GUJARAT TECHNOLOGICAL UNIVERSITY
ME SEMESTER II EXAMINATION – SUMMER 2017

Subject Code: 2721104   **Date: 30/05/2017**

Subject Name: Automative 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)**	What is importance of driver's visibility a vehicle? Explain the different methods used for improving visibility of drivers in a vehicle.	**07**
	(b)	Explain the strength and rigidity consideration in chassis design.	**07**
Q.2	**(a)**	Write a detailed note on flow visualization techniques.	**07**
	(b)	Explain the various body optimization techniques for minimum drag.	**07**
		OR	
	(b)	Discuss about the coach work with neat sketches.	**07**
Q.3	**(a)**	Discuss the testing of vehicle body.	**07**
	(b)	Explain the calculation of loading of bus body structure.	**07**
		OR	
Q.3	**(a)**	Discuss about the stress analysis in integral bus body.	**07**
	(b)	Describe idealized structure design of vehicle body.	**07**
Q.4	**(a)**	Write a shortnote on: Vehicle body materials.	**07**
	(b)	Explain the load distribution and forces acting on vehicle structure with neat sketch.	**07**
		OR	
Q.4	**(a)**	Explain shear panel method for determining stress analysis and body load.	**07**
	(b)	Discuss the design layout of the vehicle bodies and its preliminary design.	**07**
Q.5	**(a)**	Explain the functional and design requirements of chassis frame of automotive vehicles.	**07**
	(b)	Explain the recent safety measures considered for passenger vehicle and transportation vehicle (long trailer and semi-trailer) according to automotive standards in India.	**07**
		OR	
Q.5	**(a)**	Explain the different types of cross-sections of chassis members used in chassis construction of automotive vehicles with neat sketches and state their specific advantages.	**07**
	(b)	Explain about the for safety design of car bodies according to automotive standards in India..	**07**

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