

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PLAN - SEMESTER-I EXAMINATION – WINTER 2015**

**Subject Code: 1015503**

**Date: 21/12/2015**

**Subject Name: Materials & Principles of construction**

**Time: 10:30am to 12:30pm**

**Total Marks: 50**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Attempt any five in one or two sentence. **05**
- What is bond in masonry work ?
  - What is course random rubble stone masonry?
  - What is quarry sap ?
  - What is malleable property of metal ?
  - Which are industrial ( Engineered ) wood ?
  - What is water seal ?
- (b)** fill in the blanks ( any five ) **05**
- a. Innermost part of tree trunk is called -----.
  - b. Mixture of cement sand and water is called -----.
  - c. Plaster of paris is by-product of -----.
  - d. ----- is not malleable metal.
  - e. Sap of wood is reduced by ----- process.
  - f. In load bearing wall construction structure below ground is called ----.
- Q.2 (a)** Differentiate load bearing structure and frame structure. **05**
- (b)** What are the main constituents of concrete & describe briefly how it is produced ? **05**
- OR**
- (b)** Which are the iron ore available in india ?describe briefly. **05**
- Q.3 (a)** Enlist various types of stone dressing & sketch any two type of dressing with tools used for it. **05**
- (b)** Compare hard wood with soft wood. **05**
- OR**
- Q.3 (a)** Enlist various types of cement. **05**
- (b)** Enlist various types of glass. **05**
- Q.4 (a)** Write any one short note with sketch from following. **05**
- Retaining wall

- Culvert and aquaduct.
- (b) Compare cast iron with mild steel. **05**
- OR**
- Q.4** (a) Describe briefly method of distribution of water supply in town. **05**
- (b) Define soil sewage and sullage. **05**
- Q.5** (a) classify urban roads and sketch section of one of them. **05**
- (b) Enlist various types of brick masonry bond and sketch any one isometric view of it. **05**
- OR**
- Q.5** (a) Elaborate any five abbreviation from following. **05**  
MH, GT, IC, NT, RWP, SP, WP, VP
- (b) Define following components of building in single sentence. ( any five) **05**  
lintel, Plinth, Foundation, Parapet, Sill, Coping

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