



**UNIVERSITI KUALA LUMPUR
MALAYSIA FRANCE INSTITUTE**

**FINAL EXAMINATION
JANUARY 2014 SESSION**

SUBJECT CODE : FWD 32503
SUBJECT TITLE : WELDING INSPECTION & TESTING
LEVEL : DIPLOMA
TIME / DURATION : 2.5 HOURS **3.00 pm - 5.30 pm**
DATE : 30 MAY 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)** section, sections 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

SECTION A (Total: 60 marks)

INSTRUCTION: Answer ALL questions.
Please use the answer booklet provided.

Question 1

- (a) Explain briefly the meaning of code, standards and specification?
(6 marks)
- (b) Base on **ASME Sec II. Part A** ferrous Material Specification, What is material specification for carbon steel pipe and steel plate for pressure vessel?
(4 marks)
- (c) What is pressure vessel and list down types of pressure vessel?
(6 marks)
- (d) General requirement **Article 1** in **ASME Sec. V**, list down document for qualification of **NDE** personnel?
(4 marks)

Question 2

- (a) Explain what is essential variable and non-essential variable and give an example of each **Part QW** in **ASME Sec. IX**?
(12 marks)
- (b) List down what the equipment inspector used for inspection and explain function every each?
(8 marks)

Question 3

- (a) Differentiate between **Pipe** and **Tube** and give an example seamless pipe and welded pipe?
(12 marks)
- (b) Explain what hydrostatic test and give **TWO (2)** example methods for pressure testing?
(8 marks)

SECTION B (Total: 40 marks)**INSTRUCTION: Answer TWO (2) question only****Please use the answer booklet provided.****Question 1**

- (a) Visual Inspection for welding defect and discontinuities can be grouped under **FIVE (5)** headings, list down and explain each of them?

(20 marks)

Question 2

- (a) According to **AWS D1.1 (Steel Structure)** requirements for design of welded connections, explain **FOUR (4)** parts involved in welded connections?

(8 marks)

- (b) Describe definition of **API 1104** and **API** standard cover for?

(6 marks)

- (c) Explain what is function of code and standard **ASME B31.1 (Power Piping)**?

(6 marks)

Question 3

- (a) Explain period of holding time for hydrostatic test?

(8 marks)

- (b) Explain hydrostatic test procedure before, during and after?

(12 marks)

END OF QUESTION