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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.-6)**VEHICLE SAFETY ENGINEERING****Subject Code : BTAE-605****M.Code : 71221****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 have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**1. Answer briefly :**

- a. What is the safety sandwich construction?
- b. Name the parts of seat belt tightener.
- c. What is the role of seat belt in reduction of accident?
- d. Name the parts of collapsible steering column.
- e. What do you mean by perceptibility safety?
- f. List the major components of vehicle object detection system.
- g. What do you mean by operating safety?
- h. What do you mean by a crumple zone?
- i. List out the causes of rear end collision.
- j. Name the important parts of garage door opening system.

SECTION-B

2. Explain various active safety systems in automobiles.
3. *“Deceleration on impact with movable vehicle is less danger than the stationary object”.* Justify this statement.
4. Explain tyre pressure control system with suitable and neat sketches.
5. Write a short note on EBD.
6. Explain the working of pedestrian detection system.

SECTION-C

7. Explain the construction & working principle of air bag with electronic activating system.
8. Explain the working principles of anti-theft central locking system with neat sketches.
9. With a suitable diagrams, explain the working of collision warning system.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.