

First Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Green Buildings

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

| Module – 1 | | | M | L | C |
|------------|----|--|----|----|-----|
| Q.1 | a. | Define Green Building. Explain the necessity of alternate materials for conventional buildings materials. | 10 | L2 | CO1 |
| | b. | Briefly explain the applications of FRP composites. | 10 | L2 | CO1 |
| OR | | | | | |
| Q.2 | a. | Briefly explain stabilized mud blocks and laterite Block as alternate materials. | 10 | L2 | CO1 |
| | b. | Explain the major environmental concerns due to quarrying of building materials. | 10 | L2 | CO1 |
| Module – 2 | | | | | |
| Q.3 | a. | With neat sketches, explain the Rat Trap Bond wall construction. | 10 | L2 | CO2 |
| | b. | Write short note on : i) Precast and ready to use building elements ii) Composite beam and roof panels | 10 | L2 | CO2 |
| OR | | | | | |
| Q.4 | a. | Explain the role of Nirmiti Kendra Towards Low Cost housing. | 10 | L2 | CO2 |
| | b. | Explain the ferrocement construction process and list the various ferrocement products. | 10 | L2 | CO2 |
| Module – 3 | | | | | |
| Q.5 | a. | Define Global Warming. Explain the effects of Global warming. | 10 | L2 | CO3 |
| | b. | Define Carbon footprint. Explain the Global efforts to reduce the carbon footprint emissions. | 10 | L2 | CO3 |
| OR | | | | | |
| Q.6 | a. | Differentiate between the initial cost involved in Green Building and Conventional Building. | 10 | L2 | CO3 |
| | b. | List and explain various benefits of Green Building in detail. | 10 | L2 | CO3 |
| Module – 4 | | | | | |
| Q.7 | a. | Explain the necessity of green building ratings. | 10 | L2 | CO4 |
| | b. | Explain the key highlights of GRIHA. | 10 | L2 | CO4 |

| OR | | | | | |
|------------|----|---|----|----|-----|
| Q.8 | a. | What is LEED? What are the key areas for certification of buildings by LEED? | 10 | L2 | CO4 |
| | b. | Write a note on different characteristics of sustainable buildings. | 10 | L2 | CO4 |
| Module – 5 | | | | | |
| Q.9 | a. | Explain the concept of solar passive cooling and heating design of buildings. | 10 | L2 | CO5 |
| | b. | Explain the effective methods for reducing water usage in buildings. | 10 | L2 | CO5 |
| OR | | | | | |
| Q.10 | a. | Explain solid waste management disposal techniques. | 10 | L2 | CO5 |
| | b. | Explain the merits and demerits of solar powered building concepts. | 10 | L2 | CO5 |

* * * * *