



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS**

**FOR THE DEGREE OF
BACHELOR OF SCIENCE COMPUTER SCIENCE**

COURSE CODE : CSC 111

**COURSE TITLE : INTRODUCTION TO
PROGRAMMING**

DATE: 08/01/2018 TIME: 2:00 P.M – 4:00 P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY]

[30 MARKS]

1. How is the #include directive is used and why? **[3 Marks]**
2. State four key characteristics of an algorithm. **[4 Marks]**
3. Differentiate between variables and constants. **[4 Marks]**
4. "C programming language is mid level language." Explain in this sentence. **[3 Marks]**
5. What is null string and what is its length? **[2 Marks]**
6. What is EOF and what value does it usually have? **[2 Marks]**
7. List out the three arithmetic operators in C. **[3 Marks]**
8. Explain the difference between '=' and '==' operator explain with example? **[4 Marks]**
9. What is the use of the main function in c programming language? **[2 Marks]**
10. C is one of the programming languages that are normally translated to machine language before execution. What kind of translator is used to translate c? **[1 Marks]**
11. List two way an algorithm can be represented. **[2 Marks]**

QUESTION TWO:

[20 MARKS]

- a) What is the difference between while and do while loop. **[4 Marks]**
- b) Design an algorithm using pseudocode for finding out largest number out of three given numbers. **[10 Marks]**
- c) What is the purpose of printf() function? State any four format specifiers used with printf() statement with an example. **[6 Marks]**

QUESTION THREE:

[20 MARKS]

- a) What is a data type? Explain three different data types found in C in detail with examples. **[8 Marks]**

b) What is output of following program?

[2 Marks]

```
main() {  
    i. int a[7]={1,2,3,4,5,6,7};  
    ii. int i;  
    iii. printf("content of array");  
    iv. for(i=0;i<=6;++i);  
    v. {  
        1. printf("%d\t",a[i]);  
    vi. }  
}
```

c) Explain and use example to differentiate between local variable and global variable. [4 Marks]

d) What is difference between actual parameters and formal parameters? [4 Marks]

QUESTION FOUR

[20 MARKS]

a) What is the difference between call by value and call by reference

[4 Marks]

b) Differentiate between call by reference & call by value.

[4 Marks]

c) Write a C Program to find sum of even numbers from 2 to n i.e $2 + 4 + 6 + \dots + n$.

[10 Marks]

d) State two features of C programming language.

[2 Marks]

QUESTION FIVE

[20 MARKS]

a) Write a C language program to check whether given number is prime or not.

[10 Marks]

b) What are compilers- How do they differ from interpreters?

[4 Marks]

c) Demonstrate using an example what is a nest if statement

[4 Marks]

d) Differentiate between **fscanf** and **scanf**.

[2 Marks]