



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
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Mid - Term Examinations – October 2025

Date: 09-10-2025

Time: 09.30am to 11.00am

School: SOCSE	Program: B.Tech	
Course Code : CHE2501	Course Name: Chemistry of Smart Materials	
Semester: I	Max Marks: 50	Weightage: 25%

CO - Levels	C01	C02	C03	C04	C05
Marks	24	26			

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Q x 2M=10M

1	What is meant by octet configuration?	2 Marks	L1	C01
2	Write the ball and stick model of methane.	2 Marks	L1	C01
3	Mention two basic requirements of a liquid crystal.	2 Marks	L1	C02
4	Give an example of organic molecule which behaves as n type semiconductor along with structure.	2 Marks	L2	C02
5	Write the schematic representation of construction of LEC.	2 Marks	L2	C02

Part B

Answer the Questions.

Total Marks 40M

6.	a.	What is DFT? Explain the charge of Hydrogen in HF molecule and HLi molecule with respect to DFT.	10 Marks	L3	CO 1
Or					
7.	a.	What is chemoinformatics? List out the applications of	10 Marks	L2	CO

		chemoinformatics.			1
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8.	a.	Identify and discuss about, the intermolecular forces present in (a) He molecule (b) H ₂ molecule (c) H ₂ O molecule (d) Acetone (e) NaCl dissolved in water	10 Marks	L3	CO 1
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Or

9.	a.	The following MSDS label was found for a chemical. Discuss in detail the information obtained by colors and numbers for safety measures.	10 Marks	L2	CO 1
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10.	a.	What are memory devices? List the classification of electronic memory devices along with materials used, conditions and examples.	10 Marks	L2	CO 2
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Or

11.	a.	What is liquid crystal? Explain the working of LCD.	10 Marks	L2	CO 2
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12.	a.	Explain in detail the steps involved in manufacturing of semiconductor chips.	10 Marks	L2	CO 2
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Or

13.	a.	Explain the criteria for organic and polymeric semiconductor materials in memory systems.	10 Marks	L2	CO 2
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