

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1721506

Date: 23-06-2014

Subject Name: Rehabilitation and Retrofitting of Buildings

Time: 02:30 pm - 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.
4. Draw the necessary neat and clean figures with the pencil only.

- Q.1** (a) Explain how the strengthening of earthquake damaged buildings is carried out? **07**
(b) Explain the push over analysis. **07**
- Q.2** (a) What are the roles of quality control in construction as preventive measures? **07**
(b) Differentiate the following terms. **07**
(i) Active Repair and Passive Repair
(ii) Strengthening and retrofitting
(iii) Repair and Rehabilitation
- OR**
- (b) Elaborate the method of Repair and its importance depending upon situation. **07**
- Q.3** (a) Explain how the corrosion assessment in reinforcement in RCC elements is to be carried out? **07**
(b) Write on Non destructive testing of connections in steel. **07**
- OR**
- Q.3** (a) Explain how the corrosion assessment in reinforcement in Steel elements is to be carried out? **07**
(b) Explain in detail Rebar locator and SASW method. **07**
- Q.4** (a) Explain stress reduction method in detail. **07**
(b) Explain the survey procedure and assessment of structural conditions in RCC structures. **07**
- OR**
- Q.4** (a) Explain the effect of abrasion, erosion and cavitations on RCC structures. **07**
(b) Explain the survey procedure and assessment of structural conditions in steel structures. **07**
- Q.5** (a) Explain Cathodic protection detail. **07**
(b) Explain the effect of weather on durability of concrete. Explain Alkali-silica reaction. **07**
- OR**
- Q.5** (a) Explain on durability of concrete. Elaborate the factors affecting the durability of concrete. **07**
(b) What is rapid visual screening? Explain in detail. **07**
