

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER–VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3161920****Date:24-05-2024****Subject Name:Automobile Engineering****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Give classification of automobiles.	03
	(b) Explain function of Automobile chassis.	04
	(c) Discuss functional requirements of vehicle body.	07
Q.2	(a) Define Transmission efficiency.	03
	(b) Explain different forces acting on vehicle in motion.	04
	(c) Discuss stability of a vehicle in motion around the curve.	07
	OR	
	(c) Explain vehicle body construction type and materials.	07
Q.3	(a) Classify types of clutch.	03
	(b) Compare semi centrifugal and centrifugal clutch.	04
	(c) Explain constructional features and working of single plate with neat sketch.	07
	OR	
Q.3	(a) What is continuous variable transmission CVT?	03
	(b) Explain function of propeller shaft.	04
	(c) Discuss fault and diagnosis of power transmission system.	07
Q.4	(a) What is difference between live and dead axle?	03
	(b) Explain types of suspension systems.	04
	(c) Explain working of differential gear box with neat sketch.	07
	OR	
Q.4	(a) What is function of suspension system in automobiles?	03
	(b) Enlist different types of steering gear and explain anyone them with neat sketch.	04
	(c) Write short note on power assisted steering.	07
Q.5	(a) Explain function of air bag in automobile.	03
	(b) Discuss briefly about active and passive safety systems.	04
	(c) Write short note on power assisted brakes.	07
	OR	
Q.5	(a) Explain tyre properties.	03
	(b) Explain Tire Pressure Monitoring System (TPMS).	04
	(c) Explain layout and components of Electric Vehicle.	07
