KENYA POLYTECHNIC UNIVERSITY COLLEGE

SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY

DEPARTMENT OF COMMUNITY AND PUBLIC HEALTH

DIPLOMA IN COMMUNITY AND PUBLIC HEALTH

END OF STAGE 2 EXAMINATION

NOVEMBER 2011

INFORMATION AND COMMUNICATION TECHNOLOGY 1

TIME 2 HOURS

Instructions to candidates
This paper consists of two sections A and B
Section A is compulsory – Answer **ALL** questions in this section
Answer any **THREE** questions from section B

This paper consists of 3 printed pages
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SECTION A – Comulsory
Answer ALL questions in this section

1. Write a program takes in the principal, rate and time as a screen input from the user.
   It calculates the simple interest using the formula I = PTR/100.
   The principal, rate, time and the simple interest are then outputted using the 'cout' command. (5 Mks)

2. Write a program that takes in two integers x and y as a screen input from the user. The sum and average of these two integers are calculated and outputted using the 'cout' command. (5 Mks)

3. Correct the syntax errors in the following C++ program: (4 Mks)

```
include iostream.h
Main();
{ Float x,y,z;
 cout < "Enter two numbers ";
 cin >> a >> b
cout << 'The numbers in reverse order are'
      << b,a;}
```

4. How one can declare a Constant Variable (2 Mks)

5. Define a Compiler and give the main difference between a Compiler and an Assembler (3 Mks)

6. Define debugging and give three types of errors in a program (5 Mks)

7. Give the format of the following
   a. for loop
   b. do while
   c. if statement (6 Mks)

SECTION B – Answewr any TWO questions in this section

QUESTION TWO
Using both
a) SWITCH CASE
b) IF ELSE

Write programs that takes in the number of units used ('units') as a screen input from the user.
It then calculates the total telephone bill for the customer on the following basis:
A compulsory fee of Kshs 25, plus
60 Kshs per unit for the first 50 units,
40 Kshs per unit for the next 150 units,
20 Kshs per unit for anything above 200 units.
It then outputs the bill using the 'cout' command (20 Mks)

QUESTION THREE

1. Write a program that takes in an integer x as a screen input from the user.
   It then determines whether the integer is odd or even and outputs the appropriate message using the 'cout' command. (5 Mks)

2. Using example and a syntax show how one can initialize a variable (3Mks)

3. What would be output by the following segment of C++? (2 Mks)

```
int i;
for ( i = 1; i <= 12; i *= 2 )
cout << i << endl;
```

4. Write a `for loop` statement to output the numbers 1 to 20, each on a new line. (5 Mks)

5. Define an array and show how an array can be declared and initialized (5 MKs)

QUESTION FOUR

1. Write a program that will find the base given the hypotenuse and height(5 Mks)

2. Write a program that takes in the number of days as a screen input from the user.
   It then converts the days into years as well as weeks and outputs it using the 'cout' command. (5 Mks)

3. Define a comment and give two ways how to implement them in a program (3 Mks)

4. Using while loop write a program to countdown (4 Mks)

5. Give the format ***do-while loop and differentiate between the while and do while statement*** *(3 Mks)*