Code No: R201215 **R20** SET - 1

I B. Tech II Semester Supplementary Examinations, March - 2022

APPLIED CHEMISTRY

(CSE, CSE-CS&T, IT, CSE-CS, CSE-IOT&CS Incl BCT, CSE-CS&BS, CSE-IOT, Cyber Security)

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)	Mention the essential requirements of biomaterials polymers to act as biomedical polymers. Mention some examples and their applications.	(7M)
	b)	Discuss the emulsion polymerization.	(7M)
		Or	
2.	a)	Explain any two moulding techniques with labeled figures.	(7M)
	b)	Explain the preparation, properties and applications of BUNA-S.	(7M)

UNIT-II

3.	a)	Explain the working of standard hydrogen electrode. Mention its disadvantages.	(7M)
	b)	Explain the electrochemical corrosion.	(7M)
		Or	
4.	a)	Discuss (i) Helmoltz electrical double layer (ii) distinguish between primary and secondary battery.	(7M)
	b)	Differentiate anodic and cathodic coatings.	(7M)

UNIT-III

5.	a)	Discuss preparation of pure semiconductors by zone refining and Czochralski crystal pulling method.	(7M)
	b)	Discuss the applications of superconductors.	(7M)
		Or	
6.	a)	Explain p-n-p junction transistor with neat labeled diagrams.	(7M)
	b)	Explain the preparation of nanomaterials by sol-gel method.	(7M)

UNIT-IV

7.	a)	Discuss the laws of absorption.	(7M)
	b)	Discuss the design and working of tidal and wave power.	(7M)
		Or	
8.	a)	Explain the working procedure of magnetic resonance imaging.	(7M)
	b)	What is closed and open ocean thermal energy conversion. Explain its benefits.	(7M)

UNIT-V

9.		Write notes about molecular modelling and docking studies.	(14M)
		Or	
10.		Discuss about an acid-base controlled molecular shuttle.	(14M)
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