



**UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE**

**FINAL EXAMINATION
JANUARY 2014 SEMESTER**

SUBJECT CODE : FVD 35302
SUBJECT TITLE : VEHICLE SERVICE AND MAINTENANCE
LEVEL : DIPLOMA
TIME / DURATION : 2 HOUR 2.00 pm - 4.00 pm
DATE : 27 MAY 2014

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper **CAREFULLY**.
2. This question paper is printed on one side of the paper.
3. Please write your answers in the answer booklet provided.
4. Answers should be written in blue or black ink except for sketching, graphic and illustrations.
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 5 PRINTED PAGES OF QUESTIONS

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

- (a) Explain how can maintenance can contribute to extend the lifetime of the vehicle?
(2 marks)
- (b) Preventive maintenance check should be performed at the suggested dependable to vehicle operation. List **SIX (6)** area that should be checked while operating the vehicle.
(6 marks)
- (c) Describe the differences between Low Maintenance Battery and Free Maintenance battery.
(6 marks)
- (d) Describe at least **FOUR (4)** characteristics for tire designation.
(4 marks)
- (e) Explain how tire tread ware can influence tire lifetime and traction.
(2 marks)

Question 2

- (a) List **FOUR (4)** contaminants that can make lubrication oil dirty.
(4 marks)
- (b) Explain how to indicate multiple viscosity oil and state an example of oil grading.
(5 marks)

- (c) Describe the advantages of Multigrade engine oil compared to Monograde engine oil.
(3 marks)
- (d) Explain the procedure of maintenance for Automatic transmission system.
(5 marks)
- (e) Describe the procedure to check manual gearbox oil for front engine of front wheel drive vehicle.
(3 marks)

Question 3

- (a) Explain how faulty wheel bearing will affect wheel alignment.
(2 marks)
- (b) Describe the method to install camshaft oil seal for Proton 1.6 Xli SOHC.
(5marks)
- (c) Describe **FOUR (4)** safety hazards while working on engines and the cooling system.
(4 marks)
- (d) Pressure testing is one of the cooling systems diagnoses method. Describe the procedure for this testing.
(5 marks)
- (e) Explain effects of by not using coolant inside the cooling system.
(4 marks)

SECTION B (Total: 40 marks)

INSTRUCTION: Answer TWO (2) questions.
Please use the answer booklet provided.

Question 1

- (a) The engine in a vehicle is start normally. The battery seems continually needs water to keep the electrolyte to the correct level.
- i. Name **ONE** possible cause for this problem. (2 marks)
 - ii. State the necessary corrections that should be taken in order to solve the problem. (4 marks)
- (b) Tires on a vehicle are wearing outside edges. The alignment has been checked and all adjustments are within specification. The alignment shop says this is normal.
- i. Name **ONE** possible cause for this problem. (2 marks)
 - ii. State the necessary corrections that should be taken in order to solve the problem. (4 marks)
- (c) On a computer-controlled vehicle there is a small amount of battery drain when the ignition is at OFF position. Explain the causes of the causing of this drain. (4 marks)
- (d) List the purpose of *Tire Plycard*. (4 marks)

Question 2

(a) An engine which has been using synthetic lubrication oil appear to be light brown or whitish.

i. List the possible causes of this problem.

(2 marks)

ii. Explain the necessary corrections that should be taken in order to solve the problem.

(4 marks)

(b) A customer complains after changing into high viscosity transmission fluid, the automatic transmission does operate not smoothly and the engine becomes underpower.

i. Name one possible cause for of this problem.

(2 marks)

ii. State the necessary solutions that should be taken in order to solve the problem.

(4 marks)

(c) Describe the advantages to the manual gearbox if gear oil with grade 85W95 API GL-5 being used.

(4 marks)

(d) Explain the procedure for checking the level of automatic transmission fluid(ATF) in hot engine condition.

(4 marks)

Question 3

- (a) Describe the methodology to perform battery routine cleaning
(4 marks)
- (b) A driver of a Proton Suprima S indicated that while driving home from work, the alternator light came on suddenly. Being only few blocks from home, the driver continued home and shut the car off.
- i. Name **ONE** possible cause for this problem.
(2 marks)
- ii. Explain the necessary solutions that should be taken in order to solve the problem.
(4 marks)
- (c) An engine seems does not reaching the operation temperature. It always happens in cool start condition. The temperature and engine became normal when the engine reach the operation temperature. It's noticeable that the fuel consumption slightly high.
- i. Name **ONE** possible cause for this problem.
(2 marks)
- ii. Explain the necessary solutions that should be taken in order to solve the problem.
(4 marks)
- (d) State the problem that can occur when the engine temperature is too high.
(4 marks)

END OF QUESTION