



**UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE**

**FINAL EXAMINATION
JANUARY 2014 SESSION**

SUBJECT CODE : FWB32503
SUBJECT TITLE : ADVANCE WELDING PROCESSES
LEVEL : BACHELOR
TIME / DURATION : 2.5 HOURS
DATE :

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. The answer should be written in blue or black ink except for sketching, graphic and illustration.**
- 5. This question paper consists of FIVE (5) questions. Answer ALL questions.**
- 6. Answer all questions in English.**

THERE ARE 3 PAGES OF QUESTIONS EXCLUDING THIS PAGE.

(Total: 100 marks)

INSTRUCTION: Answer All questions.

Question 1

- (a) Explain the characteristics of the Explosion welding **(EXW)**.
(5 marks)
- (b) Summarize the advantages of the Explosion welding **(EXW)**.
(7 marks)
- (c) Review the limitation of the Explosion welding **(EXW)**.
(4 marks)
- (d) Summarize the potential problems of the Explosion welding **(EXW)**.
(4 marks)

Question 2

- (a) Explains the Stud Welding principles operation
(8 marks)
- (b) Summarize the application of Stud Welding
(6 marks)
- (c) Define the Flash Welding **(FW)**
(2 marks)
- (d) What material can weld by Flash Welding **(FW)**?
(4 marks)

Question 3

- (a) Define Spot Welding.
(2 marks)
- (b) Differentiate between US-spot welding over US-ring welding..
(8 marks)
- (c) Summarize the characteristics of the Electron Beam Welding **(EBW)**.
(5 marks)
- (d) Write the limitation of the Electron Beam Welding **(EBW)**.
(5 marks)

Question 4

- (a) Describe the Ultrasonic Welding (**USW**).
(4 marks)
- (b) Explain why Ultrasonic Welding (**USW**) is classified as a solid state process?
(2 marks)
- (c) Summarize the Ultrasonic Welding (**USW**) application and its variation processes.
(8 marks)
- (d) Summarize the advantages of the Flash Welding (**FW**)
(6 marks)

Question 5

- (a) Summarize the application of Resistance spot welding in the fabrication industry.
(5 marks)
- (b) Describe the general application of the Resistance Spot Welding
(5 marks)
- (c) Explain the effects of Spot projection welding to the material being welded.
(6 marks)
- (d) Explain the common hazard of Spot Welding welded.
(4 marks)

END OF QUESTION