

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2012 to 2017) (Sem.-6)
AUTOMOTIVE HEATING, VENTILATION & AIR CONDITIONING
Subject Code : BTAE-602
M.Code : 71218

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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. Answer briefly :

- a. Define the term 1 tone refrigeration.
- b. What do you mean by air conditioning?
- c. Why freons are responsible for ozone depletion?
- d. Name the refrigerant currently used in car air conditioning.
- e. What do you mean by climate control system used in cars?
- f. What is the function of evaporator?
- g. What will happen if the condenser fan of the car stops?
- h. Classify various types of refrigerants.
- i. What is purging?
- j. What is halide torch test?

SECTION-B

2. Why compressor is known as the heart of the refrigeration system?
3. Classify and explain various types of automotive air conditioning-heating systems.
4. How refrigerants are classified? Discuss the desirable properties of refrigerant.
5. What is leak detection of refrigerants and how it is done?
6. Explain various types of duct arrangement systems with the help of neat sketches.

SECTION-C

7. Write a short note on
 - a. Eco-friendly refrigerant
 - b. Ozone layer depletion and global warming potential
8. Write the possible cause and possible remedies for the following failures.
 - a. Compressor does not start
 - b. Oil on floor
 - c. Unit runs excessively
9. Explain various basic psychrometric process and show them on psychrometric chart.

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC against the Student.