



UNIVERSITI KUALA LUMPUR
Malaysia France Institute

FINAL EXAMINATION
SEPTEMBER 2014 SESSION

SUBJECT CODE : FWB12202
SUBJECT TITLE : WELDING DESIGN AND SYMBOLS
LEVEL : BACHELOR
TIME / DURATION : 9.00 AM – 11.00 AM
(2 HOURS)
DATE : 09 JANUARY 2015

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. Answer **ALL** questions in English.
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THERE ARE 5 PRINTED PAGES OF QUESTIONS, EXCLUDING THIS PAGE

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

Question 1

Answer the following questions by referring to **Fig. 1**:-

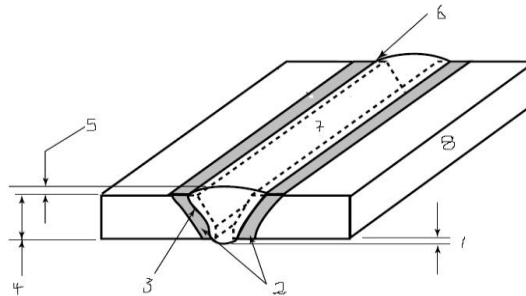


Fig. 1

(a) Write the type of weld and joint design of the joint.

(4 marks)

(b) Translate and name the labelled section **no.1 to 8**.

(8 marks)

(c) Illustrate the standard welding symbol of the joint.

(4 marks)

(d) Define the terms **Heat Affected Zone (HAZ)**.

(4 marks)

Question 2

(a) Distinguish the terms full penetration and partial penetration.

(4 marks)

(b) Choose **THREE (3)** methods used for design preparation.

(3 marks)

- (c) Examine and name the joint designs in **Fig. 2**:-

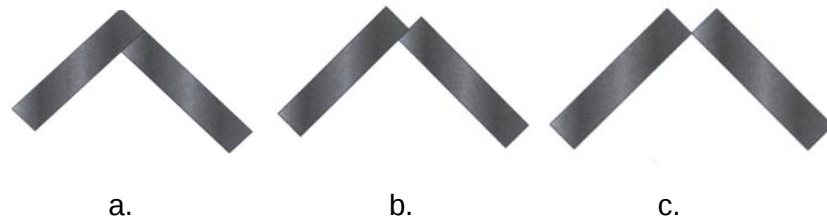


Fig. 2

- (d) Produce **FOUR (4)** factors that must be considered in designing a weld joint (3 marks)
- (e) Justify the terms “Weld toe, root of weld and leg length. (4 marks)
- (6 marks)

Question 3

Study the drawing in **Fig. 3** and answer the following questions;-

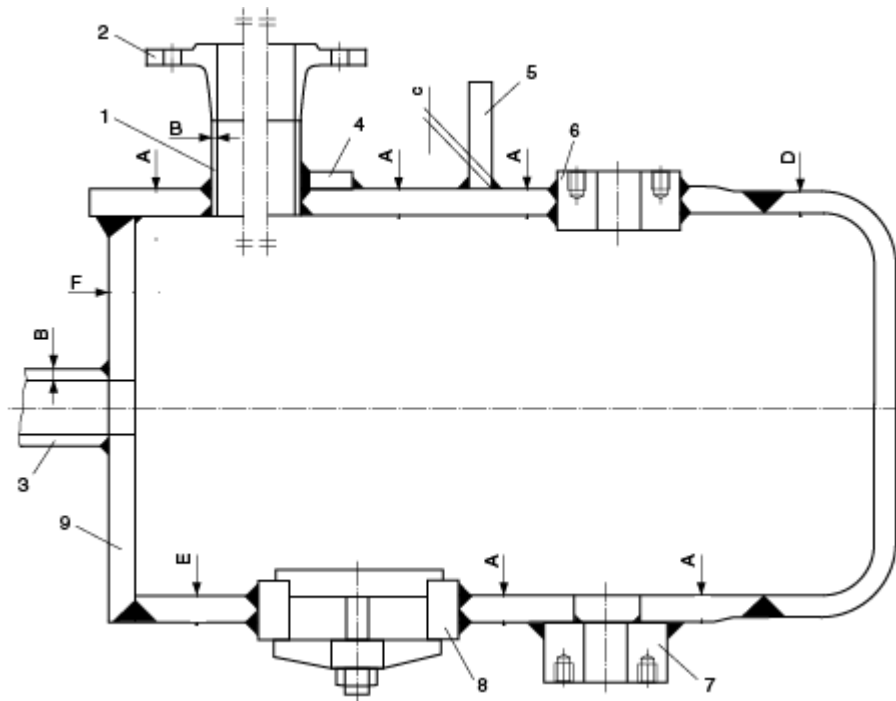


Fig. 3

- (a) Determine the type of weld of plate number 4. (4 marks)
- (b) Design the welding symbol of the joint between plate A and F. (4 marks)

(c) Design the welding symbol of the joint between plate **9 and E**.

(4 marks)

(d) Decide the joint design used for plate **9 and E**.

(4 marks)

(e) Design the welding symbol of the joint between plate **8 and A**.

(4 marks)

Question 4

Study the welding symbols in **Fig. 4 and 5** and answer the questions carefully:-

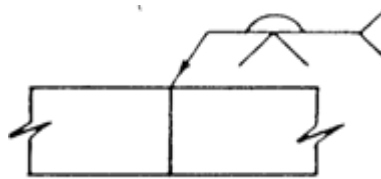


Fig.4

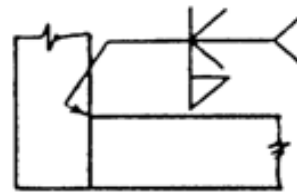


Fig.5

(a) Interpret the welding symbol of **Fig.4**.

(3 marks)

(b) Interpret the welding symbol of **Fig.5**

(3 marks)

(c) Design the desired weld of **Fig.4**.

(4 marks)

(d) Design the desired weld of **Fig.5**.

(4 marks)

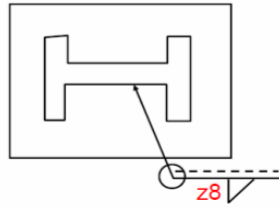
(e) Design the desired weld of **Fig.4** if the joint design is single bevel butt joint and the weld location is other side.

(6 marks)

Question 5

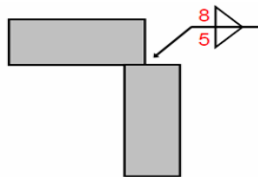
(a) Create the desired weld for the following welding symbols:-

i.



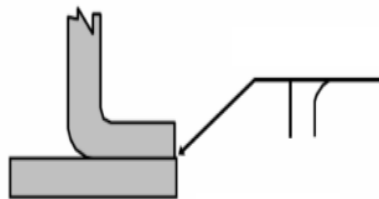
(5 marks)

ii.



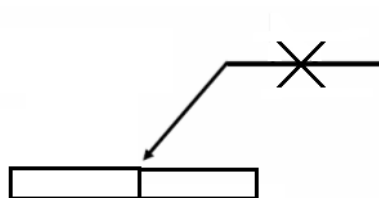
(5 marks)

iii.



(5 marks)

iv.



(5 marks)

END OF QUESTION