

310307

Roll No. 18EMLCE072

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**310307**

**B. Tech. III - Sem. (Main) Exam., Dec. - 2019**

**Civil Engineering**

**3CE4-07 Building Materials and Construction**

**Time: 3 Hours**

**Maximum Marks: 120**

**Instructions to Candidates:**

**Part – A:** Short answer questions (up to 25 words)  $10 \times 2$  marks = 20 marks. All ten questions are compulsory.

**Part – B:** Analytical/Problem Solving questions  $5 \times 8$  marks = 40 marks. Candidates have to answer five questions out of seven.

**Part – C:** Descriptive/Analytical/Problem Solving questions  $4 \times 15$  marks = 60 marks. Candidates have to answer four questions out of five.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting materials is permitted during examination.  
(Mentioned in form No. 205)

1. NIL

2. NIL

**PART - A**

- Q.1 Define the term "fire clay". [2]
- Q.2 What do you understand by the term "Conifers"? [2]
- Q.3 Explain in brief about the "X-ray shielding mortar". [2]
- Q.4 What is "Through stone"? [2]
- Q.5 Mention the names of various types of foundations used in building construction. [2]
- Q.6 Define the term "drop arch". [2]

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- Q.7 What do you understand by the term “flight”, which is used in the construction of stairs? [2]
- Q.8 Mention the names of the different kind of temporary structures used in building construction. [2]
- Q.9 Explain in brief about the pitched roof. [2]
- Q.10 What do you understand by the term “Grout”? [2]

### **PART – B**

- Q.1 What are the various ingredients of paints? State the functions of each of them. [8]
- Q.2 Describe briefly the method of preparing lime mortar. [8]
- Q.3 Draw plans of two consecutive courses of walls meeting at right angles, at a corner, in English bond. The walls are 2 bricks and 1½ brick thick. [8]
- Q.4 Explain the term raking shore with neat sketch. [8]
- Q.5 What precautions should be taken during anti – termite treatments? [8]
- Q.6 Describe the brick nagged partitions walls with neat sketch. [8]
- Q.7 Discuss the various considerations taken in planning of stairs for buildings. [8]

### **PART – C**

- Q.1 What is dampness? What are its ill effects? Explain with neat sketches how damp proofing is done in buildings. [15]
- Q.2 What is the function of glass and aluminum strips used in construction of a terrazzo? Describe in detail the method of construction of this floor. [15]
- Q.3 What are the common defects in timber? Describe any five of them, explaining their causes. [15]
- Q.4 What are the different stages of the manufacture of bricks? Describe in brief the different processes of moulding bricks. [15]
- Q.5 What is a lintel? What are the different materials used for the construction of lintels? Draw a neat sketch of an R.C.C. lintel showing the details of reinforcement. [15]