

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018**

AUTOMOTIVE AIR CONDITIONING

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Explain the role of evaporator in automotive air conditioning system.
2. Define the term COP.
3. State the purpose of automotive heater.
4. List the components of heating system of automotive air conditioning system.
5. Explain the purpose of manifold gauge. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Write a note about devices equipped in automobile air conditioning system.
2. Explain the working of compressor.
3. List the desirable properties of refrigerant.
4. Write a short note about classification of refrigerants.
5. Explain the role of manifold gauge in servicing of air conditioning system.
6. Describe all season type air conditioning system.
7. Explain gas leak detecting method. (5×6 = 30)

PART — C

Marks

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Explain the working of automobile air conditioning system with a neat sketch. 8
 (b) Describe the working of condenser. 7

OR

- IV (a) Explain the working of evaporator in automotive air conditioning system. 8
 (b) Describe the purpose of receiver and sight glass. 7

UNIT — II

- V (a) Describe the basic principle of refrigeration cycle. 8
 (b) List the coding of refrigerants. 7

OR

- VI (a) Write a short note on air conditioning lubricants. 8
 (b) Explain the thermodynamic cycle in car air conditioning system. 7

UNIT — III

- VII (a) Explain heater-cooler independent system. 8
 (b) Describe manually controlled air conditioning system. 7

OR

- VIII (a) Compare dash type and dual air conditioner type air conditioning system. 8
 (b) Explain the method of overload protection in air conditioner. 7

UNIT — IV

- IX (a) Describe evacuating and charging of refrigeration system. 8
 (b) Explain servicing of heater system. 7

OR

- X (a) Explain the procedure for refrigerant leak repair. 8
 (b) Write a short note on servicing of compressor. 7