

Enrolment Number: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.TECH (MID SEM EXAMINATION)
4th SEMESTER (WINTER-2024)

SUBJECT NAME (CODE): VSE(303102251)

BRANCH: AUTOMOBILE

DATE: 29/01//2024

TIME: 10:30AM TO 12.00PM

TOTAL MARKS: 40

Sr. No.		Marks
Q.1	(A) One-line Questions. 1. Write a difference between chassis, frame and body. 2. Define. Crumple Zone 3. Write a difference between sprung and unsprung mass of vehicle. 4. Define. NCAP 5. Define. Car Aerodynamics	05
	(B) Classify auto vehicles and explain any one drive of vehicle arrangement with neat sketch.	05
Q.2	Attempt any four. (Short Questions)	12
	(1) Explain how car bodies are classified?	
	(2) Explain monocoque chassis frame in details.	
	(3) Write a difference between active and passive safety system of car.	
	(4) Explain passenger seat dimensions and seat layout.	
	(5) List the different vehicle body materials and explain any two on them.	
Q.3	Attempt any two.	08
	(1) Explain classification of bus bodies.	
	(2) Explain classification of commercial vehicle bodies.	
	(3) Explain any one. 1. Dumper Body 2. Water Tanker Body	
Q.4	(A) Explain various moments arise on vehicle due to aerodynamic forces.	05
	(B) Explain wind tunnel test of scale model.	05
	OR	
	(B) Write a short note on car crash test.	05