

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI EXAMINATION – SUMMER 2020

Subject Code: 2160205
Date: 26/10/2020
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.

		MARKS
Q.1	(a) Name various components of vehicle powertrain with functions of each	03
	(b) Explain various types of sections used for vehicle frame construction.	04
	(c) Explain Ladder frame in detail with neat sketch	07
Q.2	(a) Explain various requirements which are to be fulfilled by vehicular body.	03
	(b) Classify various types of car bodies	04
	(c) Write brief note on types of joints used in Vehicle frame	07
	OR	
	(c) Explain construction and working of seats belts with diagram	07
Q.3	(a) Draw a diagram of BIW along with nomenclature of its various parts	03
	(b) Write a short note on “Vehicle Floor”	04
	(c) Explain various types of materials used for vehicle body construction	07
	OR	
Q.3	(a) What are crumple zones in vehicle?	03
	(b) Explain various exterior vehicle body trims.	04
	(c) Explain vehicle structure analysis by Simple Structural Surface (SSS) for Saloon	07
Q.4	(a) Define crashworthiness	03
	(b) Explain various internal trims of vehicle.	04
	(c) Write a short note on “Vehicle roof” and “Vehicle side panel assembly”	07
	OR	
Q.4	(a) Classify various bus bodies	03
	(b) Describe construction of conventional type bus body	04
	(c) Write a short note on vehicle visibility and methods of improving visibility	07
Q.5	(a) Classify various commercial vehicle bodies	03
	(b) Describe construction of integral type bus body	04
	(c) Explain construction and working of Airbags	07
	OR	
Q.5	(a) Define: Active Safety and Passive Safety	03
	(b) Write a short note on “Vehicle Dashboard”	04
	(c) Explain various types of Crash Tests	07
