GUJARAT TECHNOLOGICAL UNIVERSITY *IE – SEMESTER III (NEW) – • EXAMINATION – SUMMER 201*

ME – SEMESTER III (NEW) – • EXAMINATION – SUMMER 2016			
Subject Code: 2731307Date:03/05/2016Subject Name: Road Safety Audit			16
Time: 10:30 am to 01:00 pmTotal Marks: 70			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
C	(b)	Discuss the road accident scenario of India.	07
Q.2	(a)	Explain with sketches condition diagram and collision diagram.	07
	(b)	What are the causes of road accidents? Explain in brief. OR	07
	(b)	What are the uses of road accident data? Describe in brief.	07
Q.3	(a)	Define: Accident, Incident, Road crash, Fatal accident, Pedestrian, Driver,	07
X	(4)	Motor Vehicle.	01
	(b)	It is observed that on an average a vehicle driver drives 6400km during the	07
		course of a year. The probability of having an accident is 140/200 million veh- km. What is the probability of a driver having at least 3 accidents during his	
		driving career extending to 20 years?	
		OR	
Q.3	(a)	Briefly discuss the different types of road conditions which are responsible for the road accidents? What would be the remedial measures for the same?	07
	(b)	Two vehicles A and B approaching at right angles, A from west and B from	07
		south, collide with each other. After the collision, A and B skid in 70° and 30°	
		north of east respectively. The initial skid distances of the A and B are 20 & 15m respectively before collision. The skid distances after collision of A and B	
		are 18 and 25m respectively. If the weights of B and A are 6T & 5T, calculate	
		the original speeds of the vehicles. The average skid resistance of pavement is	
		found to be 0.6.	
Q.4	(a)	Explain with flow chart RSA process and significance of all stages.	07
	(b)	Explain with sketches different speed control devices on road. OR	07
Q.4	(a)	Explain the methods of ensuring safety of pedestrians.	07
	(b)	Describe the effects of road accidents on health and socio-economic condition	07
		of society.	
Q.5	(a) (b)	What are the legislative measures for making effective road safety program?	07 07
	(b)	Discuss about road safety measures to be taken during construction of road. OR	07
Q.5	(a)	Discuss about various traffic calming measures.	07
	(b)	Explain the methods of accident costing.	07
