

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code:2160205****Date:29/01/2021****Subject Name:Automobile Chassis and Body Engineering****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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| Q.1 | (a) Write the properties and use of FRP. | 03 |
| | (b) Draw the diagram for coach work. | 04 |
| | (c) Write brief notes on “Chassis frame design”. | 07 |
| Q.2 | (a) Classify types of bus body. | 03 |
| | (b) Give the difference between toughened glass and laminated glass. | 04 |
| | (c) Explain car body zones & body trims. | 07 |
| Q.3 | (a) Give the requirements of pedestrian safety. | 03 |
| | (b) Explain working of airbags used for safety. | 04 |
| | (c) Describe human ergonomics for driver’s seat design. | 07 |
| Q.4 | (a) Explain construction and working of safety belt for occupants. | 03 |
| | (b) Explain chassis and body alignment test used for vehicles. | 04 |
| | (c) What is the visibility of driver and explain methods to improve it? | 07 |
| Q.5 | (a) Explain aerodynamics resistance and articulated vehicle. | 03 |
| | (b) Explain roll over test to be performed for auto vehicles. | 04 |
| | (c) Explain water leakage test. | 07 |
| Q.6 | (a) Define ergonomics of vehicle | 03 |
| | (b) Write a short note on tanker body | 04 |
| | (c) Explain Full frontal crash test with neat sketch | 07 |
| Q.7 | (a) What is the concept of H-point referencing? | 03 |
| | (b) Explain 1.Passenger compartment lightning and 2. Car radio. | 04 |
| | (c) Differentiate between passive and active safety. | 07 |
| Q.8 | (a) Explain active and passive safety. And what is GRP in vehicle body material. | 03 |
| | (b) Explain dash board with figure in detail. | 04 |
| | (c) Explain Pneumatic equipment for passenger door opening & closing. | 07 |
