Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - SUMMER 2016

Subject Code:171902		et Code:171902 Date:07/05/2016	Date:07/05/2016	
Ti	ime:(struct	t Name: Automobile Engineering 22:30 PM to 05:00 PM Total Marks: 7 ions: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	'0	
Q.1	(a)	Define the term "Automobile" and classified it.	07	
	(b)	Classify the gearbox and explain constant mesh gear box with figure.	07	
Q.2	(a)	Draw the layout plan of automobile chassis. Name the various components.	07	
	(b)	Explain the working of single plate clutch with the help of simple diagram.	07	
		OR		
	(b)	A car weighing 21 kN has a static weight distribution on the axles of 50:50. The wheel base is $2.5\mathrm{m}$ and the height of center of gravity above ground is $0.5\mathrm{m}$. if the coefficient of friction on the highway is $0.6\mathrm{calculate}$ the advantage of having rear wheel drive rather than front wheel drive as far as gradiability is concerned, if engine power is not a limitation.	07	
Q.3	(a)	Differentiate Hydraulic and Air braking system.	07	
	(b)	State the objectives of employing a suspension system on an automobile.	07	
		OR		
Q.3	(a)	Explain with the help of neat sketch the construction of propeller shaft.	07	
	(b)	Explain the working of Automatic transmission gear box.	07	
Q.4	(a)	Battery is the heart of electric system in automobile. Explain	07	
	(b)	What is tyre rotation and its purpose? Explain in detail	07	
		OR		
Q.4	(a)	Draw and explain the simple layout of car wiring.	07	
	(b)	Explain Convectional tube tyre & Tubeless tyre in detail	07	
Q.5	(a)	Explain about Air bag as a safety provisions in cars.	07	
	(b)	What is engine decoking? Why is it required? Also explain various methods of engine decoking.	07	
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Q.5	(a)	Describe briefly driving and conductor Licence. Also explain the process of renewal of driving licenses.	07	
	(b)	Explain briefly the layout of Electric vehicle with Advantages and Disadvantages compared to a convectional vehicle.	07	
