

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Automobile Engg.)(Sem.-6)
VEHICLE SAFETY ENGINEERING

Subject Code : BTAE-601-18

M.Code : 79285

Date of Examination : 02-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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. Write briefly :

- a) List the parameters on which the engine location in a vehicle depends.
- b) Give the minimum speed of collision for the activation of airbags.
- c) List out the causes of rear end collision.
- d) What do you understand by perceptibility safety?
- e) Name the parts of collapsible steering column.
- f) Explain the crumple zone of a vehicle.
- g) Where are air bags installed in a vehicle? Give reasons for its location also.
- h) Enlist the major parts of glass door opening system.
- i) Give the concept of interior safety.
- j) What do you mean by telescopic steering adjustment?

SECTION-B

2. Elaborate with the help of circuit diagram, the interaction of object detection system with Braking System.
3. Discuss in brief electronic brake force distribution.
4. Explain in brief the working of tiltable steering wheel.
5. Elaborate monocoque chassis construction.
6. Investigate the working principle of tyre pressure control system.

SECTION-C

7. What do you understand by deceleration of vehicle? Describe the deceleration on impact with stationary and movable obstacles.
8. Elaborate diagrammatically the working of Anti-Lock Braking System.
9. Write a short note on the following:
 - a) Environment information system.
 - b) Bumper design for safety

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.