



**UNIVERSITI KUALA LUMPUR**  
**Malaysia France Institute**

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**FINAL EXAMINATION**  
**SEPTEMBER 2014 SESSION**

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**SUBJECT CODE** : FVD12503  
**SUBJECT TITLE** : AUTOTRONIC 2  
**LEVEL** : DIPLOMA  
**TIME / DURATION** : 8.00 PM – 10.00 PM  
( 2 HOURS )  
**DATE** : 09 JANUARY 2015

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**INSTRUCTIONS TO CANDIDATES**

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- 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 Section B. Answer all questions.**
  - 6. Answer all questions in English.**
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**THERE ARE 2 PAGES OF QUESTIONS, INCLUDING THIS PAGE.**

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**SECTION A (60 MARKS)****INSTRUCTION: Answer ALL questions.****Question 1**

Construct a wiring diagram of conventional ignition system and label all the component.

*(10 marks)***Question 2**

Define dwell angle and state the importance of dwell angle.

*(2 marks)***Question 3**

Describe what will happen if dwell angle is too small and too big.

*(4 marks)***Question 4**List **THREE (3)** functions of condenser in conventional ignition system.*(6 marks)***Question 5**

- a. Define multiplexing. *(2 marks)*
- b. Identify the types of network in the multiplexing system. *(3 marks)*
- c. Define BSI and list **THREE (3)** of its function. *(8 marks)*
- d. Identify **THREE (3)** components for each of the **VAN** and **CAN** network system.

*(6 marks)***Question 6**

- a. Sketch a wiring diagram for breaker triggered transistorized ignition system (TI-B) integrated with Darlington Ignition Amplifier and label all the major parts. *(15 marks)*
- b. State **TWO (2)** essential advantages of breaker triggered transistorized ignition system over conventional ignition system. *(4 marks)*

**SECTION B (40 MARKS)****INSTRUCTION: Answer TWO (2) questions only.****Question 1**

- a. Construct a wiring diagram of Transistorised Ignition system with Inductive Sensor and label all the related components. *(15 marks)*
- b. List **THREE (3)** differences between Transistorized Breaker Triggered Ignition system and Transistorized Ignition system with Inductive sensor *(5 marks)*

**Question 2**

Draw a complete wiring diagram of Transistorised Ignition system with Hall Effect sensor integrated with Darlington Ignition Amplifier and name all the related component.

*(20 marks)*

**Question 3**

- a. Construct a Vehicle Area Network (VAN) and Control Area Network (CAN) protocol *(10 marks)*
- b. List **FOUR (4)** advantages of Multiplexing system over conventional wiring system *(4 marks)*
- c. Explain the reason for Multiplexing wire being twisted together. *(2 marks)*
- d. Explain **TWO (2)** basic methods of Multiplexing in term of channel bandwidth and time, signal and particular phase, frequency or time. *(4 marks)*

**END OF QUESTION**