JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-V^{th} Semester (CE)

COURSE CODE (CREDITS): 18B11CE511(3)   MAX. MARKS: 15

COURSE NAME: Highway Engineering

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

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	Discuss in detail step by step about the Highway development in India? Please specify the role of each committee for the same in detail.	CO -1	03
Q2	The stopping sight distance (SSD) for a level highway is 140 m for the design speed of 90 km/h. The acceleration due to gravity and deceleration rate are 9.81 m/s2 and 3.5 m/s2, respectively. Calculate the perception/reaction time (in s, round off to two decimal places) used in the SSD.	CO -2	05
Q3.	A highway is designed for a speed of 65 kmph to carry mixed traffic, the superelevation is not to exceed 7% & coefficient of lateral friction is 0.15. Radius of horizontal curve is 125 m then which of the following statement is correct? a. Design speed of 65 kmph is allowed b. Maximum speed can be allowed only up to 30 kmph c. Maximum speed can be allowed only up to 50 kmph d. Speed up to 80 kmph can be allowed	CO -2	05
Q4.	What do you mean by superelevation? How it ill be calculated? Discuss each step.	CO -2	02