| Seat N | Ло ·                                  | Enrolment No.   |          |
|--------|---------------------------------------|---|----------|
| Sout 1 |                                       | GUJARAT TECHNOLOGICAL UNIVERSITY  | -        |
|        |                                       | BE- IV <sup>th</sup> SEMESTER-EXAMINATION – MAY/JUNE- 2012  |          |
| U      | Subject code: 140602 Date: 25/05/2012 |   |          |
| •      |                                       | Jame: Building construction   | 70       |
| Instr  |                                       | 30 am – 01:00 pm Total Marks:   | /0       |
| 111511 |                                       | OHS:<br>Attempt all questions.  |          |
|        | 2. ]<br>3. ]                          | Make suitable assumptions wherever necessary. Figures to the right indicate full marks. Supplement your answers with neat sketch  |          |
| Q.1    | (a)                                   | Explain the purposes of sub-surface investigations and discuss wash boring  | 07       |
|        | <b>(b)</b>                            | in detail  Describe the following types of stair with line diagram. Also state the  | 07       |
|        | (0)                                   | conditions under which they are provided (1) dog-legged stair (2) Open-well stair (3) Quarter- turn stair   | 07       |
| Q.2    | (a)<br>(b)                            | Explain the difference between English bond and Flemish bond with figure. Define the following terms with figure (1) King closer (2) Queen closer (3) Frog (4) Jambs (5) Reveals (6) Throating (7) Coping | 07<br>07 |
|        | <b>(b)</b>                            | OR Discuss the problems of foundation in black-cotton soils. Describe their preventive measures.  | 07       |
| Q.3    | (a)<br>(b)                            | Give a point wise comparison of brick and stone masonry.<br>Classify the stone masonry and describe the ashlar masonry in detail with figures.  | 07<br>07 |
| Q.3    | (a)                                   | OR  Describe the ingredients of reinforced cement concrete and explain the  | 07       |
|        | <b>(b)</b>                            | function of each ingredient.  Describe the factors affecting the selection of size, shape, location and number of windows in rooms.   | 07       |
| Q.4    | (a)                                   | Classify various types of doors. Discuss flush door and collapsible steel door in detail.   | 07       |
|        | <b>(b)</b>                            | Explain essential requirements of floor and describe tiled flooring.  OR  | 07       |
| Q.4    | (a)                                   | Define the following terms in relation to roof  | 07       |
|        | <b>(b)</b>                            | (1) Span (2) Rise of a roof (3) Ridge (4) Eaves (5) Gable (6) Purlins (7) Common rafter (1)Explain the factors affecting the selection of types of roof covering.   | 07       |
|        | (D)                                   | (2) Enlist various materials used in roof covering.   | U/       |
| Q.5    | (a)                                   | Define mortar. Describe lime mortar and cement mortar used for plastering.  | 07       |
|        | <b>(b)</b>                            | <ul><li>(1) Define shoring and underpinning</li><li>(2) Write a note on needle scaffolding and dead shores.</li><li>OR</li></ul>  | 07       |
| Q.5    | (a)                                   | Describe damp proofing treatment for the following (1) Foundation (2) Floor (3) Parapet   | 07       |
|        | <b>(b)</b>                            | What is sound insulation? What are the various effective measures adopted to  | 07       |

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achieve sound insulation in a building.