

Seat No. : _____

15G-122

May-2015

B.Arch. (BCT) Sem.-VIII

AR-BCT-804 : Building Maintenance & Rehabilitation

(Regular-New)

Time : 2 Hours]

[Max. Marks : 50

Instructions : (1) Write answer to the point.
(2) Figures to the right indicate full mark.

1. Explain the following : (Any **two**) **10**
 - (1) What is Structural Health Monitoring (SHM) ? Enlist instrumentation used for SHM.
 - (2) What are the points to be considered / checked being Forensic Engineering Expert Consulting Services ? And enlist the appliance failures includes by them.
 - (3) Enlist list of types, sources and cause of failure considered by forensic engineers.

2.
 - (1) Explain difference between repair and maintenance. **2**
 - (2) Enlist classification of cracks and give reason for crack development. **3**
 - (3) Describe brief procedure to repair corrosion affected reinforcements in concrete columns with neat sketches. **5**

3.
 - (1) Enlist and discuss factor affecting corrosion in reinforcement. **3**
 - (2) Define carbonation and its effects on concrete. **2**
 - (3) Explain term repair, retrofitting, restoration, strengthening, rehabilitation. **5**

4.
 - (1) Enlist and explain factor influencing the maintenance. **3**
 - (2) Enlist different types of non-destructive test and explain pulse velocity test in detail. **5**
 - (3) Define grouting and enlist properties required for good grout. **2**

5.
 - (1) Enlist strengthening or retrofitting methods for beam and explain any one in detail. **5**
 - (2) Enlist tools – equipment required for different methods of repair includes RCC, Brick, Steel, Stone. **3**
 - (3) Enlist various causes of building failure includes RCC frame structure and load bearing structure. **2**

15G-122