

# C.U.SHAH UNIVERSITY

## Summer Examination-2017

**Subject Name: Repairs and Rehabilitation of Structure**

**Subject Code: 4TE07RRS1**

**Branch: B.Tech (Civil)**

**Semester: 7**

**Date: 27/03/2017**

**Time: 02:30 To 05:30**

**Marks: 70**

**Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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- Q-1 Attempt the following questions (14)**
- a) Define diffusion. (1)
  - b) Which compound can be used as iron corrosion reducer? (1)
  - c) Which is the best fire resistance aggregate? (1)
  - d) Which cement is appropriate for repairing cracks in RCC work? (1)
  - e) The treatment of a surface to prevent the passage of water under hydrostatic pressure is..... (1)
  - f) Blow-holes are caused by..... (1)
  - g) Which material is used to protect the steel form rusting? (1)
  - h) The most common method of foundation rehabilitation is..... (1)
  - i) Define autogenous healing. (1)
  - j) What is the minimum width of routing for sealing of cracks in concrete by epoxy? (1)
  - k) How the sulphate attack can be controlled? (1)
  - l) Most suitable cement for concrete for under sea water application is..... (1)
  - m) Define Repair. (1)
  - n) Define Rehabilitation. (1)

**Attempt any four questions from Q-2 to Q-8**

- Q-2 Attempt all questions (14)**
- A) Write short note on RCC jacketing. (7)
  - B) Describe in brief, the various methods of demolition. (7)
- Q-3 Attempt all questions (14)**
- A) Which points should be considered during the procedure of safe demolition of structure? (7)
  - B) What are the objectives of condition survey? In detail explain the various stages of condition survey. (7)
- Q-4 Attempt all questions (14)**
- A) Write requirements as per IS: 456-2000 for durability of RCC structure. (7)
  - B) Write short note on polymer concrete. (7)



- Q-5**            **Attempt all questions**     **(14)**
- A)** Explain complete process of concrete guniting. In which condition guniting is preferred over jacketing?     **(7)**
  - B)** Explain the methodology to repair a earthquake deficient masonry structure.     **(7)**
- Q-6**            **Attempt all questions**     **(14)**
- A)** Explain protection measures to public during demolition.     **(7)**
  - B)** List various non-destructive tests for assessment of strength of concrete. Explain rebound hammer test.     **(7)**
- Q-7**            **Attempt all questions**     **(14)**
- A)** Explain factors affecting on permeability of concrete.     **(7)**
  - B)** Write short note on polymer latex concrete including its general requirement, Field application and properties.     **(7)**
- Q-8**            **Attempt all questions**     **(14)**
- A)** Distinguish between rehabilitation and retrofitting.     **(7)**
  - B)** What are the essential parameters of good repair material?     **(7)**

