



UNIVERSITI KUALA LUMPUR
Malaysia France Institute

FINAL EXAMINATION
JULY 2010 SESSION

SUBJECT CODE : FVD 20003
SUBJECT TITLE : AUTOTRONIC 2
LEVEL : DIPLOMA
TIME / DURATION : 9.00am – 11.30am
(2.5 HOURS)
DATE : 19 NOVEMBER 2010

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. Answer all questions.
 6. Answer all questions in English.
-

THERE ARE 4 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 20 marks)**ANSWER ALL QUESTION****SECTION A (Total: 20 marks)****INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.**

1. Distributorless ignition systems...
 - a. Fire two cylinder at the same time
 - b. Fire paired cylinder
 - c. Use the computer to control the ignition timing

2. Ignition timing that is too far advanced can caused...
 - a. Poor performance
 - b. Reduced fuel economy
 - c. Pinging on acceleration

3. In general, when must the spark occur in the piston cycle to ignite the air fuel mixture properly?
 - a. Near the end of the compression stroke
 - b. After of the compression stroke
 - c. After of the power stroke

4. The function of the contact breaker in the transistorized ignition Breaker Triggered System is:
 - a. To switch control current on and off
 - b. To switch primary current on and off
 - c. To amplify primary current

5. What is the advantage of using a semiconductor ignition system?
 - a. It is impossible to implement knock control
 - b. Extended operating-data acquisition
 - c. It is impossible to include other control parameters

6. How the engine speed sensor sense the engine speed?
 - a. An induction type pulse generator scans the teeth of a special purpose gear
 - b. The resulting change in magnetic flux induces a DC voltage evaluated by control unit
 - c. The gear wheel has a gap which is sensed by the induction pulse generator
7. All the output signal from each of the sensor below have to convert from analog to digital except:
 - a. Intake manifold pressure sensor
 - b. Engine temperature sensor
 - c. Engine speed and reference mark sensor
8. What is the advantages of the Breaker Triggered Transistorized Ignition over the Breaker Triggered Coil Ignition system?
 - a. Decrease in the primary current
 - b. Spark advance can be matched better to the individual and diverse requirement made of the engine
 - c. Considerably longer service life of the contact
9. What is meant by 'knocking'?
 - a. Temperature of an air fuel mixture is raised high enough and ignition occur by spark plug
 - b. Self ignition occurs when fuel is injected into the combustion chamber
 - c. The particles on the piston ignite the air fuel mixture in the combustion chamber
10. All the statement below is true EXCEPT:-
 - a. The primary circuit of the ignition coil is switched by means of a power input stage in the electronic control unit
 - b. Signal processing is carried out in the microcomputer which comprises the microprocessor with quartz oscillator crystal for clock pulse generation
 - c. The microcomputer contain all data, including the ignition maps, in addition to the programs for detecting the input variables and for computing the output variables

SECTION B : (50 MARKS)**INSTRUCTION: Answer all questions.****Please use the answer booklet provided.****Question 1**

Draw a functional diagram for breaker triggered transistorized ignition system and name all the major parts.

(10 marks)

Question 2

What are the advantages of the Transistorized Breaker Triggered Ignition system over conventional ignition system?

(5 mark)

Question 3

What is the differences between Transistorized Breaker Triggered Ignition and Conventional Ignition system?

(5 mark)

Question 4

What are the differences between Transistorized Breaker Triggered Ignition and Transistorized Breaker Triggered Ignition Inductive type, list 3 of them.

(6 marks)

Question 5

Write down 3 advantages of Transistorized Breaker Triggered Ignition Inductive type over conventional ignition system.

(6 marks)

Question 6

Explain the operation of Transistorized Breaker Triggered Ignition Inductive type system with the aid of a circuit diagram.

(18 marks)

Question 7

What is the multiplexing?

(2 mark)

Question 8

Name the type of network in the multiplexing system.

(3 mark)

Question 9

What is the meaning of BSI and name 3 of its functions?

(7 mark)

Question 10

Name 3 components for each of the VAN and CAN network system.

(6 mark)

Question 11

List down 3 characteristics for each CAN and VAN system.

(12 mark)

END OF QUESTION