

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ME) (Sem.-6)
AUTOMOBILE ENGINEERING

Subject Code : BTME603-18

M.Code : 79652

Date of Examination : 18-05-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Differentiate between Chassis and superstructure
- b) Why CNG is preferred over LPG as Automobile fuel?
- c) What is the function of shackle in conventional suspension system?
- d) What is the function of clutch in transmission system?
- e) What is a Turbo Charger?
- f) What is Adaptive cruise control and Braking system?
- g) What is the function of cut out in battery charging system?
- h) Differentiate between MPFI and Gasoline Direct Injection systems.
- i) What is the function of Thermostat in Engine cooling system?
- j) What are the functional requirements of a Diesel fuel injection system?

SECTION-B

2. Describe Viscosity and Service Ratings for Lube oil. What are multi-grade oils?
3. State various Alternative Fuel / Energy Source option for future Automobile. Explain the use of Hydrogen in Future Automobile.
4. Explain the construction and working of a telescopic type shock absorber with the help of a neat diagram.
5. Differentiate between :
 - a) Individual pump and nozzle system
 - b) Unit injector system
 - c) Common rail system
 - d) Distributor system.
6. Enlist the different Starting motor drives in automobiles. Describe with neat sketch the most widely used drive for diesel engines.

SECTION-C

7. Differentiate briefly, stating merits and demerits of AT, AMT, CVT, DCT / DSG automatic Transmission systems.
8. Explain briefly, the following terms in the context of Vehicle safety in Modern Automobiles : ABS, EBD, ESP and Driver Alert System.
9. Explain the following terms :
Camber, castor, King pin inclination and Included angle. Discuss their impact of steering characteristics of vehicle.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.