



## **UNIVERSITI KUALA LUMPUR**

**Malaysia France Institute**

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### **FINAL EXAMINATION JANUARY 2014 SESSION**

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|------------------------|---------------------------------|
| <b>SUBJECT CODE</b>    | <b>: FLD 30302</b>              |
| <b>SUBJECT TITLE</b>   | <b>: MAINTENANCE MANAGEMENT</b> |
| <b>LEVEL</b>           | <b>: DIPLOMA</b>                |
| <b>TIME / DURATION</b> | <b>: 2 HOURS</b>                |
| <b>DATE</b>            | <b>:</b>                        |

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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 B. Answer **ALL** questions in Section A. For Section B, answer **TWO (2)** questions only.
  6. Answer all questions in English.
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**THERE ARE 2 PRINTED PAGES OF QUESTIONS, EXCLUDING THIS PAGE.**

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

Give 3 main objectives of implementing good practice of maintenance.

(10 marks)

**Question 2**

Explain in what condition appropriate to implement the following strategies of maintenance:

- a) Preventive Maintenance
- b) Predictive Maintenance
- c) Design Out Maintenance
- d) Breakdown Maintenance

(10 marks)

**Question 3**

Give 5 examples of maintenance activity that are normally performed by electrical technicians.

(10 marks)

**Question 4**

Give the definition of FAILURE?

(10 marks)

**Question 5**

ABC SDN BHD has developed a new DC Motor that has a mean time between failures of 15000 rotations. Calculate the reliability of this motor for:

- a) 3000 rotations, and
- b) 6000 rotations.

(10 marks)

**Question 6**

Three engines are used to fly an airplane. Engine 1 has a reliability of 0.99, engine 2 has a reliability of 0.95 and engine 3, which gets less maintenance, has a reliability of 0.9. What is the total reliability of the airplane engine system?

(10 marks)

**SECTION B (Total: 40 marks)**

**INSTRUCTION: Answer Question 7 and choose either Question 8 or 9. Please use the answer booklet provided. All questions are based on the following CASE STUDY.**

**Case Study**

You are working with a company that is using the full set of the DC Motors types DC180ATZ. The company management team has appointed you as the technician that responsible to ensure the motors are always in good running condition to avoid failure. Given in **ATTACHMENT A** is the Installation, Operation and Maintenance Manual of DC Motors types DC180ATZ, C180ATZ and DC210ATZ.

**Question 7**

- a) Identify 10 maintenance activities and tasks should be performed on the MOTOR that proposed by the manufacturer, and

(10 marks)

- b) Propose their frequency and time required to complete.

(10 marks)

**Question 8**

Develop an annual work schedule.

(20 marks)

**Question 9**

Prepare a work order example of one of the tasks.

(20 marks)

**END OF QUESTION PAPER**

**Attachment A**