



**UNIVERSITI KUALA LUMPUR
Malaysia France Institute**

**FINAL EXAMINATION
JANUARY 2014 SESSION**

SUBJECT CODE : FFD 32502
SUBJECT TITLE : FABRICATION AND ERECTION SUPERVISORY
LEVEL : DIPLOMA
TIME / DURATION : 2 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. 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) questions only.
 6. Answer all questions in answer script.
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THERE ARE 8 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)

INSTRUCTION: Answer ALL questions.

Please use the answer booklet provided.

QUESTION 1

Identify the standard trusses design (AWS) in figure.1 (A,B,C,D,E,F,G,H,I) choose the right name from the list provided.

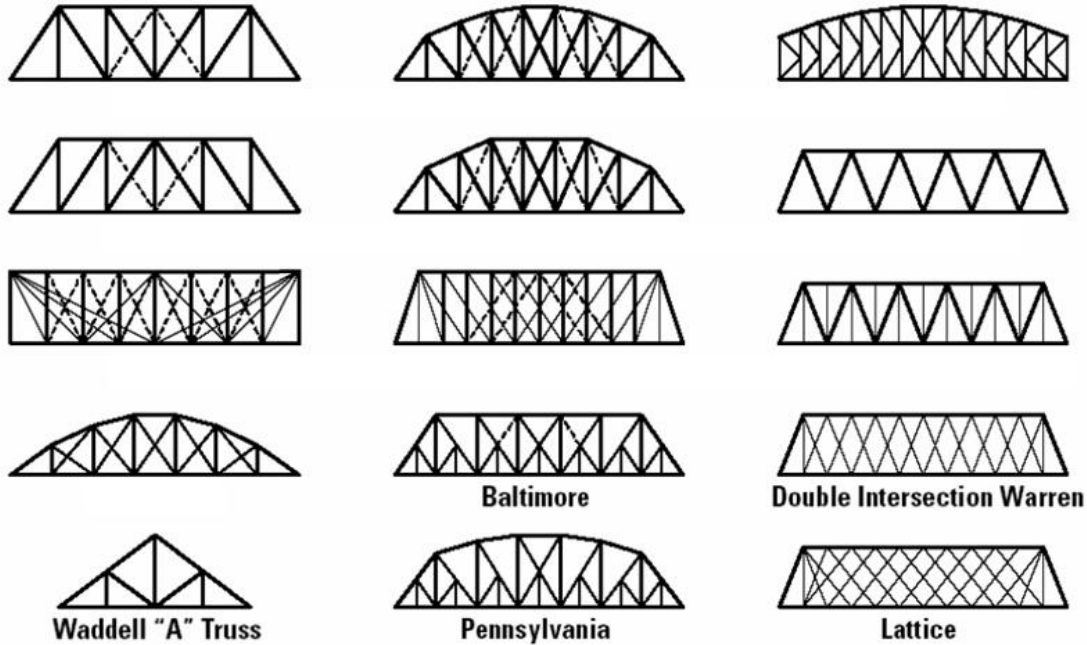


Fig.1

<p>K-Truss Warren Warren (with Verticals)</p>	<p>Parker Camelback Double Intersection Pratt</p>	<p>Pratt Howe Fink Bowstring</p>
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(10 marks)

QUESTION 2.

Pre-planning must consider the structure’s design and constructability as well as the application of various fall protection systems. Project pre-planning is the responsibility of the;

- Project Owner/Manager
- Design Engineer
- Prime Contractor
- Steel Fabricator
- Steel Erector

a. Explain briefly project owner/manager's main responsibility;

- i. _____
- ii. _____

(04marks)

b. Explain briefly project prime contractor's main responsibility;

- i. _____
- ii. _____

(04 marks)

c. Explain briefly project fabricator's main responsibility;

- i _____
- ii _____

(04 marks)

d. Explain briefly steel erector's main responsibility;

- i. _____
- ii. _____

(04 marks)

QUESTION 3

3.1 Under each of the diagrams below (Figure B), write the ISO designation of the positional welding.

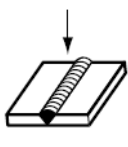
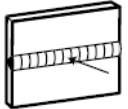
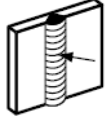
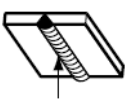
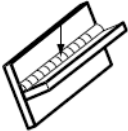
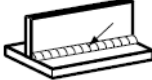


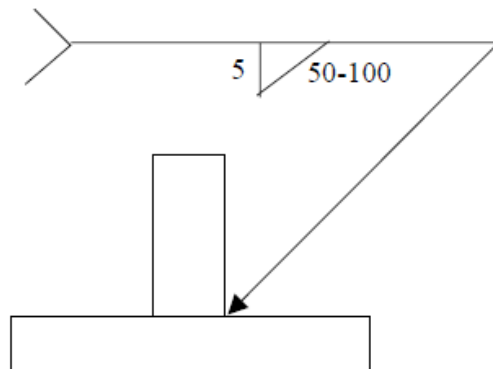
WELD	FLAT	HORIZONTAL	VERTICAL	OVERHEAD
BUTT	 1G /	 2G /	 3G /	 4G /
FILLET	 1F /	 2F /	 3F /	 4F /

Figure B.

(8 marks)

QUESTION 4

Interprete the welding symbol shown below, explain in full with the aid of a diagram, the information conveyed through it.



(10 marks)

QUESTION 5

5.1 What are the **FOUR (4)** factors that should be taken into account when selecting and designing a joint for a welding application?

- i. _____
- ii. _____
- iii. _____
- iv. _____

(08 marks)

5.2. Write **FOUR (4)** components or elements of a typical ITP.

- i. _____
- ii. _____
- iii. _____
- IV. _____

(08 marks)

SECTION B (Total: 40 marks)**ANSWER QUESTION Q1 and Q2 or Q3.****QUESTION 1**

Erecting structural steelwork for building construction takes place in a dynamic, changing environment where there are many hazards and risks. Proper and timely planning and coordination are the most effective ways to manage those hazards and risks. Projects involving structural steel construction have four main stages, where risks to health and safety need to be considered.

1.a - Identify the four (4) main stages of that kind involvement . (04 marks)

1.b - Explain briefly the parties with roles and responsibilities at the various stages of projects are: (16 marks)

QUESTION 2.

The erector, in consultation with the builder, erection engineer and other parties involved in the work, needs to plan the process for lifting and erecting individual members.

Explain briefly the precaution to managing risk at the erection stage;

2.a - Before erection, to avoid collapse, the erector should: (10 marks)

2.b - During erection, to avoid collapse, the erection supervisor must: (10marks)

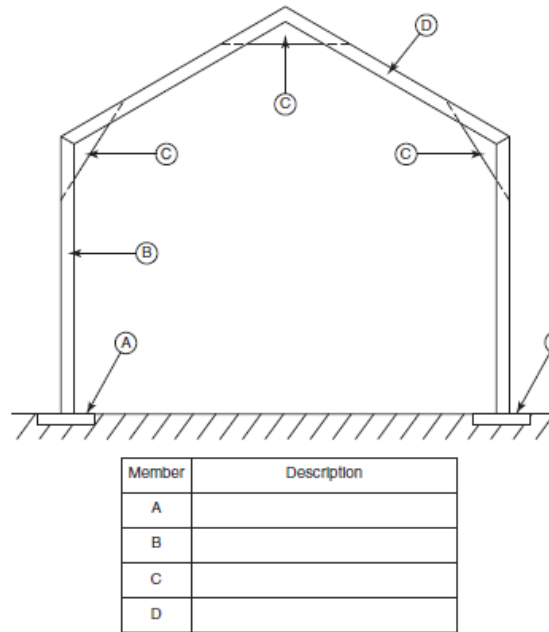


Figure 8.33 Simplified cross-section of a steel framed building

QUESTION 3.

Explain why compression joints are preferable to screwed joints when using thin-walled tubing.

a) When assembling screwed joints, state which member of the joint has a parallel thread and which has a tapered thread, the pipe or the fitting.

(5 marks)

b) Discuss the threading of pipework, illustrating your answer with sketches.

(5marks)

c) What colour coding should be used for the following pipework applications:

- i) electrical conduit
- ii) cold /fresh water
- iii) hot water
- iv) steam
- v) flammable gases

(10 marks)

End of question