

## UNIVERSITY OF DAR ES SALAAM

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## IS 136: TEST ONE

Time: 50 Mins

## Instructions:

Attempt all questions. This test carries a total of 15 marks.

## Question One:

Briefly explain the difference between the following terminologies as applied to C programming, provide example to support your explanation

- a) Variable vs. Constant
- b) Relational operators vs. Logical operators
- c) Counter controlled vs. Event controlled loops

## Question Two:

i) Identify errors in the following C code segments.

**NOTE:** There may be more than one error for each segment.

a)

```
int n;  
printf("Enter an integer  
number");  
scanf("%d", i);
```

b)

```
int i;  
for ( i=100, i <10, i-- )  
    printf("%f", i);
```

ii) Establish output of the following C code segments.

a)

```
int i = 5, j = -4, k = 7;  
int a = ++i - j++ + --k;  
printf("%d %d %d %d", i, j, k, a);
```

b)

```
int i, j;  
for ( i = 1; i <=3; i++ ) {  
    for ( j = 1; j <=5; j++ )  
        printf("*");  
    printf("\n\t");  
}
```

## Question Three:

Write a C program which accepts an odd integer number between 500 and 1000 from user and prints factorial of the provided number. Your program should print "Invalid Number" if user enters non-odd or out of range number.