

### 3<sup>RD</sup> SEM./ CIVIL/ 2022(W)

## Th-3 Building Materials & Construction Technology

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1 & 2.  
Figures in the right hand margin indicates marks.

1. Answer **All** questions. 2 x 10
  - a. What are the geological classification of rocks ? Give some examples of sedimentary rocks.
  - b. What are the functions of alumina and silica in brick earth ?
  - c. Name the compounds formed during the setting action of cement. Mention the name of the compound to react with water at the earliest, when water is added with cement.
  - d. Define water-cement ratio ? What is the effect of increasing the water-cement ratio on strength of concrete ?
  - e. What is bulking of sand ?
  - f. What is seasoning of timber ?
  - g. As per National Building Code of India, buildings are classified into how many groups as per occupancy ? Name any four.
  - h. What are the objectives of providing foundations for structures ?
  - i. Differentiate between English bond and Flemish bond.
  - j. Define these two terms;
    - a) Baluster
    - b) D.P.C.
2. Answer **Any Six** Questions. 6 x 5
  - a. State the qualities of good bricks .
  - b. Define workability. Explain the Slump Test in details.
  - c. Mention the qualities of good timber.
  - d. Explain cast in situ terrazzo flooring.
  - e. Explain different types of staircase.
  - f. What are the aims of Energy Management in buildings?
  - g. What are the principles of damp proofing ?
3. Briefly explain the steps involved in the manufacture of ordinary Portland cement with a neat flow diagram. 10
4. What are the various ingredients of paints? State the functions of each of them. 10
5. Briefly explain the process of manufacture of bricks in details. 10
6. Name various types of Doors. Describe any two types of doors with neat sketches. 10
7. What is green building ? Explain in details the features or principles of Green Building. 10