UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2019/2020

COURSE NAME	:	ALGORITHM AND PROGRAMMING
COURSE CODE	:	BIC 10204
PROGRAMME CODE	:	BIS / BIM
EXAMINATION DATE	:	JULY 2020
DURATION	:	3 HOURS
INSTRUCTION	:	1. ANSWER **ALL** QUESTIONS. 2. PLEASE MAKE SURE TO CLICK "SAVE ANSWER" BUTTON FOR SUBJECTIVE QUESTIONS. OBJECTIVE QUESTIONS ARE SAVED AUTOMATICALLY.

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

Q1 (a) Write a `while statement` that print the value of an integer number for 10 times.

(10 marks)

(b) By using `if ... else statement` and looping in **Q1 (a)**, write a program that check whether the number is an odd number. If the integer is an odd number, print the value. Given `X = 0` and `X <=10`.

(9 marks)

Q2 Write a program that will implement a one-dimensional array and sort the array in descending order. The steps are as follows.

i. Start
ii. Declare an array, a of some fixed capacity, 30
iii. Take the size of the array as input from the user.
iv. Define all the elements of the array using for loop.
v. Sort the elements of the array in descending order.
vi. Print sorted elements of the array as a final output.
vii. Exit

Refer to the above description and the example of the runtime test case in **Figure Q2**.

Example of Runtime Test Case

```
Enter the value of N
4
Enter the numbers
450
340
120
670
The numbers arranged in descending order are
given below
670
450
340
120
```

FIGURE Q2

(16 marks)

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Q3 (a) You are going to develop a grade scoring system which will print out the user current test mark and grade. You are required to use `function` and `if ... else statement` to determine their grade and mark and at the end of the program it will print out the user's mark and grade.

TABLE Q3(a)

Marks	Grade
80 - 100	A
60~79	B
41~59	C
0~40	D

(10 marks)

(b) Write C Program using `function` that will display e-wallet interface. The program will prompt the user to choose the operation (each of operation has their own function (receive and return function definition). The e-wallet current balance is RM10. U are also required to TOP-UP RM5 into the system

```
MENU
1. Check Balance
2. Top Up
3. Transfer

Enter your choice: 1
Your Balance is: 10

Continue? Y

Enter your choice: 2
Your New Balance is: A

Continue? (Y/N)
Enter your choice. 3
Enter the phone number u wanted to transfer
to: 012-3456789
Enter the amount u wanted to transfer.
Your transfer to phone number 012-3456789 is
successful.
Your balance after transfer: B

Continue? N
Thank you for using e-wallet
```


FIGURE Q3 (b)

(15 marks)

- END OF QUESTIONS -