

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- IVth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 140602****Date: 25/05/2012****Subject Name: Building construction****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Supplement your answers with neat sketch

- Q.1** (a) Explain the purposes of sub-surface investigations and discuss wash boring in detail **07**
- (b) Describe the following types of stair with line diagram. Also state the conditions under which they are provided **07**
(1) dog-legged stair (2) Open-well stair (3) Quarter- turn stair

- Q.2** (a) Explain the difference between English bond and Flemish bond with figure. **07**
- (b) Define the following terms with figure **07**
(1) King closer (2) Queen closer (3) Frog (4) Jambs (5) Reveals (6) Throating (7) Coping

OR

- (b) Discuss the problems of foundation in black-cotton soils. Describe their preventive measures. **07**

- Q.3** (a) Give a point wise comparison of brick and stone masonry. **07**
- (b) Classify the stone masonry and describe the ashlar masonry in detail with figures. **07**

OR

- Q.3** (a) Describe the ingredients of reinforced cement concrete and explain the function of each ingredient. **07**
- (b) 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) Explain essential requirements of floor and describe tiled flooring. **07**

OR

- Q.4** (a) Define the following terms in relation to roof **07**
(1) Span (2) Rise of a roof (3) Ridge (4) Eaves (5) Gable (6) Purlins (7) Common rafter
- (b) (1) Explain the factors affecting the selection of types of roof covering. **07**
(2) Enlist various materials used in roof covering.

- Q.5** (a) Define mortar. Describe lime mortar and cement mortar used for plastering. **07**
- (b) (1) Define shoring and underpinning **07**
(2) Write a note on needle scaffolding and dead shores.

OR

- Q.5** (a) Describe damp proofing treatment for the following **07**
(1) Foundation (2) Floor (3) Parapet
- (b) What is sound insulation? What are the various effective measures adopted to achieve sound insulation in a building. **07**
