



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2022/2023**

COURSE NAME : WELDING PRODUCT TESTING

COURSE CODE : BBW 30202

PROGRAM CODE : BBD

EXAMINATION DATE : JULY/AUGUST 2023

DURATION : 2 HOURS

INSTRUCTIONS : 1. ANSWER **ALL** QUESTIONS

2. THIS FINAL EXAMINATION IS
CONDUCTED VIA **CLOSED BOOK**.

3. STUDENTS ARE **PROHIBITED**
TO CONSULT THEIR OWN
MATERIAL OR ANY EXTERNAL
RESOURCES DURING THE
EXAMINATION CONDUCTED VIA
CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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- S1**
- (a) State **TWO (2)** main purposes of laboratory test in welding. (4 marks)
 - (b) State **THREE (3)** advantages and disadvantages of Destructive Test. (6 marks)
 - (c) Explain the basic procedure of Brinell Hardness Test. State a difference between Brinell Hardness Tester and Rockwell Hardness Tester. (8 marks)
 - (d) Explain the procedure of Charpy Test. State a difference between Charpy Test and Izod Test. (7 marks)
- Q2**
- (a) Non-destructive test (NDT) can be used for various purposes. When are actually NDT used? (6 marks)
 - (b) State **THREE (3)** types of NDT used for surface defects detection and **THREE (3)** types of NDT for internal defect detection. (6 marks)
 - (c) **Figure Q2(c)** illustrates a type of defect in a welding product.
 - (i) What type of defect is shown in **Figure Q2(c)**? (2 marks)
 - (ii) Suggest a test to detect the above defect. Give a reason for your suggestion. (4 marks)
 - (iii) State **THREE (3)** advantages of the suggested test. (3 marks)
 - (iv) Is it possible to detect the defect using Magnetic Particle Test? Justify your answer. (4 marks)

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- Q3** (a) State **THREE (3)** defects that can be and **TWO (2)** defects that cannot be detected by using eddy current test. (5 marks)
- (b) State **THREE (3)** good properties of penetrant and **THREE (3)** good properties of developer. (6 marks)
- (c) Explain clearly the procedures of performing Dye Penetrant Inspection. (14 marks)
- S4** (a) State **THREE (3)** disadvantages of radiography Test. (3 marks)
- (b) Sketch and explain the basic principle of radiography test. (10 marks)
- (c) Explain the procedure of magnetic particle test. (12 marks)

END OF QUESTIONS

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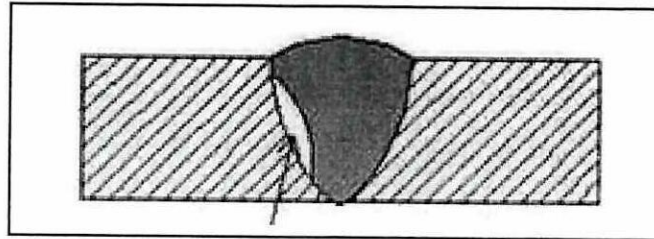


Figure Q2(c): Front view of cross-section