



# CAMBRIDGE INSTITUTE OF TECHNOLOGY

K.R. PURAM, BENGALURU-560036

## Department of Chemistry

Program: B.E. ☒ M.Tech. ☐ Specialization:

### Second Internal Assessment - Even Semester 2018-19

Sub. Name: Engg. Chemistry

Sub. Code: 18CHE22

Semester: II

Date: 10-05-2019

Time: 9.00 AM

Duration: 90 Minutes

Max. Marks: 30

[Instructions: Answer any two full questions as indicated below]

Sl. No	QUESTIONS	COs	RBT Levels	Marks
1.	a) Explain why Cr metal cannot be used as anode in Cr electroplating.	CO2	L2	3M
	b) Discuss the steps in Electroless plating of Nickel? Give its applications.	CO2	L2	6M
	c) Explain Polarization and Over Voltage. What are the factors influencing polarization.	CO2	L3	6M
	OR			
2.	a) Discuss about Power Alcohol? Give its advantages and disadvantages.	CO3	L2	3M
	b) Explain the mechanism of knocking in petrol engines with reactions. What are its ill effects? How it can be controlled.	CO3	L2	6M
	c) On burning 0.75g of Coal sample in a bomb calorimeter, the temperature of 2.5 Kg of water increased from 25°C to 28.5°C. The water equivalent of calorimeter and latent heat of steam are 0.285Kg and 587 calories respectively. If the fuel contains 2.5% hydrogen, calculate its gross and net calorific values.	CO3	L3	6M
3.	a) Define GCV and NCV. Give the relation between them.	CO3	L2	3M
	b) Differentiate between Battery and Fuel Cell.	CO3	L2	6M
	c) Discuss the production of Solar grade Si by union carbide process	CO3	L3	6M
	OR			
4.	a) What is particulate matter? Outline its sources.	CO4	L2	3M
	b) Identify the sources, ill effects and control of Carbon monoxide.	CO4	L3	6M
	c) Explain the sources, ill effects and control of Lead as chemical pollutant.	CO4	L3	6M

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