| Seat No.: | Enrolment No. |
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VII (NEW) EXAMINATION - SUMMER 2022** 

Subject Code:3170214 Date:14/06/2022

**Subject Name: Vehicle and Road Safety** 

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.
- 4. Simple and non-programmable scientific calculators are allowed.

|          |            |   | MARKS |
|----------|------------|---|-------|
| Q.1      | (a)        | Explain vehicle safety.   | 03    |
| •        | <b>(b)</b> | Discuss on road traffic accidents scenario in India.                                  | 04    |
|          | (c)        | Explain active safety and passive safety.   | 07    |
| Q.2      | (a)        | Define (1) Driving safety(2) Conditional safety (3) Operating safety                  | 03    |
|          | <b>(b)</b> | Explain road traffic scenario in India.   | 04    |
|          | <b>(c)</b> | Short note on "deformation behaviour of vehicle body".                                | 07    |
|          | (c)        | OR Explain vehicle safety rating in India.  | 07    |
| Q.3      | (a)        | Enlist name of active and passive safety equipment's in vehicle                       | 03    |
| <b>~</b> | (b)        | Describe automatic seat belt Tightener system   | 04    |
|          | (c)        | Describe electronic system to activate air bags                                       | 07    |
|          | . ,        | OR  |       |
| Q.3      | (a)        | What is the provision for provision for disabled in related to road safety?           | 03    |
|          | <b>(b)</b> | Discuss on crashes related to pedestrian and bicyclists.                              | 04    |
|          | <b>(c)</b> | Explain different front and rear object detection system in detail.                   | 07    |
| Q.4      | (a)        | Give some examples of the presentations on the road safety educations.                | 03    |
|          | <b>(b)</b> | What is the importance of road safety?  | 04    |
|          | (c)        | Explain Multidisciplinary approach to planning for traffic safety and injury control. | 07    |
|          |            | OR  |       |
| Q.4      | (a)        | Enlist name of People responsible for accident prevention.                            | 03    |
|          | <b>(b)</b> | What is the role of engineering in road safety?                                       | 04    |
|          | (c)        | Short note on "antiskid braking system".  | 07    |
| Q.5      | (a)        | Discuss policy of Govt.of India for Vulnerable road users.                            | 03    |
|          | <b>(b)</b> | Explain pre-school road safety education in details.                                  | 04    |
|          | <b>(c)</b> | Explain 4 E's of Accidents Prevention.  | 07    |
|          |            | OR  |       |
| Q.5      | (a)        | Discussions on efforts done by Government on Road Safety.                             | 03    |
|          | <b>(b)</b> | Write a note on the celebration on road safety seminar organized by students.         | 04    |
|          | <b>(c)</b> | Explain 5 P's of Road safety education.   | 07    |

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