Course Code: **23BS11T01**

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(AUTONOMOUS)

I-B.Tech I-Semester Regular Examinations (MR23), February - 2024

CHEMISTRY (COMMON TO CSE &IT BRANCHES)

Time: 3 hours Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A and Part-B***

PART–A (10X2M = 20M)

		Marks	CO	BL
1.a)	write schrodinger's wave equation	(2M)	CO1	L3
b)	Define molecular orbital theory	(2M)	CO1	L1
c)	Write the applications of fullerenes	(2M)	CO2	L3
d)	Discuss the any two properties of semiconductors	(2M)	CO2	L2
e)	Define Nernest equation	(2M)	CO3	L2
f)	Write the uses of electro chemical series	(2M)	CO3	L3
g)	Definition of chain polymerization	(2M)	CO4	L1
h)	Distinguish between the thermo and thermo setting plastics	(2M)	CO4	L4
i)	Define electromagnetic spectrum	(2M)	CO5	L1
j)	Uses of UV spectra	(2M)	CO5	L3

PART–B (5X10M = 50M)

2	a	Explain the derivation of schrodingers wave equation.	(5M)	CO1	L2
	b	Discuss about molecular orbital theory and draw the molecular orbital diagram of hetero molecules	(5M)	CO1	L2
		(OR)			
3	a	Discuss about molecular orbital theory and draw the molecular orbital diagram of Benzene	(5M)	CO1	L2
	b	Define the significance of Ψ and Ψ2	(5M)	CO1	L1

4	a	Execute the working principle of semi-conductors	(5M)	CO2	L3
	b	Explain the properties and uses of fullerenes	5M)	CO2	L2
		(OR)			
5	a	Explain the properties and uses of Semi-conductors	(5M)	CO2	L2
	b	Memorize the properties of nano materials	(5M)	CO2	L2

6	a	Discuss about standard hydrogen electrode	(5M)	CO3	L2
	b	Explain the lithium ion battery.	(5M)	CO3	L2
		(OR)			
7	a	Write about fuel cells Hydrogen-Oxygen fuel cell	(5M)	CO3	L3
	b	Describe the potentiometric sensors with examples	(5M)	CO3	L2

8	a	Apply the free radical mechanism for poly ethylene	(5M)	CO4	L3
	b	Express the preparation and properties of Teflon	(5M)	CO4	L2
		(OR)			
9	a	Write the preparation and properties of BUNA-N	(5M)	CO4	L3
	b	Demonstrate the conducting polymers of poly acetylene	(5M)	CO4	L3

10	a	Define electromagnetic spectrum and absorption laws	(5M)	CO5	L1
	b	Interpretation of IR spectra of some organic compounds and instrumentation of IR spectra	(5M)	CO5	L3
		(OR)			
11	a	Categorize the working principle of MRI	(5M)	CO5	L4
	b	Write about CTscan and applications of its medical diagnosis	(5M)	CO5	L3

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