



UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE

FINAL EXAMINATION
SEPTEMBER 2013 SESSION

SUBJECT CODE : FVD 35202
SUBJECT TITLE : ADVANCE DIESEL TECHNOLOGY
LEVEL : DIPLOMA
DURATION : 2 HOURS
DATE / TIME :

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. .
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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**

- 1) Draw a simple layout diagram of the two (2) injection pumps.
(4 marks)
- 2) What is the basic checking to be applied if the customer complained that the diesel engine has no power or produce black smoke?
(6 marks)
- 3) State five (5) pollutants produced by diesel emission
(5 marks)
- 4) Name two types of Fuel Injection Pump and describe the difference between both pump.
(5 marks)

Question 2

- 1) What are the four mechanism devices that are used for the diesel engine starting aids?
(4 marks)
- 2) List down comparison of spark ignition engines and compression ignite engine.
(6 marks)
- 3) What are the four (4) automobile application fuel injection pump that are commonly used?
(4 marks)
- 4) What are the main functions of Fuel Injection Pump?
(6 marks)

Question 3

- 1) How many grades does the diesel fuel have?
(4 marks)

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

- 3) Why doesn't diesel engine use spark plug to ignite fuel?
(5 marks)

- 4) Explain the function of the delivery valve in Inline fuel injection pump.
(4 marks)

SECTION B (Total: 40 marks)

INSTRUCTION: Answer TWO(2) questions only.

Please use the answer booklet provided.

Question 1

1) Figure A is the Diesel fuel layout systems.

a. Name all the components.

(10 marks)

b. Describe where is the high pressure and low pressure system.

(3 marks)

c. What are the general functions of governor?

(7 marks)

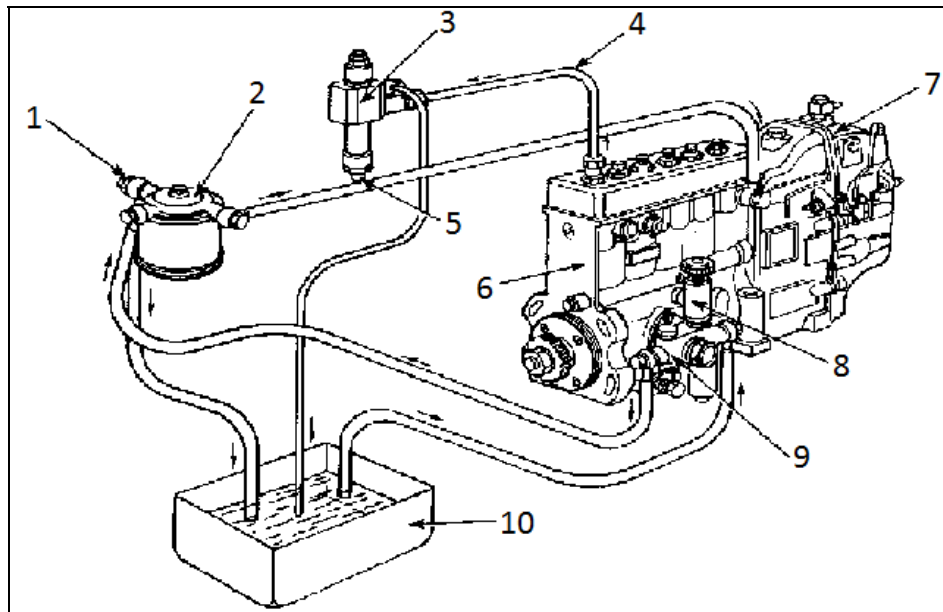


Figure A: Diesel Fuel layout system

Question 2

1) By referring to figure B

a. What is the name of this component inside the injection pump?

(2 marks)

b. Name all elements on figure B?

(4 marks)

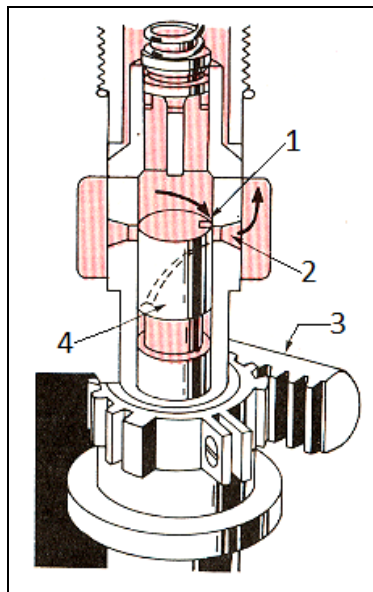


Figure B

c. What is the position that should be in figure B?

(2 marks)

d. Briefly explain the operation by referring to your answer in 1.c

(6marks)

e. Explain the characteristic of

i. Volatility

(3 marks)

ii. Cetane Number or Rating

(3 marks)

Question 3

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

- 2) What will happen to the diesel engine with distributor injection pump if the reading is lower than the standard value (0.97-1.03mm)?
(10 marks)

END OF QUESTION