

## **BINT 0116: PROGRAMMING CONCEPTS**

**Answer question one and any other three question**

### **QUESTION ONE (COMPULSORY)**

**25Mks**

- a. Briefly explain what Software Development Life Cycle is? 5mks
- b. State and explain six phases of software development life cycle 20mks

### **QUESTION TWO 15mks**

- a. Write a program which inputs a temperature reading expressed in Fahrenheit and Outputs its equivalent in Celsius, using the formula:  
 $^{\circ}\text{C} = (5/9) * (^{\circ}\text{F} - 32)$

Its output should resemble this:

```
Temperature in Fahrenheit: xxx  
xxx degrees Fahrenheit = yyy degrees Celsius
```

### **QUESTION THREE 15mks**

- a. What is a variable? 1 mks
- b. Name three types of data types giving an example to each. 5mks
- c. Define variables to represent the following entities 9 mks
  - i. Age of a person.
  - ii. Income of an employee.
  - iii. Number of words in a dictionary.
  - iv. A letter of the alphabet.
  - v. A greeting message.

### **QUESTION FOUR 15mks**

- a. Name and briefly explain three types of control structures. 6mks
- b. Write a program using the if statement which inputs a person's height and weight and outputs one of the messages: underweight, normal, or overweight, based on the following conditions: 9mks

Underweight:  $\text{weight} < \text{height}/2.5$

Normal:  $\text{height}/2.5 \leq \text{weight} \leq \text{height}/2.3$

Overweight:  $\text{height}/2.3 < \text{weight}$

### **QUESTION FIVE 15mks**

- a. What is the difference between coding and design? 4mks
- b. Why is it the importance of including comments to program code? 2mks
- c. State and explain four steps to take before writing a Computer Program 9mks