

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER III (NEW) – EXAMINATION – WINTER-2016

Subject Code: 2731307**Date: 25/10/2016****Subject Name: Road Safety Audit****Time: 02:30 pm to 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is Road Safety Audit (RSA)? What are the specific aims of RSA? **07**
 (b) Discuss the recent road traffic accidents scenario of India. **07**
- Q.2** (a) Explain briefly different causes for road accidents. **07**
 (b) Define: Accident, Incident, Road crash, Fatal accident, Pedestrian, Driver, Motor vehicle. **07**

OR

- (b) Discuss about the role of 4 Es for controlling road traffic accidents. **07**
- Q.3** (a) Explain with sketches condition diagram and collision diagram. **07**
 (b) Two vehicles A and B approaching at right angles, A from west and B from south, collide with each other. After the collision, A skids in a direction 60° north of west and B skids in 60° east of north. The initial skid distances of the A and B are 32 & 20m respectively before collision. The skid distances after collision of A and B are 12 and 30m respectively. If the weights of B and A are 6T & 4T respectively, calculate the original speeds of the vehicles. The average skid resistance of pavement is found to be 0.6. **07**

OR

- Q.3** (a) Discuss with sketch the conflict points on three arm junction with two way traffic on all approaches. Which measures do you suggest to minimize these conflicts? **07**
 (b) It is observed that on an average a vehicle driver drives 6000km during the course of a year. The probability of having an accident is 120/200 million veh-km. What is the probability of a driver having at least 2 accidents during his driving career extending to 20 years? **07**
- Q.4** (a) Describe with flow chart the stages involved in RSA procedure as per IRC SP: 88 – 2010. **07**
 (b) Discuss with sketches the road safety measures for the pedestrians. **07**

OR

- Q.4** (a) Explain with sketches different types of speed breakers on road with their suitability. **07**
 (b) Describe the details included in typical accident report form and interpretation of crash data. **07**
- Q.5** (a) Discuss about road safety measures to be taken during construction of road. **07**
 (b) Describe the effects of road accidents on health and socio-economic condition of society. **07**

OR

- Q.5** (a) What are the impacts of vehicular noise pollution? Describe various traffic calming measures. **07**
 (b) What are the impacts of vehicular emissions? How will these be controlled? **07**
