

\$h@j3r

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

- Variable vs. Constant
- Relational operators vs. Logical operators
- 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("%d", i);
```

ii) Establish output of the following C code segments.

a)

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

b)

```
int i, j;  
for (i = 1; i <= 3; i++)  
    for (j = 1; j <= 6; j++)  
        printf("%d", j);  
printf("\n");
```

6+6 + (6-4) = 6

12 + 1 = 13

6-4 = 2

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.

If (num > 500 for 47500)
for (i = 101 < 1000 21.2)
while (num < 500 < ...)
else if else
else int.

If (num < 500)

xxxxxx
xxxxxx
xxxxxx