

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-Vth Semester (Civil)

COURSE CODE (CREDITS): 18B11CE511(3)

MAX. MARKS: 15

COURSE NAME: Highway Engineering

COURSE INSTRUCTORS: Dr. Amardeep

MAX. TIME: 1 Hour

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

Q1. What are the different governing bodies established till now for the Highway development in India? Please specify their role for the same in detail. [CO -1] [3]

Q2. Find the stopping sight distances for level, ascending and descending grades on a road with a design speed of 100km/h. Assume total reaction time as 2.5 second and coefficient of friction as 0.36. Take gradient of a road as 1 in 40. [CO -2] [5]

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? [CO -2] [5]

- Design speed of 65 kmph is allowed
- Maximum speed can be allowed only up to 30 kmph
- Maximum speed can be allowed only up to 50 kmph
- Speed up to 80 kmph can be allowed

Q4. Define the following along with their importance and specified values as per IRC: [2]
[CO -2]

- Cant
- Frontage Road, Lay bay and
- Kerb and their types