

**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**

M. Sc. (Third Semester) Regular Examinations, December – 2024

22CHCBOE307 – Chemistry of Materials

(M.Sc.- Chemistry)



Time: 3 hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A

(2 x 10 = 20 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Write notes on Glassy State.	CO1	K1
b. Define particle-reinforced composite.	CO2	K2
c. Explain the LB method.	CO4	K1
d. Discuss types of ceramics.	CO2	K2
e. Define ionic conductor.	CO1	K1
f. Define the sol-gel process.	CO3	K2
g. Write short notes on conductance in Organic Material.	CO4	K1
h. Explain doped Fullerene.	CO5	K3
i. Define Frenkel Defect	CO6	K3
j. Define traditional ceramic & their types.	CO2	K1

PART – B

(10 x 5 = 50 Marks)

Answer **ANY FIVE** questions

	Marks	CO #	Blooms Level
2. Elaborate manufacturing of ceramics.	10	CO1	K2
3.a. Explain polymer composite and their preparation methods.	5	CO2	K1
b. Write short note on CMC.	5	CO4	K1
4. a. Explain ball milling process and its instrumentation.	5	CO3	K3
b. Explain principle of CVD with instrumentation.	5	CO4	K2
5.a. Discuss Artificial Photosynthesis and their advantages and disadvantages.	5	CO5	K2
b. Define refractory and their classification.	5	CO2	K1
6. a. Explain details about the fullerenes and fullerides.	5	CO1	K1
b. Discuss property change during superconductor transformation.	5	CO3	K2
7. Derive mechanism for Vacancy Defect	10	CO5	K3
8. a. Discuss Thermal evaporation methods.	5	CO4	K2
b. Describe transistor and their structure.	5	CO3	K2