JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION-2025

B.Tech VIII Semester (CE)

COURSE CODE (CREDITS): 18B1WCE733 (3) MAX. MARKS: 15

COURSE NAME: Advanced Foundation Engineering

COURSE INSTRUCTORS: Dr. Saurav MAX. TIME: 1 Hour

Note: ***(a)*** *All questions are compulsory.*

(b)Marks are indicated against each question in square brackets.

Q.No	Question	CO	Marks
Q1	Draw the graph for shear stress vs shear strain for a dense sand and normally consolidated clays. Explain why failure occurs at small strain of 4-5% in case of dense sand.	1	4
Q2	Explain the importance of Mat foundation. Elaborate the significance of mat foundation in Sands and in Clays.	2	5
Q3.	A beam of length 4 m and width 0.75 m rests on stiff clay. A plate load test carried out at the site with the use of a square plate of size 0.30 m gives a coefficient of sub grade reaction k_1 equal to 25 MN/m^3. Determine the coefficient of sub grade reaction for the beam.	1	4
Q4.	Draw the graphical representation of the following a) Volume change vs Shear strain curve in case of dense sand and loose sand b) Pore pressure change vs shear strain curve in case of dense sand and loose sand	2	2