

ANURAG Engineering College**(An Autonomous Institution)****III B.Tech I Semester Supplementary Examinations, June/July-2024****GREEN BUILDING MATERIALS AND TECHNOLOGIES****(CIVIL ENGINEERING)****Time: 3 Hours****Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Define green building?	CO1	L1	2M
2. Show the common sources of indoor air contaminants?	CO1	L2	3M
3. What is thermal comfort in green buildings	CO2	L1	2M
4. Write the requirements of Air-conditioning	CO2	L2	3M
5. What are non-conventional energy resources?	CO3	L1	2M
6. Draw the neat sketch of sun earth relationship and explain briefly?	CO3	L2	3M
7. Define the terms steady and non- steady heat transfers?	CO4	L1	2M
8. Explain in short about Evaluation of the overall thermal transfer?	CO4	L2	3M
9. What is LEED and its role in green building system?	CO5	L1	2M
10. List few USGBC building assessment standards.?	CO5	L2	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11.A) Explain in detail about advantages and short comings of green buildings?	CO1	L3	10M
OR			
B) List the Fundamental principles involved in the development of green building?	CO1	L3	10M
12.A) Explain about i) Visual perception ii) Illumination requirement iii) Auditory requirement.	CO2	L3	10M
OR			
B) Distinguish the term Natural and mechanical ventilation system?	CO2	L3	10M
13.A) Write a brief note on i) Role of HVAC in different climatic conditions. ii) Lighting system	CO3	L3	10M
OR			
B) Explain about any fully solar energy-based building in India	CO3	L3	10M
14.A) Explain the passive cooling techniques in green buildings	CO4	L3	10M
OR			
B) Construct and estimate the energy use in a building based on Recommendation of ASHARE?	CO4	L3	10M
15.A) Define the terms Energy audit and energy targeting and explain them in detailed?	CO5	L3	10M
OR			
B) Classify the LEED and TERI (GRIHA) parameters and certification of Green Buildings?	CO5	L3	10M