

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Remedial Examination Nov/ Dec. 2010****Subject code: 140602****Subject Name: Building Construction****Date: 03 / 12 / 2010****Time: 03.00 pm – 05.30 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw neat and clean sketches. Make suitable notations and labels on it.

- Q.1** (a) Write size of brick. Enlist types of bonds in brickwork. Sketch English bond for 1.5 brick thick wall. **07**
- (b) Enlist types of doors. Write size of doors of residential buildings. Sketch solid core flush door. **07**

- Q.2** (a) Draw single flight staircase and label various components of stair on it. Also sketch various types of steps with their names. **07**
- (b) Write the purposes of site exploration. Enlist various methods of site exploration. Explain seismic refraction method with sketch. **07**

OR

- (b) Write various factors affecting the selection of site exploration method. Enlist various boring methods adopted for site exploration. Explain wash boring with sketch. **07**

- Q.3** (a) What are the causes of failure of foundation? **07**
When do you suggest :
1. Combined footing
2. Strap footing
3. Raft foundation

Also state that which type of foundation is suitable for black cotton soil?

- (b) Write the difference between **03**
1. English bond and Flemish bond **04**
2. Rubble masonry and ashlar masonry

OR

- Q.3** (a) What is composite masonry? Write various types of it. Explain any one in detail. **07**
- (b) Explain with sketch: **04**
1. R.C.C.Lintel **03**
2. Semicircular brick arch

- Q.4** (a) What is cavity wall? Write advantages of cavity walls. What precautions to be taken during cavity wall construction? **07**
- (b) Explain water-cement ratio, Grades of concrete and Curing of concrete. **07**

OR

- Q.4** (a) Write the factors affecting selection of size, shape, location and number of windows. Sketch casement window and label various components of window on it. **07**
- (b) Write essential requirements of a floor. Explain cement concrete flooring with advantages and disadvantages of it. **07**

- Q.5 (a)** What is pitched roof? What are the types of it? What are the roof coverings for it? **07**
Sketch king post truss with labels.
- (b)** What is the difference between plastering and pointing? Discuss cement mortar plastering. **07**

OR

- Q.5 (a)** Define shoring, underpinning and scaffolding. Sketch brick layer's scaffolding. **07**
- (b)** What are the special treatments for buildings? Explain any one in detail. **07**
