



MUEO

MOI UNIVERSITY

**OFFICE OF THE DEPUTY VICE CHANCELLOR, ACADEMIC
AFFAIRS, RESEARCH & EXTENSION**

**UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR**

END OF SEMESTER EXAMINATIONS

***FOR THE DEGREE
IN BACHELOR OF BUSINESS AND ECONOMICS***

EXAM CODE: BBM 210

COURSE TITLE: INTRODUCTION TO COMPUTER PROGRAMMING

DATE: 13TH DECEMBER, 2018

TIME: 2.00P.M. -5.00PM.

INSTRUCTION TO CANDIDATES

➤ *SEE INSIDE.*

THIS PAPER CONSISTS OF (4) PRINTED PAGES

PLEASE TURN OVER

INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (20 MARKS)

- a) Describe the various data types in C programming language (5 marks)
- b) Discuss giving examples any three programming errors. (6 marks)
- c) Write C codes that prints the natural numbers from 5 down to 1. (5 marks)
- d) State any two debugging aids in programming. (2 marks)
- e) What is the value in variable x after the following code has executed? Explain the reasons to justify the solution. (2 marks)

- i. `x=10;`
- ii. `x%=5;`
- iii. `x = ?`

QUESTION TWO (25 MARKS)

- a) Explain the following programming terms: (4 marks)
 - a. double
 - b. local variable
 - c. integer division
 - d. Scope of a variable.
- b) Write a program to read the age of 100 persons and count the number of persons in the age group between 50 and 60. Use *do... while* loop and *continue* control structures. (6 marks)
- c) Differentiate between global and local scope of a variable giving as example of each. (4 marks)
- d) Distinguish between high level programming language and machine level programming language (4 marks)
- e) Using syntax, show how arrays are declared and initialized in a program. (5 marks)
- f) Differentiate between call by value and call by referencing methods of parameter passing to a function giving an example of each. (6 marks)

QUESTION THREE (25 MARKS)

- a) State and explain any four advantages of structured programming. (4 marks)
- b) List any four qualities of a good program. (4 marks)
- c) Write a C program that inputs the subject marks of student and tell him / her the grade that he/she has obtained in the subject. The grading criteria is as follows:

MARKS	GRADE
90 and Above	A
80 – 89	B

70 – 79	C
60 – 69	D
Below 60	Fail

If the student fails specify that the students will be required to sit for a supplementary examination. (12marks)

d) Explain the OUTPUT of the following C program (5 marks)

```
# Include list dio.h.main ( ) {
int a = 6, b = 10;
print f (“a =% d \n, a ++ ) ;
print f ( “b = %d\n, ++bj }
```

QUESTION FOUR (25 MARKS)

a) Discuss any three language evaluation criteria. (6 marks)

b) List four characteristics of a good algorithm. (4 marks)

c) Define an array structure. (2 marks)

d) Write codes that initializes the values in the array sequentially and then prints them out as follows.

(8 marks)

i. a[0] = 0

ii. a[1] = 1

iii. a[2] = 2

iv. a[3] = 3

v. a[4] = 4

e) Differentiate between the while & co-while statements (5 marks)

QUESTION FIVE (25 MARKS)

a) Explain the following phrase “c” is called a compiled language” (3 marks)

b) Explain any three factors that influence on language design. (6 marks)

i) Salesman commission is calculate using the following pseudo-code.

Use the following pseudo-code to write a flow-chart.

If sales <500

THEN

 COMMISSION = 2% of sales

ELSE

 COMMISSION = 5% of sales

ENDIF

Print COMMISSION

(8 marks)

ii) Write codes in C programming language that translate the flow chart

Into a program.

(8 marks)

QUESTION SIX (25 MARKS)

- a) Differentiate between the following set of programming terms: **(4 marks)**
- i. Variable and identifier.
 - ii. Operand and operator.
- b) List and explain the various types of functions. **(6 marks)**
- c) In order to write an efficient user defined function the programmer needs some elements. Name and explain. **(5 marks)**
- d) What is the difference between the call by value and the call by reference argument passing conventions in the C programming language? **(4 marks)**
- e) Use the If then else statement to write a program to read a given year, and find whether the given year is a leap year or not. **(6 marks)**
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