JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-VI Semester (CE)

COURSE CODE (CREDITS): 18B1WCE634   MAX. MARKS: 15

COURSE NAME: Transportation Engineering

COURSE INSTRUCTORS: Dr. Amardeep   MAX. TIME: 1 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required

for solving problems

Q.No	Question	CO	Marks
Q1	Find the steepest gradient on a 2° curve for a BG line with a ruling gradient of 1 in 200.	CO-2	1
Q2	Differentiate between different types of rails along with their merits and demerits.	CO-1	3
Q3	A BG branch line track takes off as a contrary flexure through a 1 in 12 turnout from a main line track of a 3° curvature. Due to the turnout, the maximum permissible speed on the branch line is 30 km/h. Calculate the negative superelevation to be provided on the branch line track and the maximum permissible speed on the main line track (when it takes off from a straight track)	CO-3	3
Q4	What is the importance of transition curve in railway system? Please discuss in detail.	CO-2 CO-3	2
Q5	Discuss any two methods of Setting Out a Circular Curve in detail along with proper sketch.	CO-3	3
Q6	A curve of 600 m radius on a BG section has a limited transition of 40 m length. Calculate the maximum permissible speed and superelevation for the same. The maximum sectional speed (MSS) is 100 km/h.	CO-3	3