Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION - SUMMER • 2015

Subject Code:150202 Subject Name: Automobile Systems Time:02.30pm-05.00pm Instructions: 1. Attempt all questions.			Date: 05/05/2015 Total Marks: 70	
		2.30pm-05.00pm Total Marks: 'ons:		
	2.			
Q.1	(a) (b)	Which are the main components of an automobile? Describe all of them briefly. Describe various component layouts for automobile and discuss the advantages and disadvantages of each.	07 07	
Q.2	(a) (b)	Discuss the functions of frames. Explain briefly the various types of chassis construction with the help of suitable diagram. What is function of clutch? Explain its requirement in details.	07 07	
	(b)	OR Describe briefly and electromagnetic clutch. Discuss its merits and demerits.	07	
Q.3	(a)	Describe the working of torque convertor with neat sketch. Discuss its	07	
	(b)	advantages and disadvantages. What is transfer box? Where it is used? Explain clearly the construction and working of transfer box.	07	
Q.3	(a) (b)	OR Explain different types of gears used for final drive with suitable diagram. Discuss three quarter floating axle with neat sketch.	07 07	
Q.4	(a) (b)	Which are the basic considerations for suspension system? Describe air suspension system with neat sketch. OR	07 07	
Q.4	(a)	Define the following terms: Over steer Under steer Cornering power Slip angle	07	
	(b)	Discuss recirculating ball type steering gear with neat sketch.	07	
Q.5	(a) (b)	Discuss various types of disc wheels with suitable diagrams. Describe the working of tandem master cylinder with neat sketch. OR	07 07	
Q.5	(a) (b)	Discuss any type of mechanical brake with the help of neat sketch. Write a short note on vaccum assisted brakes.	07 07	
