

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATIONS-2024

B.Tech-V Semester (Civil)

COURSE CODE (CREDITS): 18B11CE511

MAX. MARKS: 15

COURSE NAME: Highway Engineering

COURSE INSTRUCTORS: Dr. Amardeep

MAX. TIME: 1 Hours

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

- Q. 1. Calculate the Stopping Sight Distance for two-way traffic in a Single Lane Road. The design speed of the Road is 60 kmph. Assume Reaction time of the driver as 2.5 sec and Co-efficient of friction as 0.6. Brake efficiency is 50%. [CO2] (3)
- Q. 2. The speed of overtaking and the overtaken vehicle is 80kmph and 65 kmph respectively on two-way traffic. The acceleration of the overtaking vehicle is 3.6 kmph. Calculate. (i) Safe overtaking sight distance. (ii) Minimum and desirable overtaking zone. [CO2] (3)
- Q. 3. Design the rate of superelevation for a horizontal highway curve of radius 500m and speed 90kmph. for mixed traffic conditions. [CO2] (4)
- Q. 4. Explain the following:- [CO1]
- Superelevation
 - Different types of gradient
 - Intermediate sight distance
 - Different defects occurred in flexible pavement
 - Soil stabilisation.
- (5X1=5)