



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(ONLINE)
SEMESTER I
SESSION 2020/2021**

COURSE NAME : WELDING PRODUCT TESTING
COURSE CODE : BBW 30202
PROGRAM : BBD
DATE : JANUARY/FEBRUARY 2021
DURATION : 1 HOUR
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PRINTED PAGES

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- Q1** (a) Probe is used in ultrasonic test. What will happen if the angle is:
- (i) Smaller than 1st critical angle?
 - (ii) Larger than 2nd critical angle?
- (4 marks)
- (b) What will happen if the signal of ultrasonic test has poor resolution?
- (2 marks)
- (c) How to ensure the sound waves from the probe can be travelling smoothly into the specimen?
- (2 marks)
- (d) Mr Brown works as a welding inspector in Weldcom Pvt. Ltd. He sometimes performs magnetic particle test to see if there is any defect in the products.
- (i) Explain the procedures taken by Mr Brown to perform the magnetic particle test.
- (6 marks)
- (ii) Why the yoke has to be turned 90° from the original position when performing magnetic particle test?
- (3 marks)
- (iii) State three types of defect that cannot be detected using magnetic particle test.
- (3 marks)
- Q2** (a) Explain how do the following factors influence penetration process in Penetrant Testing.
- (i) Penetration/dwell time.
 - (ii) Component temperature.
 - (iii) Surface cleanliness.
- (6 marks)

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- (b) Figure Q2(b) illustrates a type of defect in a welding product.

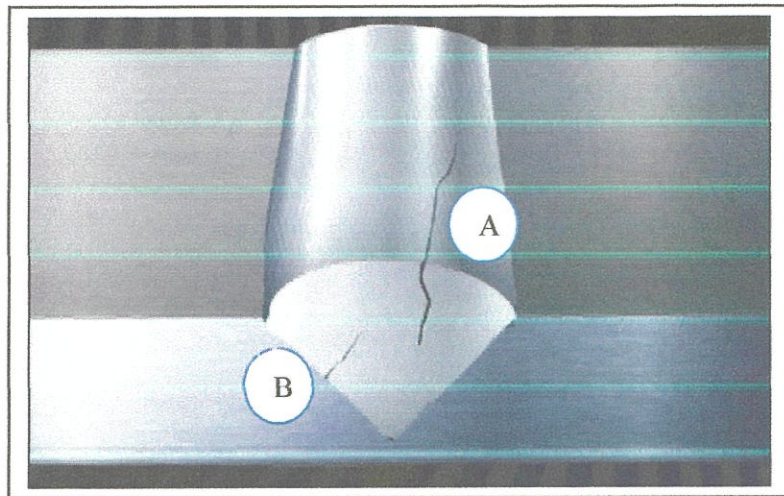


Figure Q2(b): defects in weld product

- (i) There are two cracks indicated in Figure Q2(b). Name those cracks?
(2 marks)
- (ii) Suggest a test to detect the crack A. Give a reason for your suggestion.
(4 marks)
- (iii) State four (4) advantages of the suggested test.
(4 marks)
- (iv) Is it possible to detect the crack B using the same method as suggested in Q2(b)(ii)? Justify your answer.
(4 marks)

- END OF QUESTIONS -

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