Paper Id: | **100301** | **Roll No:**

B.TECH
(SEM III) THEORY EXAMINATION 2019-20
BUILDING MATERIALS AND CONSTRUCTION

Time: 3 Hours   *Total Marks: 70*

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   **Attempt** *all* **questions in brief.**   **2 x 7 = 14**

a.	What do you understand by the term efflorescence and lime bursting?
b.	What is seasoning of Timber?
c.	Explain the term HVAC.
d.	What are elastomers?
e.	What are the properties of good mortar?
f.	Draw a sketch showing the position of gable and dormer widow.
g.	Explain bulking of sand.

SECTION B

2.   **Attempt any** *three* **of the following:**   **7 x 3 = 21**

a.	Explain the various tests that need to be performed to ensure the suitability of cement.
b.	Explain how pre-construction anti termite treatment is carried out in a building
c.	Give the classification of building as per NBC with suitable examples
d.	Discuss the general principles that need to be observed in brick masonry construction.
e.	Explain the various measures taken for limiting the spread of fire in a building.

SECTION C

3.   **Attempt any** *one* **part of the following:**   **7 x 1 = 7**

(a)	What is Pozzolona? Explain the various pozzolanic materials
(b)	Explain with neat sketches the various defects of timber.

4.   **Attempt any** *one* **part of the following:**   **7 x 1 = 7**

(a)	Explain the various properties of plastics and their use in construction Industry.
(b)	Explain the term damp proofing. What are the various methods of damp proofing?

5.   **Attempt any** *one* **part of the following:**   **7 x 1 = 7**

(a)	What do you understand by the term "bonds in Brick work?" Compare English and Flemish Bonds and also draw the plan of successive courses of $1\frac{1}{2}$ brick thick wall in both the bonds.
(b)	What is the functional requirement of lintel? Write short notes on the following with suitable sketches (i) Bay Window (ii) Revolving door

6.   **Attempt any** *one* **part of the following:**   **7 x 1 = 7**

(a)	Explain the various types of flat roofs
(b)	Discuss the various principles of planning of the building

7.   **Attempt any** *one* **part of the following:**   **7 x 1 = 7**

(a)	What do you mean by Acoustics? As an engineer what are the probable solutions for treating the acoustical defects of a lecture room.
(b)	What is pointing and where is it required? Explain the various types of pointing with suitable sketches.