

B.E. (Civil Engineering) Seventh Semester (C.B.S.)  
**Elective - I : Sustainable Resource Management in Civil Engineering**

P. Pages : 2

Time : Three Hours



**TKN/KS/16/7525**

Max. Marks : 80

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- Notes :
1. All questions carry marks as indicated.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is sustainability? Explain the need of sustainability in India. 7
- b) What are the practices to be adapted to achieve the sustainability? Explain. 6

**OR**

2. a) Discuss the sustainability initiatives at global level. 7
- b) Discuss the sustainability of the resources that are used currently in construction industries in India. 6
3. a) What problems are caused due to waste production in construction industries. 7
- b) Classify the solid waste pertaining to construction engineering. 7

**OR**

4. a) What alternative building materials can be used to reduce the waste & energy consumption. 7
- b) Discuss the concept of zero waste production. 7
5. a) What role that water management plays in sustainability. 7
- b) Discuss 3R of water conservation. 6

**OR**

6. a) Explain the process of water conservation for sustainability. 7
- b) Discuss the concept of reduce & reuse of waste. 6
7. a) Differentiate between Renewable & Non-renewable energy sources. 7
- b) Enumerate the salient features of energy conservation of Building code. 6

**OR**

8. a) Discuss the concept of energy conservation in civil engg. 7

- b) Enlist the renewable sources of energy. Discuss any two with respect to available potential in India. **6**
- 9.** a) Discuss the health issues during the construction in civil Engineering. **7**
- b) Explain in detail the principles of basic building design as per SP – 41. **7**

**OR**

- 10.** Write short note on **any three**. **14**
- i) Effect of humidity on health & productivity.
- ii) Effect of heat on health & productivity.
- iii) Comfort of occupants.
- iv) Need of Natural light & air.

- 11.** a) Enumerate the provisions of NBC with respect to sustainability. **7**
- b) Discuss the need of life cycle costing. **6**

**OR**

- 12.** a) What are the life cycle costing techniques? Explain briefly. **7**
- b) Discuss the advantages of life cycle costing. **6**

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