



**UNIVERSITI KUALA LUMPUR
Malaysia France Institute**

**FINAL EXAMINATION
SEPTEMBER 2013 SESSION**

SUBJECT CODE : FVD 11103
SUBJECT TITLE : ENGINE FUNDAMENTAL
LEVEL : DIPLOMA
TIME / DURATION : 2 hours and 30 minutes.
DATE :

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper CAREFULLY.
 2. This question paper is printed only one side of the paper.
 1. Please write your answers on the answer booklet provided.
 2. Answer should be written in blue or black ink.
 3. This question paper consists of TWO (2) sections. Section A and B.
 4. Answer all questions in Section A and 2 questions in Section B only.
 5. Answer all questions in English.
 6. All questions are closed type question. Please return it back to the invigilator
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THERE ARE 2 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)**INSTRUCTION: Answer All question.****Question 1**

- a) What is an engine? (4 marks)
- b) List five components attached to cylindre head. (5 marks)
- c) List five components attached to cylindre block. (5 marks)
- d) List the types of cylindre liners and identify the types that can be replaced. (6 marks)

Question 2

- a). Describe the actions of the piston, intake and exhaust valves during each engine stroke. (8 marks)
- b). In most engines, how are cylinders numbered and where is cylinder number one located? (4 marks)
- c). Describe the “blow-by gas”. (4 marks)
- d). Why Petrol engine is called spark ignition engine (4 marks)

Question 3

- a). Explain what is the sludge? (5marks)
- b). Describe the difference between mechanical pump and electrical fuel pump? (5marks)
- c). Describe the main job of ignition system. (5marks)
- d). Explain the advantages of air cooling system (5marks)

SECTION B (Total: 40 marks)**Answer 2 questions only****Question 1**

Discuss the major causes of the car breakdown; name three of these common breakdown and how to solve each case. *(20marks)*

Question 2

Explain the four methods of valve adjustment. *(20 marks)*

Question 3

- a. Sketch the valve timing diagram and show the overlap region. *(10 marks)*
- b. Customer complaint, after engine overheating, his engine was not run smooth and the engine oil was not "black" it become "brown" and sticky. As technician give the possible cause to resolve this problem and explain the process.

*(10 marks)***END OF QUESTION**