

No. of Printed Pages : 03

Roll No.

G-321

B. Tech. EXAMINATION, Dec. 2017

(Seventh Semester)

(B. Scheme) (Main & Re-appear)

(AE)

AE-401-B

AUTOMOTIVE SAFETY

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-07/10)M-G-321

P.T.O.

Unit I

1. (a) Explain deceleration on impact with stationary obstacles. **8**
(b) What is sandwich construction ? Explain. **7**
2. (a) Explain the concept of perceptible safety. How is it achieved ? **8**
(b) Explain the concept of interior safety. How is it achieved ? **7**

Unit II

3. (a) Explain automatic seat belt tightening system. **8**
(b) What is tiltable steering wheel ? Explain. **7**
4. (a) Name safety devices in an automobile. Explain the purpose of air bags. **8**
(b) How bumper is designed from safety considerations ? Explain **7**

Unit III

5. What are the causes of rear end collision ? How rear end collision can be avoided ? Explain. **15**
6. What are the causes of rear end collision ? Explain rear vehicle object detection system. **15**

Unit IV

7. (a) Explain, how driving can be made convenient ? **8**
(b) What is the relevance of central locking ? Can it be dangerous for the users ? **7**
8. How environment effects automotive safety ? Explain in detail the environment information system. **15**