

26 JUN 2023

Reg. No.

Question Paper Code

11946

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Fifth Semester

Civil Engineering

20CEPC505 - SUSTAINABLE URBAN INFRASTRUCTURE DEVELOPMENT

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | Marks,
K-Level, CO |
|---|-----------------------|
| 1. Define sustainable development. | 2,K1,CO1 |
| 2. What are the pillars of sustainable development? | 2,K2,CO1 |
| 3. Differentiate between sustainable planning and sustainable design. | 2,K1,CO2 |
| 4. Name few innovative materials used in the building industry. | 2,K1,CO2 |
| 5. What is meant by energy conservation in buildings? | 2,K2,CO3 |
| 6. How can you save water in building sector? | 2,K2,CO3 |
| 7. List out the various green house gases in the atmosphere. | 2,K2,CO4 |
| 8. Define Urbanization. | 2,K1,CO4 |
| 9. Name few green buildings available in India. | 2,K2,CO5 |
| 10. What is LEED certification? | 2,K2,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain the Environmental impacts of construction sector on Water, Air, Land and Biodiversity. 13,K2,CO1
- OR**
- b) Discuss the Sustainable planning for building industry. 13,K2,CO1
12. a) Write a note on Urban Design. 13,K2,CO2
- OR**
- b) Discuss in detail about the sustainable building planning. 13,K2,CO2
13. a) Discuss the merits and demerits of Solar energy in the context of developing countries. 13,K2,CO3
- OR**

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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b) Write notes on Passive Solar Design.

13,K2,CO3

14. a) What are the impacts of Urban climate on buildings?

13,K2,CO4

OR

b) Explain the impacts of Urbanization in detail.

13,K2,CO4

15. a) Explain the benefits of green building.

13,K2,CO5

OR

b) Write down the Design principles of a green building.

13,K2,CO5

PART - C (1 × 15 = 15 Marks)

16. a) What are the various health benefits of LEED Certification?

15,K2,CO6

OR

b) What are the various Real Estate benefits of green buildings?

15,K2,CO6