

LOCATION: LONDON

LEVEL 4

EXAMINATION PERIOD
JUNE 2023

TOTAL MARKS: 60

MODULE CODE: ACCB4017
SOFTWARE DEVELOPMENT

TIME: 2 HOURS

ANSWER ALL QUESTIONS IN PART A and ANY TWO QUESTIONS IN PART B

Equipment or materials required – Computers with code editor installed

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ANSWER ALL QUESTIONS IN PART A and ANY TWO QUESTIONS IN PART B

SUBMISSION INSTRUCTIONS:

Answer the PART A in the answer sheet given.

For PART B, save all the Python files in a folder, zip the folder and upload it on Moodle after your exam. Name the folder with your StudentID_Studentname

PART A

1. a) Which variable type would be most suitable to store each of the following values?

g
2112
Sarah
3.21
H2
-34.62

[1 mark each - 6 marks total]

1 b)

What errors are present in the following code for welcoming a user to a program? Line numbers are included for easy reference

```
1 print>Welcome to my program")
2
3 print("Please enter your name: ")
4 myName = int(input())
5
6 print("Welcome, " myName)
7
8 print("I shall say hello to you 10 times: ")
9
10 for counter in range(0, 11)
11  print("Hello")
```

[5 marks]

1 c) How many iterations do the following loops have?

for i in range(1, 9, 1):
 print("Hello")

for i in range(0, 8, 2):
 print("Hello")

[4 marks – 2 marks each]

1. d) What is the value of the integer variable *total* after the following code is executed?

```
total = 1

for x in range(0, 8, 1):
    total = total + x

if x == 5:
    total = 0
```

.....

[3 marks]

1 e) Logic

i) Given the following values x=5, y=3, z=12 is the statement below true or false?

x==y

.....

ii) Given the following values x=5, y=3, z=12 is the statement below true or false?

x < z/y

.....

[2 marks total]

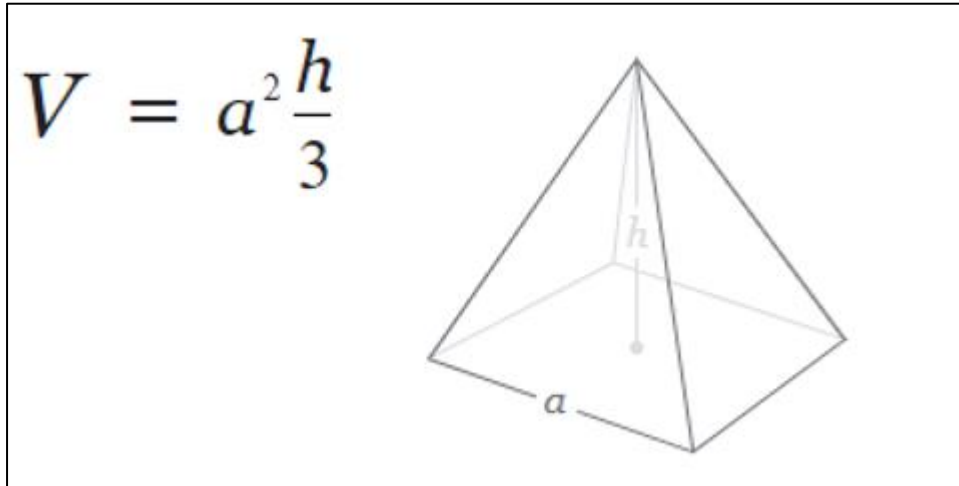
[20 marks total for Question 1, part A]

PART B

ANSWER ANY TWO:

2. Calculate the volume of a square-based pyramid

The volume of a square-based pyramid is calculated using the formula shown below:



Task:

2a) Write a program to calculate the volume of the pyramid using the above formula.

Allow the user to enter the measurements for a and h . Both a and h should be positive numbers.

Print the volume on the screen to 2 decimal places

[10 marks total for Question 2a]

2b) Write a program to check biggest among two numbers.

Allow the user to enter the value of a and b . Use if condition and find out which number is greatest and print the result.

[10 marks total for Question 2b]

3. Using lists (Python)

Task:

Define a list called temperature and enter the following values.

temperature= [22,33,20,22,21,11,17,80].

Use the list functions available to do the following:

1. Display the created list using loop
2. Append 19 to the list
3. Display total number of elements in the list
4. Display the list in descending order.

[20 marks total for Question 3]

4. Using Functions (Python)

Task:

Write a function called *entername()* to allow the user to enter the name of a conference delegate.

The function should be called 3 times, once for each of 3 conference delegates, and the (local scope) name entered returned to the main program.

Print the names entered from the main program, then calculate the total bill for attending the conference (£65 per person) and print it on the screen

Sample output:

```
Enter name of next delegate:
Gaynor Thomas
Enter name of next delegate:
Beverley Holland
Enter name of next delegate:
James Williams

The delegates who attended today were:
Gaynor Thomas  Beverley Holland  James Williams
Total due is £ 195
```

[20 marks total for Question 4]

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