Dr Pankaj Kumar

Jaypee University of Information Technology, Waknaghat

T-1 Examination- February 2019

B. Tech. 7th Semester (Civil Engg.) & M. Tech. 2nd Semester (Structural Engg.)

Course Code: 12M1WCE214

Course Name: Theory of Plates and Shells **Max. Marks:** 15

Course Credit: 03 **Time:** 60 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 plate with examples (any four). 2

Q .2. Define plate behaviour influencing parameters under static and dynamic loading. 1

Q .3. Discuss the subdivision of plates based on thickness to governing length (h/L) ratio. And, also detail the internal forces carrying mechanism for each. 3

Q .4. Write assumptions used to derive governing differential equation. 2

Q .5. Draw a sketch showing internal stresses in a rectangular plate subject under uniformly distributed loading in y and z axes. Write governing differential equation in Cartesian coordinate system and Laplacian operator form. 4

Q .6. Write classification for boundary conditions of Kirchhoff's plate theory in bending. 3