



**UNIVERSITI KUALA LUMPUR
Malaysia France Institute**

**FINAL EXAMINATION
JANUARY 2014 SESSION**

SUBJECT CODE	:	FVB 20603
SUBJECT TITLE	:	AUTO AIR CONDITIONING AND CLIMATE CONTROL SYSTEM
LEVEL	:	BACHELOR
TIME / DURATION	:	2 ½ HOURS
DATE	:	

INSTRUCTIONS TO CANDIDATES

- 1. Please read the instructions given in the question paper CAREFULLY.**
- 2. This question paper is printed on both sides of the paper.**
- 3. Please write your answers on the answer booklet provided.**
- 4. Answer should be written in blue or black ink except for sketching, graphic and illustration.**
- 5. This question paper consists of TWO (2) sections. Section A and B. Answer all questions in Section A. For Section B, answer THREE (3) question only.**
- 6. Answer all questions in English.**

THERE ARE 3 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answer all the question.****Please use the answer booklet provided.****Question 1**

- a) State **FIVE (5)** purposes of having a climatic vehicle air-conditioning system. (5 marks)
- b) List down the most common problems found in car air-conditioning system resulting from not following the recommended maintenance schedule? (5 marks)

Question 2

- a) Describe the general procedures when replacing a leaked evaporator. (5 marks)
- b) What does the term “condenser overhaul”? (5 marks)

Question 3

- a) State the normal high and low working pressure reading for most of car air-conditioning system. (5 marks)
- b) Explain the possibilities resulting from the following pressure reading?
i. high suction pressure
ii. high discharge pressure (5 marks)

Question 4

- a) Explain the characteristics of the refrigerant that is used in air conditioning systems. (5 marks)
- b) Discuss the effect of refrigerant to the environment and damage to the ozone layer and its danger to living things. (5 marks)

SECTION B (60 marks)**INSTRUCTION: Answer any THREE (3) questions only****Question 5**

- a) State the uses and the differences of a filter drier and an accumulator. (6 marks)
- b) Explain the most suitable time to replace the filter drier? (2 marks)
- c) Sketch the working principle of a filter drier and an accumulator and show their location in the system. (12 marks)

Question 6

- c) List down the difference between a thermostatic and automatic expansion valve? (8 marks)
- d) Explain the working principles and pressures acting in both of the valve. (12 marks)

Question 7

Explain the process of servicing a car air-conditioning system which includes:

- a) The safety procedures and all the required tools and equipments (5 marks)
- b) Methods and processes of cleaning evaporator, condenser expansion valves and compressor (5 marks)
- d) The charging processes, procedures and connection diagrams. (10 marks)

Question 8

- a) List **THREE (3)** common fault found in climatic wiring system and explain the reason for each of the fault. (6 marks)

b) Sketch the standard schematic for car climatic air-conditioning wiring system.

(14 marks)

END OF QUESTION