

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1721401

Date: 06/07/2012

Subject Name: Advanced Civil Engineering Materials

Time: 10:30 am – 13:00 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 (a)** Write short note on the manufacture of bricks by bull's trench kiln. **07**
(b) Comment on composition, Properties and uses of the following types of stones: Granite, Marble, Basalt, slate. **07**

- Q.2 (a)** Write short note on “causes of deteriorations”. **07**
(b) Describe briefly with sketches the process of manufacture of good Portland cement. **07**

OR

- (b)** Explain briefly functions of ingredients of cement, Explain briefly various tests carried out for testing of Portland cement. **07**
- Q.3 (a)** Write short note on “construction materials for high rise structures”. **07**
(b) Give the classification of ceramics materials and Describe the mechanical properties of ceramics. **07**

OR

- Q.3 (a)** Explain the effects of superplasticiser on fresh and hardened concrete. **07**
(b) Write short note on “polymer concrete”. **07**
- Q.4 (a)** Explain briefly on “Applications of plastics in civil engineering”. **07**
(b) What are the various ingredients of paints? State the functions of each of them. **07**

OR

- Q.4 (a)** Describe briefly the classification of tar and the specifications of bitumen a biding materials. **07**
(b) Describe briefly application of glass in building industry. **07**
- Q.5 (a)** Write short note on “properties of polymer materials”. **07**
(b) What is an adhesive? What are advantages and disadvantages of adhesives over the conventional methods of bolting, riveting and welding? **07**

OR

- Q.5 (a)** Write short note on “Water stops”. **07**
(b) “Without heat treatment, steel may be as good a material as pig iron or cast iron”.Critically examine the statement and give your comments. **07**
