

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3160211****Date:20-05-2024****Subject Name:Automobile Chassis and Body 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) Differentiate between chassis, frame and automobile body.	03
	(b) Explain the vehicle roof and vehicle side panel assembly.	04
	(c) Which materials are used in chassis and body construction?	07
Q.2	(a) Classify types of car bodies	03
	(b) Explain Aerodynamic Drag and its types.	04
	(c) Explain the effects of different types of forces & moments acting on vehicle body.	07
	OR	
	(c) Explain the driver cabin design for compactness design of frames for bus and commercial vehicles	07
Q.3	(a) Classify types of commercial vehicle bodies.	03
	(b) Describe the aerodynamic force and moments.	04
	(c) Write a short note on “wind tunnel testing of a scale model”.	07
	OR	
Q.3	(a) Classify types of bus bodies	03
	(b) Explain the crumple zone in vehicle.	04
	(c) Define Blind Spot. Describe various methods to reduce blind spot in sedan car.	07
Q.4	(a) Describe dashboard of vehicle in detail.	03
	(b) Explain the body trims.	04
	(c) What is the difference between of Active safety and Passive safety?	07
	OR	
Q.4	(a) Explain the aerodynamic resistance and articulated vehicle.	03
	(b) Explain the pedal controls and electronic displays.	04
	(c) Explain Pneumatic equipment for passenger door opening & closing.	07
Q.5	(a) Explain the concept of H-point referencing.	03
	(b) What is ergonomics? Explain in brief.	04
	(c) Explain the chassis and body alignment test.	07
	OR	
Q.5	(a) Explain the Crash test.	03
	(b) Give the requirements of pedestrian safety.	04
	(c) Explain construction and working of safety belt for occupants.	07
