

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- IV EXAMINATION – SUMMER 2020****Subject Code: 3140203****Date: 26/10/2020****Subject Name: Basics of Automobile Systems****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

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

		MARKS
Q.1	(a) Classify automobiles.	03
	(b) Compare front and rear mounting engine.	04
	(c) Explain torque converter with neat sketch.	07
Q.2	(a) Draw layout of front engine front wheel drive and write advantages of it.	03
	(b) Explain tractive effort.	04
	(c) Explain different resistance during motion of a vehicle in detail.	07
	OR	
	(c) Explain four wheel drives with advantage and disadvantages.	07
Q.3	(a) Why gearbox is required in automobile?	03
	(b) Explain Synchromesh gear box.	04
	(c) Explain 4 forward and 1 reverse sliding mesh gearbox with neat sketch	07
	OR	
Q.3	(a) Explain word Transmission.	03
	(b) Explain any one CVT.	04
	(c) Explain any one gear selector mechanism.	07
Q.4	(a) Explain semi floating rear axles with the aid of suitable sketch	03
	(b) Explain Macpherson strut type suspension system.	04
	(c) Explain electrical drive and its advantages.	07
	OR	
Q.4	(a) Classification of suspension system.	03
	(b) Explain radial ply tyre.	04
	(c) Explain differential with neat sketch.	07
Q.5	(a) Explain breaking.	03
	(b) Advantages of hydraulic breaking system.	04
	(c) Explain antilock breaking system.	07
	OR	
Q.5	(a) Define aspect ratio.	03
	(b) Difference between tube tyre and tubeless tyre.	04
	(c) Explain power steering system.	07
