



SET A

**UNIVERSITI KUALA LUMPUR**  
MALAYSIA FRANCE INSTITUTE

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**FINAL EXAMINATION**  
**JULY 2010 SESSION**

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**SUBJECT CODE** : FWD22402  
**SUBJECT TITLE** : WELDING PROCEDURE AND SPECIFICATION  
**LEVEL** : DIPLOMA  
**TIME / DURATION** : 3.00pm – 5.30pm  
( 2.5 HOURS )  
**DATE** : 19 NOVEMBER 2010

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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) question only.
6. Answer all questions in English.

**SECTION A (Total: 60 marks)**

**INSTRUCTION: Answer ALL questions.**

**Please use the answer booklet provided.**

**Question 1**

State the full term of the acronyms below.

a. WPS

(2 marks)

b. WPQR

(2 marks)

c. WQT

(2marks)

**Question 2**

Different codes and specifications may have different requirements for a welding procedure, but in general, a welding procedure consists of three parts, write down three main parts

(6 marks)

**Question 3**

List down 4 major items as "Essential Variables" in welding procedure .

(8 marks)

**Question 4**

List down 4 major items as "Non Essential Variables" in welding procedure .

(8 marks)

**Question 5**

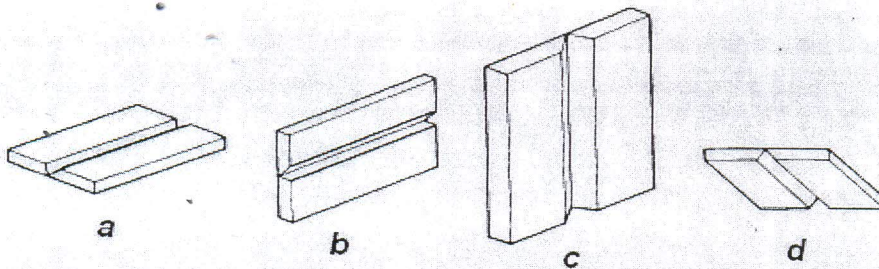
The code (ASME IX) is divided into 4 parts as follows:  
Identify the clause (QW) of each part.

- a. QW 100 (2 marks)
- b. QW 200 (2 marks)
- c. QW 300 (2 marks)
- d. QW 400 (2 marks)

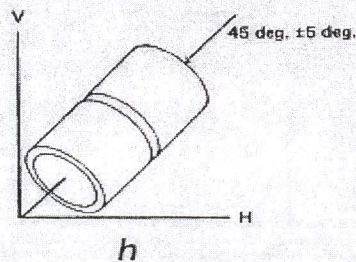
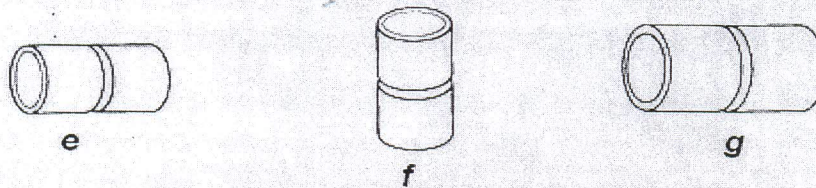
**Question 6**

According ASME, QW 460 for **Graphic** and QW 461 (plate and pipe) for **Position**. From the graphic given clarify with a suitable weld position.

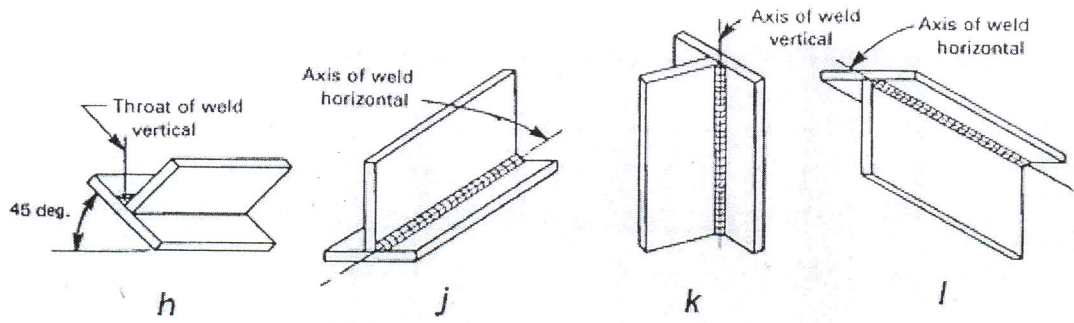
(24 marks)



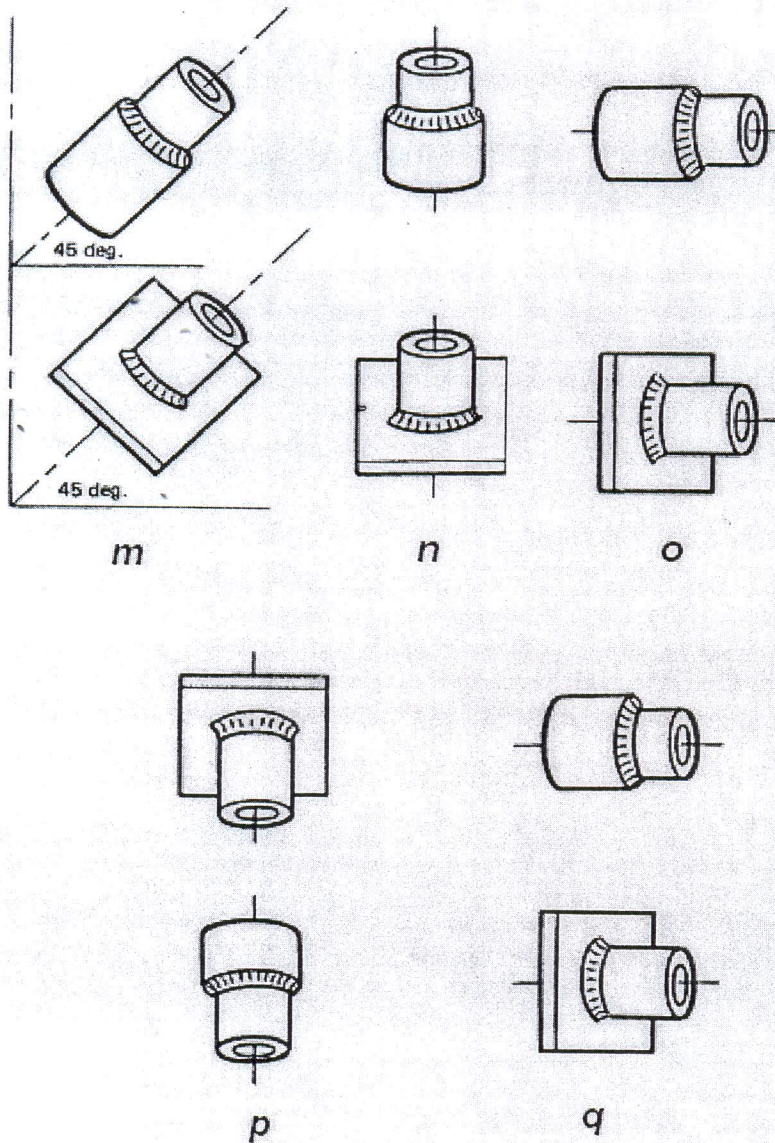
QW-461.3 GROOVE WELDS IN PLATE — TEST POSITIONS



QW-461.4 GROOVE WELDS IN PIPE — TEST POSITIONS



QW-461.5 FILLET WELDS IN PLATE — TEST POSITIONS



QW-461.6 FILLET WELDS IN PIPE — TEST POSITIONS

SECTION B (Total: 40 marks)

INSTRUCTION: Answer TWO (2) question only, Q 1 and Q2 or Q3

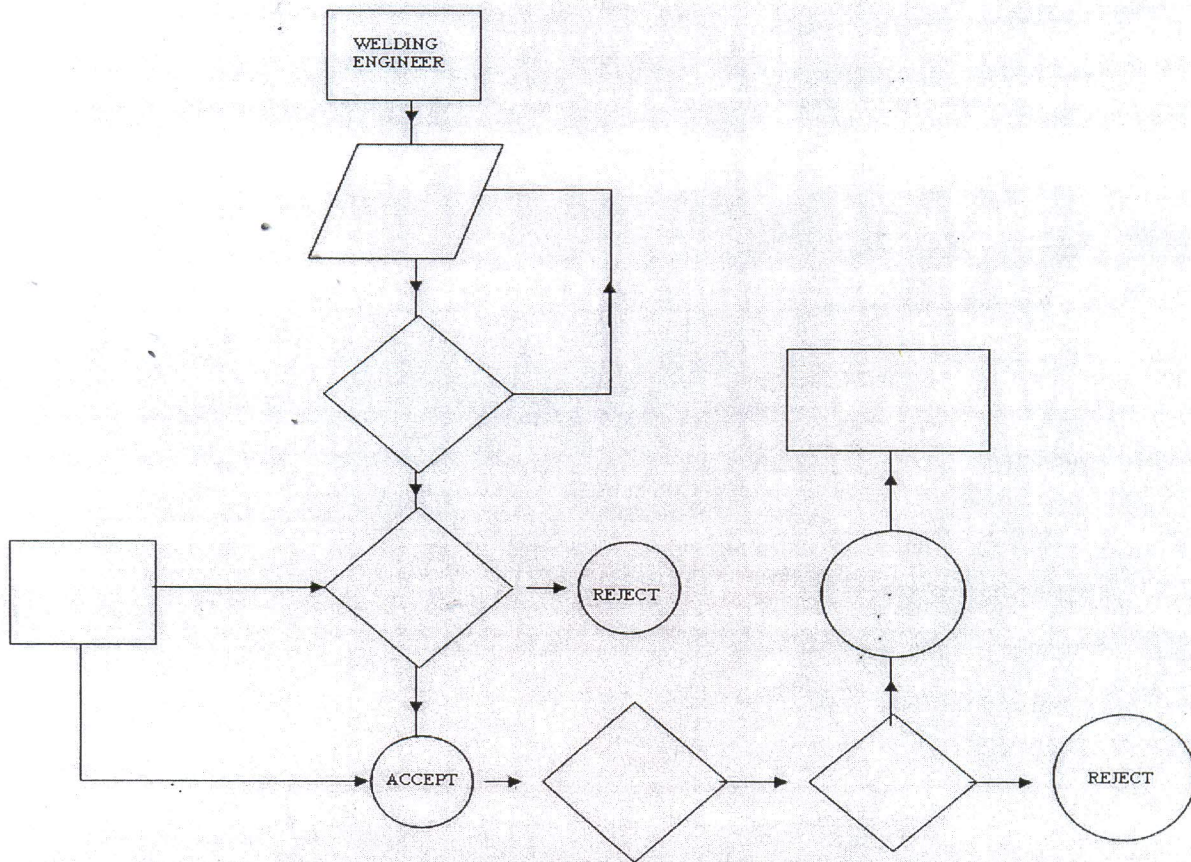
Please use the answer booklet provided.

Question 1

Preparing the Welding Procedure Qualification flow chart is part of our duties as welding supervisor. From the

chart given (Fig.1) please fill the flow process with suitable information. Please re sketch the chart and use suggested word given to fill in the respective blank area.

(24 marks)



**Question 2**

What are the steps in writing a welding procedure specification (WPS) ? What are to be referred for writing a WPS  
(16marks)

Parent metal :

a- \_\_\_\_\_

b- \_\_\_\_\_

c- \_\_\_\_\_

Welding process

a- \_\_\_\_\_

b- \_\_\_\_\_

c- \_\_\_\_\_

Joint design

a- \_\_\_\_\_

b- \_\_\_\_\_

c- \_\_\_\_\_

d- \_\_\_\_\_

Welding position

a- \_\_\_\_\_

b- \_\_\_\_\_

c- \_\_\_\_\_

d- \_\_\_\_\_

Thermal treatment

a- \_\_\_\_\_

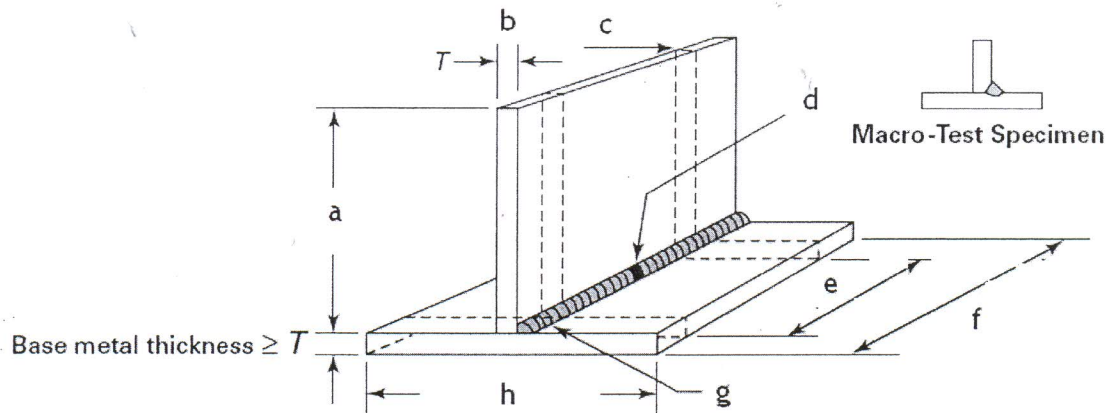
b- \_\_\_\_\_

Note: please write your answers in exam answer booklet

Question 3

From the information given above (QW 425.5 fillet weld performance), fill in the blank (a,b,c,d,e,f,g,h,i) with suitable information .

(16marks)



GENERAL NOTE: Refer to QW-452.5 for *T* thickness/qualification ranges.

QW-462.4(b) FILLET WELDS — PERFORMANCE

	Fillet weld
a	
b	
c	
d	
e	
f	
g	
h	

Note: please write your answers in exam answer booklet