



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER 1
SESSION 2021/2022**

COURSE NAME : COMPUTER PROGRAMMING
COURSE CODE : BIT 10303
PROGRAM CODE : BIT
EXAMINATION DATE : JANUARY / FEBRUARY 2022
DURATION : 3 HOURS
INSTRUCTION : 1. ANSWER ALL QUESTIONS
IN THIS BOOKLET.
2. THIS FINAL EXAMINATION
IS CONDUCTED ONLINE
AND CLOSE BOOK

THIS QUESTION PAPER CONSISTS OF **EIGHT (8)** PAGES



Q1. Based on case study in **Figure Q1**, you are required write the C program code for the following requirements. The questions are interrelated.

Case Study

ABC Sdn Bhd currently is planning to deploy a system that enable user to pay for bills from multiple utilities and internet provider company. The list of identified company that agreed to join this venture are listed in the **Table 1**. By using this system, user will be entitled for a discount. However, the discount are varies based on the company name. List of discount also can be seen from **Table 1**.

TABLE 1: List of companies and discounts

| Bill type | Company | Discount (%) |
|------------------|----------------|---------------------|
| utilities | 1.TNB | 5 |
| | 2.Syabas | 10 |
| internet | 1.Digi | 5 |
| | 2.Unifi | 5 |
| | 3.Maxis Fibre | 5 |

(a) Give **THREE (3)** valid identifiers that will be used to store input data.

(6 marks)

Answer:



(b) Based on answer **Q1(a)**, write program code to read **THREE (3)** inputs from user.
(6 marks)

Answer:

(c) Write **ONE (1)** function use to receive types of bill and return the company name.

(10 marks)

Answer:

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- (d) Write **ONE (1)** function to determine the discount where the function not return parameter and receive **ONE (1)** parameter by value and **ONE (1)** parameter by reference.

(8 marks)

Answer:

- (e) Write **ONE (1)** function include :
- receive by reference the discount and
 - read the amount to pay.
 - calculate the bill after discount and
 - return the bill after discount.

(7 marks)

Answer:

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- (f) Write **ONE (1)** function include :
- display amount bill after discount and not return parameter
 - receive amount bill to pay after discount.

(3 marks)

Answer

- Q2.** Based on case study in **Figure Q2**, you are required to write the C program code for the following requirements. The questions are interrelated.

Case Study:

Car Sdn. Bhd. required one system that able to keep information about cars. The system allow user to add new car record and keep/write into data file. Then, the system able to display data from file on output screen.

Figure Q2

- (a) Write the data about car that consists of five information by using struct mechanism.

(8 marks)

Answer:

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- (b) Based on answer **Q2(a)**, declare **ONE (1)** array variable with struct data type to store **FIVE (5)** car records.

(2 marks)

Answer:

- (c) Declare **TWO (2)** file variable.

(4 marks)

Answer:

- (d) Write the instruction to keep/write the car record into file name as `carInfo.dat`.

(2 marks)

Answer :



(e) By using array, reads 5 car record and write into `carInfo.dat` .

(21 marks)

Answer:

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(f) Write the program code to read record from `carInfo.dat`.

(2 marks)

Answer:

(g) By using array, display data from `carInfo.dat` file on output screen.

(21 marks)

Answer :

- END OF QUESTION -

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