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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2021/2022**

COURSE NAME : SOFTWARE TESTING  
COURSE CODE : BIE 30803  
PROGRAMME CODE : BIP  
EXAMINATION DATE : JANUARY / FEBRUARY 2022  
DURATION : 3 HOURS  
INSTRUCTION : 1. ANSWER ALL QUESTIONS  
2. THIS FINAL EXAMINATION  
IS CONDUCTED ONLINE AND  
CLOSE BOOK

THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

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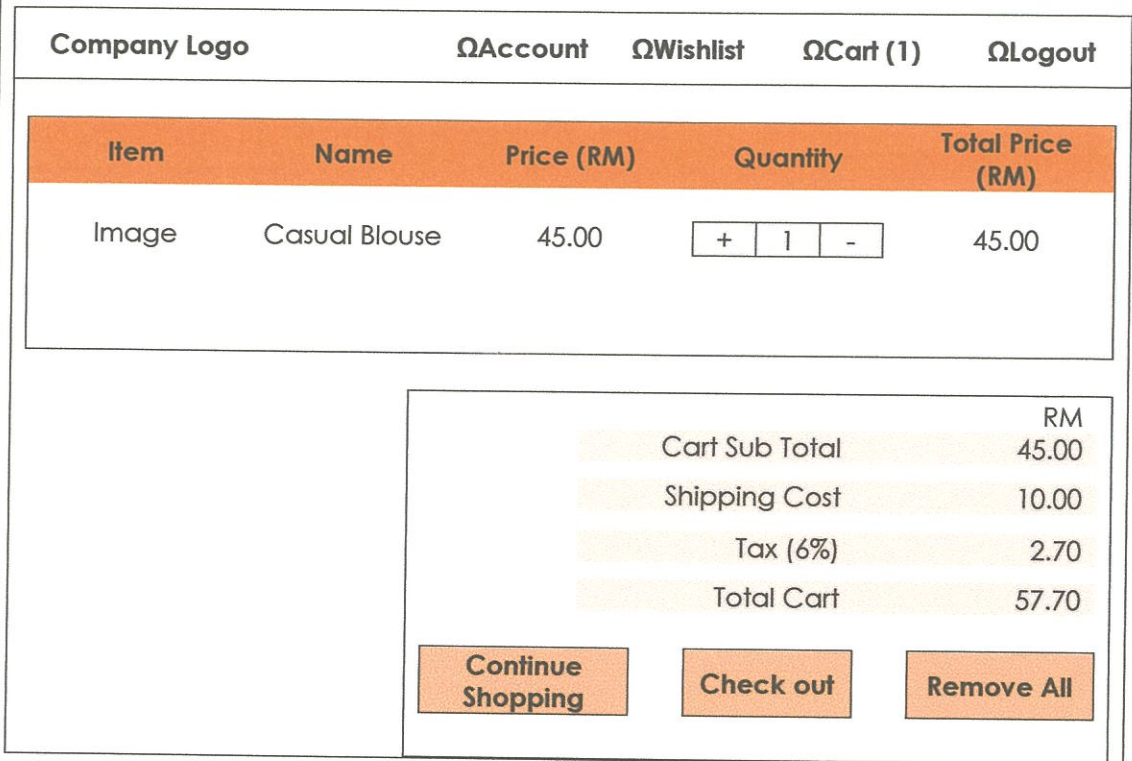
**Q1** Determine the test work products for the following purposes and contents.

- (a) Specifies sequence of test actions. (2 marks)
- (b) Specifies test conditions. (2 marks)
- (c) Specifies expected results of tests. (2 marks)
- (d) Environmental needs. (2 marks)
- (e) Approach refinements. (2 marks)

**Q2 Answer Q2(a) and Q2(b) based on the scenario in Figure Q2(a).**

You are testing an e-commerce system that sells clothes like shirts, blouses, skirts, etc.

The system accepts a quantity to be ordered, from 1 to 99. Based on the input, the system calculate the item total price and adds the item total to the cart total. Due to limits on credit card orders that can be processed, the maximum cart total is RM999.99. A screen prototype for the order entry web page is shown in the following figure.



**A screen prototype**

**FIGURE Q2(a)**

- (a) Create functional test conditions using equivalence partitioning. (5 marks)
- (b) Create functional test conditions using boundary value analysis. (5 marks)
- (c) Propose **TWO (2)** test cases using the template in **Figure Q2(b)**. (10 marks)



- Test Case ID
- Test Case Summary
- Test Data
- Expected Result

FIGURE Q2(b)

Q3 Create functional test conditions for the scenario in Figure Q3 using decision table.

(10 marks)

**Flight Search**

Roundtrip  Oneway  Multi City

\*From  \*Depart on

\*To  \*Return on

I must travel on these dates  My travel dates are flexible

Cabin Class Economy Class

\*Passengers (Maximum total passenger: 9)

Adult	Child	Infant
1	0	0

[Do you have a coupon?](#)

Reset Search

**Rule 1:** When destination for both *From* and *To* are not set, the *Search* button is disabled.

**Rule 2:** When *From* destination is set but *To* is not set, *Search* button is disabled.

**Rule 3:** When *From* destination is not set but *To* destination is set, *Search* button is disabled.

FIGURE Q3



**Q4** Answer Q4(a) - Q4(c) based on the scenario in **Figure Q4**.

```
1. int someFunction(int a, int b) {
2.     int result = 0;
3.     if (a < b) {
4.         System.exit(0);
5.     }
6.     else {
7.         int c = a + b; (*)
8.         int i = 0; (*)
9.         while (i < c) {
10.            result = (result + a) / b;
11.            i++;
12.        }
13.    }
14.    return result;
15.}
```

**FIGURE Q4**

- (a) Derive a flow graph. (15 marks)
- (b) Determine the maximum number of test cases needed to provide statement coverage. For each test case, give an example set of input. (5 marks)
- (c) Define the maximum number of test cases needed to provide branch/condition coverage. For each test case, give an example set of input. [Show your works] (10 marks)

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**Q5** Elaborate the drawback of independent testing based on scenario in **Figure Q5**.

You are working as the manager of an independent test team. At a project meeting, you are explaining the result of your testing so far. You show the team that, while testing is proceeding productively, it is taking a while to get some critical bugs and test failures resolved.

Another manager comments that he is concerned that the test team delaying the release of the software.

**FIGURE Q5**

(6 marks)

**Q6** Suggest a type of tool support the following scenario.

(a) You are currently engaged in working as a test manager on a large project. You anticipate a large number of defects in the system.

(2 marks)

(b) Customers are complaining that your company web site is too slow. You have been asked to manage the testing portion of a project which is charged with reducing the incidence of such problems.

(2 marks)

**- END OF QUESTIONS -**

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