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| Seat No.: | Enrolment No. |
| Dear 110 | Linomicht No. |

Subject Code: 2130607

Subject Name: Building construction

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (New) EXAMINATION – WINTER 2015

Date:18/12/2015

| | ± ± | | | Total Marks: 70 | |
|--------|-------------|--|---|-----------------|--|
| Instru | 1. 2. | Attempt all questions.Make suitable assumptions wherever necessary. | | | |
| | | | | MARKS | |
| | Q. 1 | 1 | Short Questions | 14 | |
| | | 1 2 | Enumerates any four components of building. Suggest the methods of sub-surface investigation for har rock material. | rd | |
| | | 3 | Write the function of frog in brick. | | |
| | | 4 | Give the standard and nominal size of brick. | | |
| | | 5 | Define header and stretcher with figure. | | |
| | | 6 | Explain cornice and corbel with figure. | | |
| | | 7 | Give the situations under which various stone masonric are used. | es | |
| | | 8 | Explain the purpose of providing cavity wall. | | |
| | | 9 | Write two advantages of hollow concrete masonry | | |
| | | 10 | Explain water cement ratio and state its range. | 0 | |
| | | 11 | Explain the differences between pitched roof and flat roo | f. | |
| | | 12 | Enumerate various defects in plastering. | | |
| | | 13 | Differentiate between shoring and underpinning. | | |
| | | 14 | Enlist the materials used for damp-proofing. | | |
| | Q.2 | 2 (a) | Explain the purposes of sub-surface investigation. | 03 | |
| | | (b) | Explain the classification of windows and discuss any or of them with a neat sketch. | ne 04 | |
| | | (c) | Give a pointwise comparison between stone masonry an | d 07 | |
| | | | brick masonry. | | |
| | | | OR | | |
| | | (c) | Describe with figure various precautions to be taken foundations in black cotton soil. | | |
| | Q.3 | 3 (a) | Describe the points to be kept in mind while selecting the method of site exploration. | | |
| | | (b) | Draw a neat sketch of one brick thick English bond are describe the characteristics of English bond. | d 04 | |
| | | (c) | Describe various causes of failure of foundation and the remedies. | ir 07 | |
| | | | OR | | |
| | Q.3 | | Describe various defects in brick masonry. | 03 | |
| | | (b) | Define composite masonry and explain anyone its type with figure. | pe 04 | |
| | | (c) | Describe in brief | 07 | |
| | | (-) | (1) Hollow concrete block masonry (2) Cavity walls | - | |
| | Q. 4 | 4 (a) | Differentiate between precast and cast-in-situ concre construction. | te 03 | |
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| | (b) | Draw a neat sketch of door with all components and | 04 |
|-----|------------|---|----|
| | | describe the function of each component. | |
| | (c) | Describe the classification of stair and discuss any two of | 07 |
| | | them in details (with figure). | |
| | | OR | |
| Q.4 | (a) | Explain essential requirements of floor. | 03 |
| | (b) | Describe lean to roof with a neat sketch. | 04 |
| | (c) | Explain the following in relation of roof (with a figure) | 07 |
| | | (1) Rise (2) Pitch (3) Principal rafter (4) Common rafter | |
| | | (5) Purlin (6) Cleat (7) Ridge | |
| Q.5 | (a) | Discuss in brief various roof covering materials. | 03 |
| | (b) | Define pointing and its types in brief. | 04 |
| | (c) | Define scaffolding and its component parts. Describe | 07 |
| | | needle scaffolding in detail (with figure) | |
| | | OR | |
| Q.5 | (a) | Discuss cause of fire and its precautionary measures. | 03 |
| | (b) | Discuss various principles to be followed for providing | 04 |
| | | damp proofing. | |
| | (c) | Write short note on | 07 |
| | | (1) Thermal insulation (2) Anti-termite treatment | |
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