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15CV653

Sixth Semester B.E Degree Examination, June-July 2018

Alternative Building Materials

Time -3hrs

Max Marks-80

**NOTE: Answer five full questions, choosing one full questions from each module.
Assume any missing data suitably**

MODULE -1

1. **a.** Discuss the Energy Embodied In Building Materials and Buildings. (8Marks) **b.** Discuss The Environmental Issues Related To Building Materials. (8Marks)

OR

2. **a.** List the various environmental friendly and cost effective building technologies (8Marks)
b. Explain the role of construction industry in global warming. (8Marks)

MODULE-2

3. **a.** Explain the method of manufacturing the stabilized mud blocks (8Marks)

b. Calculate the energy embodied in a burnt brick wall without plastering in cement mortar CM 1:6 assume the details. (8Marks)

OR

4. **a.** Explain briefly the use of stones and laterite blocks against their compressive strength. (8Marks)

b. A Mangalore tiled roof is used to span a room of size 3m X 6m. The roof slope is 20° and assuming wall thickness of 230mm and roof overhanging of 300mm at both ends of slope. Calculate the energy in the roof per m^2 . Assume energy in one Mangalore tile = 15MJ. (8Marks)

MODULE-3

5. **a.** What is lime- pozzolona cement? Explain the different of blending of lime and

pozzolona
(8Marks)
)

b. Discuss the different sources of lime stones. (8Marks)

OR

6. **a.** Explain the method of manufacture of lime pozzolona cement. (8Marks)

b. What are the different industrial wastes used effectively in construction industry. Explain any 3 materials. (8Marks)

MODULE-4

7. **a.** Write short notes on Ferro cement and Ferro concrete. (8Marks)

b. What are the concept and details of composite beam panel roof? (8Marks)

OR

8. **a.** Explain filler slab blocks of roof construction with a neat diagram using SMB. (8Marks)

b. Explain masonry vaults and domes. (8Marks)

MODULE-5

9. **a.** What is cost effective building design? Explain cost saving techniques. (8Marks)

b. Explain machine used for making stabilized mud blocks. (8Marks)

OR

10. a. Explain with a neat diagram the manufacture of concrete.

(8Marks)

b. Explain how you precast a roof element.

(8Marks)
