

Dr. Abhilash Shukla

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April 2019

B.Tech VIII Semester AND M.Tech II Semester

COURSE CODE:12M1WCE211

MAX. MARKS: 25

COURSE NAME: Solid Mechanics in Structural Engineering

COURSE CREDITS: 03

MAX. TIME: 1.5 Hrs

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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1. Discuss the Mohr's circles for the three dimensional state of stress. (5)
2. Derive the stress strain relations for linearly elastic solids. (5)
3. Derive the compatibility conditions for strain. (5)
4. Discuss the cubical dilation in analysis of strain. (5).
5. Discuss the maximum normal stress theory, Maximum shear stress theory, Maximum strain theory and octahedral shear stress theory. (5)