

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2026

B.Tech-IV<sup>th</sup> Semester (CE)

COURSE CODE (CREDITS): 24B11CE412(3)

MAX. MARKS: 25

COURSE NAME: Highway Engineering

COURSE INSTRUCTORS: Dr. Amardeep

MAX. TIME: 1Hour 30 Minutes

**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 about the different categories of roads along with their application and specifications.	CO -1	05
Q2	Calculate the OSD for a two-way traffic highway with a design speed of 80 km/h. (Take $t = 2$ sec and $a = 0.72$ m/s <sup>2</sup> )	CO -3	04
Q3.	Find the setback distance (m) from the centerline of a 2-lane road to provide a Stopping Sight Distance (SSD) of 80 m. (Assume $R = 300$ m and length of curve is 200 m)	CO -2	05
Q4.	(a) Discuss step by step detail about the provision of superelevation on highway. (b) Discuss different methods of superelevation attainment.	CO -2	04
Q5.	What kind of distresses are supposed to occurred in flexible pavement? Discuss in detail.	CO -4	04
Q6.	Calculate the length of a summit curve connecting a +3% gradient to a -5% gradient for an SSD of 128 m.	CO -2	03