

JEREMIAH NYAGAH NATIONAL POLYTECHNIC
STRUCTURED PROGRAMMING
CAT 2

QUESTION ONE (30 Marks)

1. Looping assists a programmer to implement a programming logic at ease. Using suitable examples explain any three looping statements in C programming. **(6 Marks)**
2. Distinguish between a variable and a constant **(4Marks)**
3. Explain four common data types used in C language. **(4Marks)**
4. Declare and initialize an array called AVERAGES to contain the following averages; **(4 Marks)**

36.20	30.00	67.20	100.00
53.65	93.50	45.60	21.90
20.70	45.30	67.30	78.36
92.45	35.90	67.45	90.45

5. State reasons why one would use an unsized array in C **(2 Marks)**
6. Explain the difference between Call by value and call by reference **(2 Marks)**
7. Write the general format of the IF.....THENELSE control structure **(3 Marks)**
8. A program is required to calculate the volume of a cylinder. It is required that base area be calculated using a function **basearea()** and its return value be used in the **main()** to calculate the volume. Implement this in C language. **(5 Marks)**