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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech- 6th year (Civil)

COURSE CODE: 11B1WCE834

MAX. MARKS: 25

COURSE NAME: Highway Construction and Maintenance

COURSE CREDITS: 3

MAX. TIME: 1 Hour 30 Min

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

Q1. Please answer the followings:

a) Discuss different types of stresses induced in a flexible pavement along with their net sketches. (2)

b) Differentiate between flexible and rigid pavement. (2)

Q2. What is the interface treatments using prime coat? Discuss its applications and different prime coat materials with their requirements. (4)

Q3. Explain different fundamental diagram of traffic flow. (2)

Q4. What are the different layered system in the rigid pavement? How it is different from flexible pavement and why? (2)

Q5. In a district where the rainfall is heavy, major district road of WBM pavement, 3.8 m wide, and a state highway of bituminous concrete pavement, 7.0 m wide are to be constructed. What should be the height of the crown with respect to the edges in these two cases? (4)

Q6. Calculate the stopping sight distance on a highway at a descending gradient of 2% for a design speed of 80 kmph. Assume other data as per IRC recommendations. (4)

Q7. Calculate the safe overtaking sight distance for a design speed of 96 kmph. Assume all other data suitably. (5)