

Jaypee University of Information Technology, Waknaghat

T 3 Examination – December 2018

M. Tech. 3rd Semester (Construction Management and Structural Engineering)

Dr. Pardeep Kumar

Course Code: 12M1WCE332

Max. Marks: 35

Course Name: Repair and Retrofitting of Structures

Course Credit: 03

Max. Time: 120 Minutes

Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Assume any missing data.

- Q.1 Define horizontal structural irregularities. State the codal provision for irregularities and draw sketches. [4]
- Q.2 Define vertical structural irregularities. State the codal provision for vertical irregularities and draw sketches. [4]
- Q.3 Detail the cause of distressing in reinforced concrete structures. [3]
- Q.4 Detail the damages (foundation and superstructure) in reinforced concrete structure due to earthquake. [3]
- Q.5 Write the damage assessment criteria for reinforced concrete structure along with class of damage. [4]
- Q.6 Explain seismic capacity reduction factor in detail. [3]
- Q.7 Differentiate the following terms;
Repair, retrofitting, strengthening, rehabilitation [3]
- Q.8 List the properties requisite for a repair material with justification. [4]
- Q.9 List the different classes involved in repair methodology. [2]
- Q.10 (a) Differentiate local and global retrofitting techniques. [1]
(b) Write the techniques involved in global and local retrofitting. [2]
(c) Draw load-deformation (strength-drift) with retrofitting technique. [2]