Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Automobile Servicing) (Sem.–5) ALTERNATIVE FUEL & EMISSION CONTROL Subject Code : 7.GV.02 M.Code : 91073 Date of Examination : 14-12-22

Time: 3 Hrs.

Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

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

SECTION-A

- 1. Write briefly :
 - a) Define the lower calorific value of fuel.
 - b) What is meant by particulate emissions from S.I. and C.I. engines?
 - c) Mention major advantages of bio fuel over diesel.
 - d) What purpose does PCV serve?
 - e) What do you understand by breathing of fuel tanks?
 - f) What is the function of EGR?
 - g) Can one use solid fuels for automotive? If so how?
 - h) What is the function of catalytic converter?
 - i) How photochemical smog affects our atmosphere?
 - j) What is the function of flame ionization detectors?

SECTION-B

- 2. Write a short note on present scenario of Conventional (Petroleum) Automobile fuels.
- 3. Describe how proper design of combustion chamber helps to reduce exhaust emissions.
- 4. Write a short note on the use of Hydrogen as an Automobile fuel. What Engines modifications are required for hydrogen?
- 5. Discuss with neat sketches working of a 3-way catalytic converter.
- 6. Explain briefly principle and working of: NDIR Analyzer and NOX Analyzer.

SECTION-C

- 7. Explain in detail use of any one alternative fuel system in existing I.C. engine. Compare its performance with other alternative fuels.
- 8. Discuss the air injection system technique of reducing pollution in the exhaust gases.
- 9. How does an Automobile contribute towards Environment pollution? Discuss various methods to reduce the emission of pollutants in Exhaust gases.

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.