



**UNIVERSITI KUALA LUMPUR
Malaysia France Institute**

**FINAL EXAMINATION
SEPTEMBER 2014 SESSION**

SUBJECT CODE : FWB12103
SUBJECT TITLE : WELDING & CUTTING PROCESSES
LEVEL : BACHELOR
TIME / DURATION : 3.30 PM – 6.00 PM
2.5 HOURS
DATE : 31 DECEMBER 2014

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. Answer all questions in Section A and Section B.
 6. Answer all questions in English.
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THERE ARE 2 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)**INSTRUCTION: Answers All Questions.****Questions 1**

Oxy-fuel welding is a process that requires the use of oxygen and acetylene gas:

1.1 What is “acetylene”? (7 marks)

1.2 Why is it suitable for welding? (8 marks)

Questions 2

1.1 Explain the conditions for obtaining satisfactory welds. (7 marks)

1.2 Discuss the importance of welding and state its applications. (8 marks)

Questions 3

Discuss the factors which are considered in choosing a welding process for a specific application. (10 marks)

SECTION B (Total: 60 marks)**ANSWER ALL QUESTIONS.****Question 1**

Shielded metal arc welding is one of most commonly used process:

1.1 Why “shielded metal arc welding” process is most commonly used? (5 marks)

1.2 Briefly describe the process. (5 marks)

Question 2

Gas metal arc welding is a mechanized process that require the support of gas for welding:

2.1 Explain briefly the difference between the “MIG” and “MAG” process. (10 marks)

2.2 What are the advantages and limitations of these processes? (5 marks)

Question 3

The selection of welding polarity in arc welding is important in the welding result:

3.1 Explain what you know about polarity in arc welding. (5 marks)

3.2 What is the advantage of using electrode negative over electrode positive? (5 marks)

Question 4

Electrode coatings are considered fluxes that establishes good arc and sound welds:

4.1 Explain the functions of “flux” in electrode coatings or coverings. (10 marks)

4.2 Why are cellulosic electrodes, (E6010) suitable for root runs? (5 marks)

Question 5

Explain briefly what causes “arc blow” and the steps to be taken in reducing this phenomenon. (10 marks)

END OF QUESTION