Roll No: | | | | | | | | | | | |

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

PRESIDENCY UNIVERSITY

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Mid Term Examinations - October 2026

Date: 07/10/2026 **Time:** 11:45 AM - 01:15 PM

Course Code: CHE2503 **Course Name:** Applied Chemistry for Engineers

Semester: First Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	88	92

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Define compound semiconductor and state one example.	2	CO1	BT1
2	For the element having energy gap (Eg) > 3eV acts as: (i) Semiconductor (ii) insulator (iii) superconductor (iv) conductor	2	CO1	BT1
3	List out the types of organic memory materials.	2	CO2	BT1
4	Define photoactive and electroactive materials.	2	CO2	BT1
5	Define memory device. Give an example.	2	CO2	BT1

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Apply the principle of Czochralski (CZ) process for producing electronic-grade silicon with a neat labelled diagram and relate this to its electronic applications.	10	CO1	BT3
7	Assuming that the number of electrons near the top of the valence band available for conduction is 8×10^{25} /m^3 and the number of electrons exited to conduction band is 5.5×10^{19} /m^3, calculate the energy gap of Ge at 300K. k=Boltzmann 8.6173303 × 10^{-5} eV/K	10	CO1	BT3

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Apply the principle of Float Zone (FZ) process for producing electronic-grade silicon with a neat labelled diagram.	10	CO1	BT3
9	Determine suitable electronic and optoelectronic applications of GaAs from its chemical and electronic properties.	10	CO1	BT3

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Classify organic memory materials into n-type and p-type materials and illustrate their characteristics with suitable examples.	10	CO2	BT2
11	Explain the properties and applications of OLED.	10	CO2	BT2

PART E: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
12	Illustrate the principle of liquid crystals to explain the working of an LCD with neat labelled diagram.	10	CO2	BT3
13	Illustrate the principle of semiconductor and electroluminescence to explain the working of an LED.	10	CO2	BT3