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Question Paper Code: R8161

B.E. / B.Tech. DEGREE EXAMINATION, APRIL / MAY 2025

One Credit Course

Civil Engineering

R21UCE861 – GREEN BUILDING CONCEPTS

(Regulations R2021)

Duration: 1.30 hours

Maximum: 50 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The 'Miracle Material' that can turn CO₂ into liquid fuel is: CO1- U
(a) Propene (b) Copper (c) Graphene (d) Potassium
2. India's first green building located on CO1-U
(a) ITC Green Centre, Gurgaon (b) CII–Sohrabji Green Business Centre, Hyderabad
(c) Wipro Technologies, Gurgaon (d) Suzlon one Earth, Pune
3. Which of the below green building in India has received a platinum LEED certification? CO1-U
(a) Dabur India, Chandigarh (b) Logix Cyber Park, UP
(c) Unitech Commercial Tower, Chandigarh (d) Suzlon One Earth, Pune
4. Which of the following is not a measure for a green building? CO1-U
(a) Use B-rated elements that save energy
(b) Install solar panels for lighting or heating water
(c) Install water meters in a building
(d) None of the above
5. LEED gives rating in form CO1-U
(a) Platinum (b) Gold (c) Silver (d) All the above

6. What is the full form of IGBC? CO1-U
- (a) Indian Green Building Control (b) Indian Green Building Council
- (c) International Green Building Control (d) International Green Building Council
7. LEED Means CO1-U
- (a) Leadership in Energy& Efficiency Design
- (b) Leadership in Energy& Efficiency Document
- (c) Leadership in Energy & Environmental Design
- (d) Leadership in Energy & Environmental Document
8. How many set of criteria formulated by GRIHA for Rating the building? CO1-U
- (a) 34 (b) 33 (c) 32 (d) 31
9. Full Name of TERI CO1-U
- (a) The Energy & resources Institute (b) The Energy & rating Institute
- (c) The Energy & resources India (d) The Energy & Research Institute
10. The expansion of ECBC is CO1-U
- (a) Energy Consumption Building Code
- (b) Energy Conservation Building Code
- (c) Energy Conservation Building Committee
- (d) Energy Consumption Building Committee

PART – B (5 x 2= 10 Marks)

11. What is PMV? CO1-U
12. Define global warming. CO1-U
13. Explain Concentrating solar power (CSP) CO1-U
14. List some of the effects of global warming. CO1-U
15. What are the materials used for construction of green buildings? CO1-U

PART – C (2 x 15= 30 Marks)

16. (a) Illustrate the concept of green composite buildings. CO1-U (15)
- Or
- (b) Implemented the environmental implications of green energy in buildings. CO1-U (15)

17. (a) Briefly explain the waste disposal management and its types. CO1-U (15)
- Or
- (b) Explain in detail about the green buildings in different climatic regions. CO1-U (15)

