

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VI (New) EXAMINATION – WINTER 2019****Subject Code: 2160205****Date: 11/12/2019****Subject Name: Automobile Chassis and Body Engineering****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- 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**
- OR**
- (c) Explain load analysis of simple van using SSS method. **07**
- Q.3** (a) List down various materials used in automobile construction. **03**
(b) Explain key points to be considering in design of driver’s cabin. **04**
(c) Describe dashboard of vehicle in detail. **07**
- OR**
- Q.3** (a) Write the importance of crumple zones provided in vehicle. **03**
(b) Explain longitudinal load in cars. **04**
(c) Explain methods of improving visibility and space in car body. **07**
- Q.4** (a) State the sources of body noise. **03**
(b) Describe the uses of GRP in bus body. **04**
(c) Explain briefly, “heating and ventilation systems” of the vehicle. **07**
- OR**
- Q.4** (a) List various methods to reduce blind spot in sedan car. **03**
(b) What is Drag? Write the name of various body optimization techniques used to reduce Drag. **04**
(c) Explain Crash test to be performed for auto vehicles. **07**
- Q.5** (a) Explain construction of tipper body style used in vehicle. **03**
(b) Explain water leakage test. **04**
(c) Explain safety requirements for car body. **07**
- OR**
- Q.5** (a) Write the selection of criteria of paint in vehicle. **03**
(b) Explain 1. Passenger compartment lightning and 2. Car radio. **04**
(c) Describe wind tunnel testing of a scaled model of a car. **07**
