



BINGHAM UNIVERSITY, KARU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE
FIRST SEMESTER EXAMINATION, 2016/2017 SESSION

COURSE CODE: CMP 101

COURSE TITLE: INTRODUCTION TO COMPUTER SCIENCE

CREDIT UNITS: 2

TIME ALLOWED: 2HRS

INSTRUCTIONS: ANSWER QUESTION 5 AND ANY OTHER TWO (2) QUESTIONS

QUESTION 1

A computer is a machine that takes in data, processes it and returns information.

- Describe four input devices [2marks]
- Describe six Output devices [3 marks]
- Discuss briefly the five generations of computer (hardware) [10 marks]

Question 2

A programming language is an artificial language used to communicate with a computer

- Discuss briefly the four generations of development of programming languages. Give examples of languages in each generation. [10 marks]
- Explain the term 'operating system software'. Give three examples. [5 marks]

Question 3

Write a Python program that asks a user to type in a sentence (string), then tell the user how many times the letter a,e,l,o,u each appear in the sentence (string). (Remember to write your Algorithm)

Algorithm/flowchart [7.5 marks], Program [7.5 marks]

Note: Your programme is graded for similarity to algorithm/flowchart, correctness of solution, structure of written code (alignment of lines), and application good programming conventions.

Question 4

- What is a variable? [1 mark]
- State four (4) rules that apply to naming variables in Python. [4 marks]
- What is the output of this snippet of Python code? Use the table below [10 marks]

s/n	Input	Output
1	100	
2	65	
3	46	
4	50	

5	Sixty-five	
6	101	
7	0	
8	81	
9	59	
10	75	

*****python code*****

```

score = raw_input("whats your score?")

if (int(score)>100 || int(score)< 0):
    print("Your score is out of range. Please enter a score between
0 and 100")
else If (int(score) >= 80):
    print("Your Grade is A")
else If (int(score) >= 70 &&int(score) < 80):
    print("Your Grade is B")
else If (int(score) >= 60 &&int(score) <70):
    print("Your Grade is C")
else If (int(score) >= 50 &&int(score) <60):
    print("Your Grade is D")
else If (int(score) >= 45 &&int(score) <50):
    print("Your Grade is E")
else If (int(score) <45):
    print("Your Grade is F")
print("Bye")

```

Question 5

Your friend Angel who is a student at the department of statistics has asked you to help her develop a software to aid her in completing her assignment.

She has been given a large set of numbers and is supposed to calculate the mean, median, mode and standard deviation

Write an algorithm or draw a flowchart of your solution