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# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## February / March 2024 Semester End Main Examinations

**Programme: B.E.**

**Branch: Common to all Branches**

**Course Code: 22CV1ESGBT / 22CV2ESGBT**

**Course: Green Buildings**

**Semester: I / II**

**Duration: 3 hrs.**

**Max Marks: 100**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
2. Missing data, if any, may be suitably assumed.

### MODULE - I

- 1 a) In terms of achieving sustainability and affordability, how are stabilized mud blocks superior when compared with burnt clay bricks Illustrate with suitable example. **10**
- b) In what way does quarrying of natural resources affect the environment. Can you suggest suitable remedial measures (any 4) to overcome/reduce this impact of quarrying on environment **10**

**OR**

- 2 a) Describe the technical characteristics of Bamboo. Can bamboo be used as an active building material for different components in buildings? If so, specify its applications with suitable illustrations/examples. **10**
- b) What are the technical benefits of using construction and demolition waste as a building material? State the application of brick waste in construction. **10**

### MODULE - II

- 3 a) How is rat-trap bond different from Flemish bond. What are its benefits and limitations. **10**
- b) Describe the technical features of ferrocement construction. In what way can ferrocement be efficiently utilized in construction. Give some illustrations **10**

**OR**

- 4 a) How is Pre- engineered construction different from conventional construction? What way can it lead to savings in material and time. Support your answer with suitable examples. **10**
- b) Highlight the construction, benefits and limitation of filler slab system of construction **10**

**Important Note:** Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

### **MODULE - III**

- 5 a) Green buildings are better in terms of sustainable practice. Validate the statement with appropriate justification **10**
- b) How is the current trend of construction of buildings and infrastructure contributing to Global Warming? Elucidate. **10**

### **MODULE - IV**

- 6 a) Elucidate in details the “GRIHA” rating system for green buildings **10**
- b) What does “Integrated Life cycle design of Materials and structure” comprise of? Elaborate with explanation on related concepts **10**

### **MODULE - V**

- 7 a) Elaborate on the concept of Water utilization in buildings along with management approaches **10**
- b) Elaborate on different solar passive cooling techniques which can help in energy savings in building **10**

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B.M.S.C.E. - ODD SEM 2023-24