QP Code: SN22BTECH602 Reg. No | | | | | | | | | | | AR 21

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)

B. Tech (Seventh Semester - Regular) Examinations, November – 2025

22BCVOE47013-Green Building

(Civil Engineering)

Time: 3 hrs Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions		CO #	Blooms Level
a.	Define ecological design and its main objective.	CO1	K1
b.	What is the role of building envelope in energy efficiency?	CO2	K1
c.	Mention two strategies for indoor environmental quality improvement.	CO3	K1
d.	Define building commissioning.	CO3	K1
e.	State the purpose of the LEED certification system.	CO4	K1

PART – B **(15 x 4 = 60 Marks)**

Answer ***all*** the questions		Marks	CO #	Blooms Level
2. a.	Discuss building water and waste management practices relevant to LEED / IGBC standards.	8	CO1	K1
b.	Explain how building envelope composition affects heat transfer and thermal comfort.	7	CO1	K2
	(OR)			
c.	Explain the methods and tools used for green building assessment.	8	CO1	K2
d.	Describe the LEED certification process and its rating levels.	7	CO1	K2
3.a.	Compare LEED and Green Globes assessment systems.	8	CO2	K3
b.	Discuss international building assessment systems and their key features.	7	CO2	K3
	(OR)			
c.	Discuss the process and importance of building commissioning in HVAC systems.	8	CO2	K2
d.	Explain commissioning procedures for lighting and non-mechanical systems.	7	CO2	K2
4.a.	Analyze the cost-benefit relationship of implementing green building technologies.	8	CO3	K4
b.	Discuss how LEED / IGBC standards guide sustainable implementation practices.	7	CO3	K2
	(OR)			
c.	Explain the criteria for attaining LEED-NC Platinum, Gold, and Silver certifications.	8	CO3	K3
d.	Present a detailed case study of a LEED-certified building (Platinum/Gold/Silver).	7	CO3	K4
5.a.	Explain the importance of ECBC compliance in India's green building movement.	8	CO4	K2
b.	Discuss the role of IGBC in promoting sustainable construction in India.	7	CO4	K2
	(OR)			
c.	Describe the Florida Green Building Coalition system and its unique features.	8	CO4	K2
d.	Write short notes on emerging trends in global building rating systems.	7	CO4	K2

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