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**Total No. of Pages: 02**  
**Total No. of Questions: 09**

**B. Tech. (AE) (Sem-6th)**  
**VEHICLE SAFETY ENGINEERING**  
**Subject Code: BTAE 605**  
**Paper ID: (A2384)**

**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** consist **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) What is safety?
  - (b) Define conditional safety.
  - (c) What are the stationary obstacles?
  - (d) Define interior safety.
  - (e) What is the function of seat belt?
  - (f) Explain the functioning of air bag.
  - (g) What is warning system?
  - (h) What principle is used for object detection?
  - (i) What is sensor used in vehicle,
  - (j) Types of mirrors.

**SECTION B**

2. Explain the monocoque chassis construction.
3. Differentiate between active safety and passive safety with examples.
4. Discuss tilt able steering wheel.
5. Explain the causes of rear end collision.
6. Discuss rain sensor system.

### SECTION C

7. Define sensor and how it is important to avoid collision.
8. How safety is essential on road? Discuss.
9. What are the safety equipments and discuss the electronic break force distribution.

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