

No. of Printed Pages : 03

Roll No.

H-321

B. Tech. EXAMINATION, Dec. 2018

(Eighth Semester)

(B. Scheme) (Re-appear Only)

(AE)

AE402B

EMERGING AUTOMOTIVE
TECHNOLOGIES

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.

(3-04/9) M-H-321

P.T.O.

Unit I

1. What are the challenges and concept for the 21st century of the automotive industry and what are the crucial issues facing the industry and approaches to meet these challenges ? **15**
2. What do you mean by fuel cell technology for engine ? What do you variable valve timing ? What are methods used to effect variable valve timing ? **15**

Unit II

3. (a) What do you mean by direct fuel injection and gasoline engine ? Explain the difference between these two engines. **8**
(b) What are electromagnetic valves and camless engine actuators ? **7**
4. What do you mean by need, benefits, potential and challenges that occurs due to adoption of 42 volt system ? **15**

M-H-321

2

Unit III

5. What is need, benefits, potential and challenges faced due to the adoption of hybrid vehicles in India ? **15**
6. What do you mean by integrated starter Alternator in the automotive industry ? Explain the new storage energy system. **15**

Unit IV

7. What do you Automotie micro-controllers and utilisation of actuators in an automobile Industry ? **15**
8. Explain the fully-active and sem-active suspension system and the advantages of fully active suspension system. **15**

(3-04/10)M-H-321

3

20