
	b)	Differentiate differential aeration and stress corrosion.	[7M]
		(OR)	
4.	a)	Classify batteries, explain phosphoric acid and molten carbonate fuel cell.	[7M]
	b)	Give brief note on importance of protective coatings.	[7M]
		UNIT-III	
5.	a)	Define semiconductors, explain their preparation by distillation method.	[7M]
	b)	Describe characterization of Nano material by Brunauer Emmet Teller method.	[7M]
		(OR)	
6.	a)	Describe p-n junction diode as rectifier and junction transistor.	[7M]
	b)	Give brief note on liquid crystals.	[7M]
		UNIT-IV	
7.	a)	Explain laws of absorption and intensity shifts.	[7M]
	b)	Give brief note on ocean and hydro power.	[7M]
		(OR)	
8.	a)	Describe CT scan and its applications.	[7M]
	b)	Explain schematic diagram and working of photovoltaic cell.	[7M]
		UNIT-V	
9.	a)	What is computational chemistry, explain molecular modelling.	[7M]
	b)	What are the characteristics of molecular motors and machines?	[7M]
		(OR)	
10.	a)	What is importance of computational chemistry, explain molecular docking studies.	[7M]
	b)	Describe an acid-base controlled molecular shuttle.	[7M]

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