

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2017

Subject Code: 2181915

Date: 10/11/2017

Subject Name: Automobile Engineering(Department Elective II)

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.

		MARKS
Q.1	(a) Draw any two vehicle layouts in Automobile	03
	(b) Explain functions, types, and different components of chassis frame.	04
	(c) Explain different types of vehicle bodies with neat sketch.	07
Q.2	(a) Name the different types of materials used in body construction with each one its application.	03
	(b) Explain different types of resistances acting on acting on vehicles.	04
	(c) Explain briefly 'SSS method'	07
	OR	
	(c) Explain briefly vehicle aerodynamics.	07
Q.3	(a) What is free pedal play and why it is required?	03
	(b) Give the comparison between single plate clutch and multi plate clutch.	04
	(c) Explain with figure construction and working of a fluid flywheel.	07
	OR	
Q.3	(a) What is double declutching in gearbox?	03
	(b) Explain the necessity of transmission in a vehicle	04
	(c) Explain working and construction of constant mesh gear box.	07
Q.4	(a) Give the functions of (1) propeller shaft and (2) universal joint.	03
	(b) Give the comparison between Hotchkiss drive and Torque tube drive.	04
	(c) Explain the necessity, construction and operation of the differential.	07
	OR	
Q.4	(a) What are objectives of suspension system?	03
	(b) Explain briefly 1. Camber angle and 2. Castor angle.	04
	(c) Explain Mac-pherson strut type suspension system.	07
Q.5	(a) Give the comparison between Disc brake and Drum brake	03
	(b) Differentiate understeer and oversteer with neat sketch.	04
	(c) Explain with the help of a suitable sketch the constructional details and working of Power steering.	07
	OR	
Q.5	(a) Name the different electrical and electronics components used in vehicle with its symbols.	03
	(b) Explain 1. Fading of Brakes 2. Wheel skidding	04
	(c) Explain Briefly Electric vehicle with its layout.	07
