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School of Engineering
M.TECH Transportation Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem I - G1PD103T - Traffic Engineering and Safety

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Compare the basic characteristics of motor-vehicle traffic in urban and rural areas, outlining the key differences in traffic flow patterns and vehicle distribution. K2 (2)
- 2) Label the key responsibilities of traffic control authorities in ensuring smooth traffic flow and enforcing compliance with traffic regulations. K1 (3)
- 3) Contrast the components of road traffic, including the vehicle, driver, and road, and explain how each component contributes to the overall dynamics and safety of the traffic system. K2 (4)
- 4) Illustrate the road traffic accidents scenario in India and globally, outlining the key factors contributing to the high accident rates, and summarize the measures taken by authorities to address this critical issue. K2 (6)
- 5) Model and explain the Poisson distribution in accident analysis K3 (6)
- 6) It is observed that on an average a vehicle driver drives 5000 Km during the course of a year. The probability of having an accident is 100 per 200 million vehicle -kilometers. Examine the probability of a driver having atleast two accidents during his driving career extending to 25 years. K3 (9)
- 7) Simplify and narrate the measures to increase pedestrian safety K4 (8)
- 8) Examine the reasons for road accidents by cyclists involved and detail them. K4 (12)

OR

Analyze the road scenario prevailing in India K4 (12)