QP Code: SN23BTECH235 | Reg. No | | | | | | | | | | | AY 23

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

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

23BCVOE30001-Green Building

(Civil Engineering)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions
(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.	What is the purpose of the ecological design process?	CO1	K1
b.	Define building assessment and list two international systems.	CO2	K1
c.	State any two strategies for internal load reduction.	CO3	K1
d.	What is ECBC compliance in green building?	CO4	K1
e.	List two environmental benefits of green design.	CO5	K1

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions

		Marks	CO #	Blooms Level
2. a.	Discuss the role of the integrated design process in green building development.	5	CO1	K1
b.	Explain the difference between design and ecological design.	5	CO1	K1
c.	Describe the historical evolution of ecological design thinking.	5	CO1	K2
d.	Discuss the principles of regenerative design and its future role in construction.	5	CO1	K2
3.a.	Illustrate how green building documentation supports certification.	5	CO2	K3
b.	Explain the interrelationship between design and construction in green building delivery.	5	CO2	K2
	(OR)			
c.	Analyze the impact of sustainable materials on building life cycle.	5	CO2	K3
d.	Discuss major passive design strategies suitable for tropical climates.	5	CO2	K2
4.a.	Explain various indoor environment quality strategies adopted in LEED projects.	5	CO3	K1
b.	Describe building energy system strategies for improving efficiency.	5	CO3	K2
	(OR)			
c.	Explain design strategies for efficient water and waste management in buildings.	5	CO3	K2
d.	Discuss the importance of health and safety planning in green construction sites.	5	CO3	K2
5.a.	Outline measures for minimizing the footprint of construction activities.	5	CO4	K3
b.	Explain building commissioning for lighting and non-mechanical systems.	5	CO4	K3
	(OR)			
c.	Compare the LEED and IGBC rating systems in detail.	5	CO4	K3
d.	Describe the Green Globes and Florida Green Building Coalition assessment	5	CO4	K2

	approaches.			
6.a.	Analyze the scope and features of ECBC compliance for new buildings.	5	CO5	K3
b.	Describe case studies of LEED Platinum or Gold rated buildings in India.	5	CO5	K3
	(OR)			
c.	Discuss future trends in national and international green building rating systems.	5	CO5	K2
d.	Evaluate the social, environmental, and economic benefits of green building practices.	5	CO5	K3

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