



PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 29-10-2025

Time: 11.00am to 12.30pm

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

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	26	24			

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	How many numbers of hydrogen bonds that a molecule of water can have?	2 Marks	L1	CO1
2	Write the importance of electrostatic potential maps.	2 Marks	L1	CO1
3	Name two tools used for chemoinformatics.	2 Marks	L1	CO1
4	What are photoactive and electroactive materials?	2 Marks	L2	CO2
5	What causes differences in LED colors?	2 Marks	L2	CO2

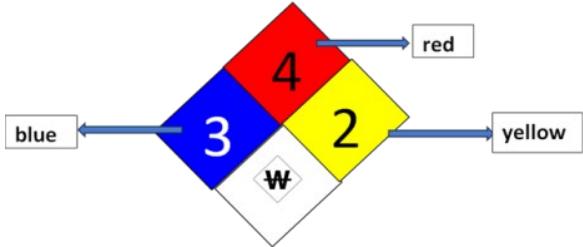
Part B

Answer the Questions.

Total Marks 40M

6.	a.	What is chemoinformatics? Brief out the applications of AI and ML in chemoinformatics.	10 Marks	L2	CO 1
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Or

7.	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
					

8.	a.	Why bonds are formed? In detail explain the different types of molecular models of Methane.	10 Marks	L2	CO 1
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Or

9.	a.	Name the types of intermolecular forces that exist in the following substances along with pictorial representation and explanation. (i) NaCl in H ₂ O, (ii) Acetone	10 Marks	L3	CO 1
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10.	a.	List out types of organic memory materials. Discuss n-type and p-type organic memory materials in detail with suitable examples.	10 Marks	L2	CO 2
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Or

11.	a.	Differentiate between LED and LCD.	10 Marks	L3	CO 2
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12.	a.	Describe the steps involved in making of semiconductor chips.	10 Marks	L2	CO 2
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Or

13.	a.	What is OLED? List out the properties and applications of OLED.	10 Marks	L2	CO 2
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