

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2019****Subject Code: 2134002****Date: 07/06/2019****Subject Name: Building Technology & Materials****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
<b>Q.1</b>	(a) Define the following terms (i) Frog (ii) Quoin (iii) Closer.	<b>03</b>
	(b) Define 'Underpinning'. Explain in which situations you will used underpinning techniques and Enlist types of underpinning techniques used commonly in practice.	<b>04</b>
	(c) Briefly describe the causes of failure of foundation and their remedial measures.	<b>07</b>
<b>Q.2</b>	(a) Enlist various types of bonds of brick masonry construction.	<b>03</b>
	(b) Describe various types of 'Pointing' with neat sketch.	<b>04</b>
	(c) What is cavity wall? Explain advantages of cavity walls. What precautions to be taken during cavity wall construction?	<b>07</b>
	<b>OR</b>	
	(c) Which bond you will recommend for construction of one and half brick masonry wall for load bearing structure? Explain it in detail with neat sketch.	<b>07</b>
<b>Q.3</b>	(a) What are the requirement of good formwork?	<b>03</b>
	(b) Differentiate between of Flat roofs and Pitched roofs.	<b>04</b>
	(c) Write essential requirements of a floor. Explain cement concrete flooring with advantages and disadvantages of it.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Explain the meanings of the following designations as recommended by the BIS for doors and windows: 8 DT 20 ; 6 WS 12 ; 10 WT 13	<b>03</b>
	(b) Draw a neat sketch of needle scaffolding and show its various component in figure.	<b>04</b>
	(c) Explain King - post truss with neat sketch.	<b>07</b>
<b>Q.4</b>	(a) What are the objects and basic characteristics of an ideal paint?	<b>03</b>
	(b) What are the functional requirement of lintels? Explain various types of lintels based on the materials used.	<b>04</b>
	(c) Enlist various types of Windows. Explain Bay window and Sky-light window with figure.	<b>07</b>

**OR**

- Q.4** (a) What are essential requirements of good plaster? **03**  
(b) Explain various causes of failures of arches. **04**  
(c) What are the different types of the opening provided in buildings? **07**  
Which types of door you are recommend for Shops and Showrooms and also explain it in details along with neat sketch.

- Q.5** (a) Write short note on 'Ceramic products'. **03**  
(b) Explain handling of heavy construction equipment with safety at construction site. **04**  
(c) Draw a neat sketch of Dog-legged stair and explain it briefly. **07**

**OR**

- Q.5** (a) Explain various types of 'Lime' based on purity of limestone. **03**  
(b) What are the important measures need to be taken care for safety against fire at construction site? **04**  
(c) Describe the following types of staircase in detail with neat sketch: **07**  
(i) Circular stair (ii) Bifurcated stair.

\*\*\*\*\*

[www.FirstRanker.com](http://www.FirstRanker.com)