CONTINUOUS INTERNAL EVALUATION - 1

Dept: FY	Sem / Div: II/CS	Sub: Applied Chemistry for CSE Stream	S Code: BCHES202
Date: 15/05/24	Time: 3:00-4:30	Max Marks: 50	Elective: N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	CO's
		PART A			
1	a	Write a short note on i) Sacrificial anode method ii) Galvanization	10	L2	CO3
	b	What is CPR? A thick brass sheet of an area 400 inch^2 is exposed to air near the ocean. After two years period it was found to experience a weight loss of 375g due to corrosion. If the density of brass is 8.73g/cm^3. Calculate the CPR in mpy and mmpy.	8	L3	CO3
	c	Explain the process of hydro-metallurgical e-waste management.	7	L2	CO5
		OR			
2	a	Define Corrosion. With a block diagram, explain the electrochemical theory of corrosion taking iron as an example.	10	L1, L2	CO3
	b	Define ion-selective electrode. Explain the construction and working of glass electrode.	8	L2	CO3
	c	Explain the principle of conductometric analysis. Describe its application in estimation of weak acid.	7	L2	CO3
		PART B			

3	a	Explain the e-waste recycling by different pyrometallurgical methods.	10	L2	CO3
	b	What are Photovoltaic Cells? Explain the construction and working of PV cell.	8	L1, L2	CO4
	c	What are conducting polymers? Explain the mechanism of conduction in polyacetylene by n- doping. List any 4 applications of conducting polymers.	7	L1, L2	CO4
		OR			
4	a	Explain the synthesis of (a) Kevlar fibre (b) Graphene oxide	10	L2	CO4
	b	What are polymers. A polydisperse sample of polystyrene is prepared by mixing three monodisperse samples in the following proportions. 1g of 10,000 molecular weight, 2g of 50,000 molecular weight and 2g of 1,00,000 molecular weight. Determine number average and weight average molecular weight of the polymer. Calculate PDI.	8	L1, L3	CO4
	c	Describe the generation of hydrogen by Alkaline water electrolysis with a neat labelled diagram.	7	L2	CO4

Nikhila

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