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Question Paper Code : X10862

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020

Seventh Semester

Civil Engineering

OEN 751 – GREEN BUILDING DESIGN

(Common to Aeronautical Engineering/Biomedical Engineering/Computer Science and Engineering/Electronics and Communication Engineering/Geoinformatics Engineering/Mechanical Engineering/Mechatronics Engineering/Chemical Engineering/Information Technology)
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Define Embodies energy.
2. What are green buildings ?
3. What is the need for recycling building waste ?
4. Name some recycled fibers.
5. What is Heat Transfer Co-efficient ?
6. Discuss Solar map.
7. Define PSD.
8. List a few solar PV materials.
9. State the objectives of fibers used in green composites.
10. What are the challenges faced by urban areas in sustainable water management ?

PART – B

(5×13=65 Marks)

11. a) Explain the types of building materials used in construction.

(OR)

- b) i) What are the goals and purpose of LCA ? **(6)**
- ii) Explain the stages in LCA. **(7)**

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12. a) Explain the embodied energy breakup of a RRC framed structure.
(OR)
b) Explain the process of reusing demolished concrete.
13. a) Explain the six variables that predict a person's thermal comfort in a building.
(OR)
b) Illustrate the ways of heat transfer in buildings.
14. a) Explain the advantages and disadvantages of Solar Power.
(OR)
b) Explain the role of windows in passive solar design.
15. a) Explain any two methods of sewage management.
(OR)
b) Write the overview of green building concept.

PART – C

(1×15=15 Marks)

16. a) Write short notes on :
- i) Elevated air speed. **(5)**
 - ii) Mixed Mode Ventilated Buildings. **(5)**
 - iii) Paper Insulation. **(5)**
- (OR)
- b) Analyze the green building rating system in India.
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