



**UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE**

**FINAL EXAMINATION
SEPTEMBER 2014 SESSION**

SUBJECT CODE : FVD35202
SUBJECT TITLE : ADVANCE DIESEL TECHNOLOGY
LEVEL : DIPLOMA
DURATION : 2.00 PM – 4.00 PM
(2 HOURS)
DATE / TIME : 30 DECEMBER 2014

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 two(2) question only.
6. Answer all questions in English. .

THERE ARE 3 PRINTED PAGES OF QUESTIONS EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)**INSTRUCTION: Answer ALL question in section A****Please use the answer booklet provided.****Question 1**

- a. List **FOUR (4)** starting aids usually used in Diesel engine. (5marks)
- b. Describe the factor that can influence engine performance (6marks)
- c. List **TWO (2)** types of forced induction system that are used in automotive engines. (5marks)
- d. Explain the functions of the delivery valve in Inline fuel injection pump. (4marks)

Question 2

- a. Describe the general functions of a governor in the diesel fuel pump. (5marks)
- b. List **FOUR (4)** starting mechanisms that are used in diesel engine. (5marks)
- c. Explain **THREE (3)** basic types of diesel injector nozzle and its common use. (5marks)
- d. Explain the meaning of Turbocharger Lag. (5marks)

Question 3

- a. List **TWO (2)** main types of turbine used in turbocharger. (5marks)
- b. Explain **TWO (2)** types of Fuel Injection Pump and describe the differences between these both pump. (5marks)

c. Describe a basic checking to be applied if the diesel engine lack of power or black smoke.

(6marks)

d. List **FOUR (4)** main components of the common rail.

(4marks)

SECTION B (Total: 40 marks)**INSTRUCTION: Answer TWO(2) questions only.****Please use the answer booklet provided.****Question 1**

a. State the procedure of plunger lifter timing adjustment on distributor fuel pump.
(10marks)

b Explain the differences between “RPM” (revolution per minute) and “Stroke” during calibration?
(10marks)

Question 2

a. Explain what will happen to the diesel engine with distributor injection pump if the reading is lower than the standard value (0.97-1.03mm).
(10marks)

b. During calibration using distributor fuel pump, the adjusting screw will increase or decrease the diesel fuel quantity. Explain how it happens.
(10marks)

Question 3

a) Explain the procedure to install a calibration kit on the distributor injection pump (DPA) before carry out calibration test.
(10marks)

b) Explain why does diesel direct injection system is performing very well?
(10marks)

END OF QUESTION