

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2019 – 20 Examination

Semester: 2
Subject Code: 203211182
Subject Name: Road Safety Engineering

Date: 19/12/2019
Time: 2:00 pm to 4:30 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) Explain the collision and condition diagram with neat sketch. (05)
B) Explain preventable accidents and non-preventable accidents. (05)
C) Explain the causes of road accident (05)
- Q.2** Answer the following questions. (attempt any three) (each five mark) (15)
A) Explain the process of eliminating the black spots with neat sketch.
B) Explain the following:
1. Accident rate per kilometer
2. Accident involvement rate
3. Death rate based on population
4. Death rate based on registration
5. Accident rate based on vehicle-kms of travel
C) Enlist crash countermeasures and explain any two of them.
D) Explain guidelines for incorporating safety features into road design
- Q.3** A) Explain any five elements of road safety (07)
B) Enlist the road safety stages and explain them by detailed flow-chart. (08)
- OR**
- B) Define road safety audit and explain its essential elements. (08)
- Q.4** A) Explain the before and after methods of crash analysis (07)
- OR**
- A) Enlist advanced statistical methods of crash data, and explain crash rate method in detail. (07)
B) Explain the basic stages in the historical development of road safety improvement interventions (08)