

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2011 onwards) (Sem.-6)

VEHICLE SAFETY ENGINEERING

Subject Code : BTAE-605

Paper ID : [A2384]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. SECTION-B contains **FIVE** questions carrying **FIVE** marks each and students has to attempt any **FOUR** questions.
3. SECTION-C contains **THREE** questions carrying **TEN** marks each and students has to attempt any **TWO** questions.

SECTION A**1. Write briefly :**

- (a) What is Safety?
- (b) What are the stationary obstacles?
- (c) What is sensor used in Vehicle?
- (d) What is warning system?
- (e) Write the optimum distance between two vehicles to avoid the collision.
- (f) Define engine location with respect to safety.
- (g) Define the Vehicle Body Engineering.
- (h) Define Sensor.
- (i) What is conditional safety?
- (j) How automatic seat belt works?

SECTION B

- 2 Explain the construction of safety sandwich.
- 3 Discuss tilt able steering wheel.
- 4 Discuss EBD.
- 5 Differentiate between interior and exterior safety with examples.
- 6 What are the causes of rear end collision?

SECTION C

7. Discuss the safety equipments in details.
8. Explain the deformation behavior of vehicle body after collision. Also suggest the correcting measures.
9. Write a note on the following topics :
 - a. Object detection system with breaking system interaction.
 - b. Frontal object detection.