

Date: 20/5/19

Time: 3 Hrs

Max Marks:80

PLEASE NOTE:

1. Question No 1 is Compulsory.
2. Attempt any three questions out of remaining questions.
3. Figures to the right indicate full marks.

- Q1 Answer any four questions 20
- a) Explain how the structures are distressed due to fire.
 - b) List the various stages of conditional survey.
 - c) Explain the use of pre mixed cement concrete as a repair material.
 - d) Discuss the guniting method used for repair of structures.
 - e) Discuss the effects of earthquake on structure.
- Q2 a) Explain the Ultrasonic Pulse Velocity method for diagnosis and assessment of deterioration in concrete structures 10
- b) What special precautions are required for repair of heritage structures. 10
- Q3 a) Consider a building affected by cyclone. Discuss this as a case study. Analyse its various effects and suggest suitable methods of remedy. 10
- b) Describe the steel jacketing method for strengthening of concrete structures. 10
- Q4 a) State the reasons for repair of tunnels. How the procedure to repair tunnels is carried out. 10
- b) You are drafting a tender for repair of an industrial structure. Explain the guidelines for framing the tender. 10
- Q5 a) Explain the procedure to decide the retrofitting method for a structure. What factors must be considered. 10
- b) Explain the modelling of repaired composite structure. 10
- Q6 a) Explain the procedure to distinguish different types of cracks. 10
- b) Write a note on non-destructive testing. 10
