

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VI EXAMINATION – SUMMER 2026

Subject Code:3160211

Date:26-05-2026

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) What is chassis in vehicle and interference drag force?	03
	(b) Differentiate between chassis frame and automobile body.	04
	(c) Explain various types of bus bodies with neat sketch	07
Q.2	(a) Write and explain requirement of vehicle body.	03
	(b) Explain the crumple zone in vehicle.	04
	(c) Describe various types of materials used for body construction.	07
OR		
	(c) Explain aerodynamic force and moments.	07
Q.3	(a) Define: Chassis, Body, Frame	03
	(b) Give different types of commercial vehicle body and Explain any one.	04
	(c) Explain load analysis of simple van using SSS method.	07
OR		
Q.3	(a) What is vehicle body trim? Explain it.	03
	(b) Give the brief about body structure mounting.	04
	(c) Explain driver seat design & dimension parameters.	07
Q.4	(a) What is ergonomics? Explain in brief.	03
	(b) What is surface protection for vehicle body?	04
	(c) Write a short note on “crash test”.	07
OR		
Q.4	(a) What is the concept of H-point referencing?	03
	(b) Explain Crashworthiness.	04
	(c) Explain construction and working of safety belt for occupants.	07
Q.5	(a) Explain active and passive safety. And what is GRP in vehicle body material.	03
	(b) Write a short note on tanker body.	04
	(c) What is the visibility of driver and explain methods to improve it?	07
OR		
Q.5	(a) Explain engine location for bus body.	03
	(b) Describe working of Airbag system in vehicles.	04
	(c) Explain Pneumatic equipment for passenger door opening & closing.	07
