

[Time: Three Hours]

[ Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question.No.1 is compulsory.
  2. Attempt any three out of remaining five questions
  3. Figures to right indicates full marks.

- Q.1 Answer any four of the following
- |    |  |   |
|----|--|---|
| a) | Write a short note on ' Frontal collision'                       | 5 |
| b) | In short Explain the term' Biomechanics and occupant simulation' | 5 |
| c) | Explain the purpose of vehicle safety.                           | 5 |
| d) | Explain how accident data is interpreted?                        | 5 |
| e) | Write a short note on' Abbreviated Injury Scale'                 | 5 |
- Q.2
- |    |   |    |
|----|---|----|
| a) | Explain the construction and working of ABS with neat sketch. | 10 |
| b) | Write a note on 'Photogrammetry for accident Reconstructions. | 10 |
- Q.3
- |    |  |    |
|----|--|----|
| a) | Write a note on Hazard-Risk-Danger"              | 10 |
| b) | Write a detail note on Accident reconstructions. | 10 |
- Q.4
- |    |   |    |
|----|---|----|
| a) | Compare quasistatic seat test and hydge sled test.    | 10 |
| b) | Explain effectiveness of self-aligning Head Restraint | 10 |
- Q.5
- |    |  |    |
|----|--|----|
| a) | Explain any five illustrative human errors.    | 10 |
| b) | Explain the term' Uncertainty in measurements. | 10 |
- Q.6
- |    |  |    |
|----|--|----|
| a) | Explain Universal and Alternative Design.            | 10 |
| b) | Explain the injuries observed in various collisions. | 10 |