

BE/Sem VIII/CBSGS/AUTO/MJ2019/24-05-2019

(3 Hours)

Total Marks: - 80

- N.B: (1) Question no.1 is compulsory.
(2) Attempt any three out of remaining five questions.
(3) Figures to the right indicate full marks.
(4) Illustrate your answers with sketches wherever necessary.

- Q.1 Answer any four of the following:
- a Explain the term "Hazard risk danger". 05
 - b Explain active and passive safety. 05
 - c Explain the significance of crash testing. 05
 - d Explain the injuries observed in accidents. 05
 - e Explain fail safe and fault tolerance systems. 05
 - f Explain the role of seat in rear crash safety. 05
- Q.2 a Write short notes on the following
- 1. Quasistatic seat test 05
 - 2. Hydge sled test 05
- b Explain accident reconstruction analysis 10
- Q.3 a According to you what are the key issues of vehicle safety in India. Explain in detail. 10
- b Explain any two automotive safety systems. 10
- Q.4 a Explain different priorities taken into consideration while preparing safety plan. 10
- b Explain in detail photogrammetry in accident reconstruction 10
- Q.5 a Draw the fishbone diagram for root cause identification of accidents 10
- b According to you what measures government can undertake to minimize accidents? 10
- Q.6 Explain the following terms
- 1) Head restrain position in normal driving 05
 - 2) Universal design and alternative design 05
 - 3) Human error analysis 05
 - 4) Accident data 05