

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Mechanical Engg.) (Sem.-6)

AUTOMOBILE ENGINEERING

Subject Code : BTME603-18

M.Code : 79652

Date of Examination : 07-07-22

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) Which vehicle is better monocoque or ladder on frame? Justify your answer.
- b) Where and why, we use multiplate clutch?
- c) What do you mean by multi-point fuel injection system for a petrol engine?
- d) Why the differential is needed in automobile?
- e) Why a rich mixture is required for idling?
- f) *'Is differential compulsory part of transmission system'*. Explain in brief.
- g) What are the different sources of automobile pollution?
- h) Make a list of important quantities to be measured during the testing of an engine.
- i) How Exhaust Gas Recirculation (EGR) helps in reducing pollution?
- j) What is knocking phenomenon of I.C. engines.

SECTION-B

2. Why we use multi-cylinder engines instead of the big single-cylinder with the same volume? Justify your answer by suitable engine parameter's discussion.
3. What are the main factors which affect the tendency to detonate? Describe them with suitable diagram.
4. What are the functions of exhaust system? Draw a neat sketch of exhaust system.
5. Explain the terms (a) Brake Power (b) Indicated Power (c) Specific Fuel consumption.
6. Discuss the weight transfer phenomenon indicating the force acting when brakes are applied to a moving vehicle.

SECTION-C

7.
 - a) What do you understand from the 'breathing' of the fuel tank? How does it cause pollution?
 - b) What are the advantage and drawbacks of the catalytic converter method compared to blowing of air only into the exhaust manifold?
8. Explain the multi-point fuel injection system for a petrol engine.
9. Explain the following :
 - a) Camber
 - b) Caster
 - c) Toe-in and Toe-out
 - d) King-pin inclination.

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.