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Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV(OLD) • EXAMINATION - WINTER 2016

Subject Code:140602 Date:19/11/2016 **Subject Name: Building Construction** 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. **Q.1** What are the purposes of sub-soil exploration? Explain in brief, following **(a)** 07 methods of site exploration: (i) Auger boring, (ii) Wash boring. Enlist and Discuss various types of shallow foundation. **(b)** 07 Describe the causes of failures of foundation and their preventive measures. **O.2** 07 (a) What are the problems of foundations on black cotton soils? Explain with sketch **(b)** 07 one of the approach for foundation in black cotton soil. OR What are the special treatments for buildings? Explain any one in detail. 07 **(b) Q.3** Enlist different types of stone masonry. Describe with neat sketch different types 07 (a) of rubble masonry. Compare stone masonry and brick masonry. 07 **(b)** OR Discuss Points to be considered while Supervising Brick Masonary work. Q.3 07 **(a)** What is bond in brick masonry? What is its significance? Disuses rules for **(b)** 07 bonding? Distinguish between lintel & an arch. Draw a neat sketch of an arch and show on **Q.4** 07 (a) it various technical terms used in its construction. Discuss the factors affecting the selection of size, shape, location and number of 07 **(b)** windows in rooms. OR Enlist various types of doors and explain partly glazed and partly paneled door **Q.4** 07 (a) figure. Also indicate usual sizes of the component for the same. Describe requirements of good stairs explaining each requirement clearly. **(b)** 07 Describe and compare cast-in-situ and pre-cast construction. Q.5 07 (a) Discuss various factors affecting the selection of flooring material. 07 **(b)** OR **Q.5** Define the following terms in relation to roof with figure (1) Ridge line (2) 07 (a) Common rafter (3) Purlin (4) Cleat (5) Eaves Board (6) valley line (7) Gable What are the various types of scaffolding? Describe single and double 07 **(b)** scaffolding with sketch.
