Ser. IT AUG/18/19

GARISSA UNIVERSITY

UNIVERSITY EXAMINATION 2017/2018 ACADEMIC YEAR ONE THIRD TRIMESTER EXAMINATION

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCE

FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

COURSE CODE: DIT 005

COURSE TITLE: OBJECT ORIENTED PROGRAMMING I

EXAMINATION DURATION: 2 HOURS

DATE: 09/08/18 **TIME: 9.00-11.00 AM**

INSTRUCTION TO CANDIDATES

- **The examination has SIX (6) questions**
- **Question ONE (1) is COMPULSORY**
- **Choose any other THREE (3) questions from the remaining FIVE (5) questions**
- **Use sketch diagrams to illustrate your answer whenever necessary**
- **Do not carry mobile phones or any other written materials in examination room**
- **Do not write on this paper**

This paper consists of THREE (3) printed pages ***please turn over***

QUESTION ONE (COMPULSORY)

a. Define the following terms as used in computer programming

   i. Machine dependence **[2 Marks]**

   ii. Design tool **[2 Marks]**

   iii. Object Oriented Analysis and Design **[2 Marks]**

b. What is meant by program portability? Why are low-level languages not considered to be portable? **[3 Marks]**

c. With an Aid of an illustration differentiate between an algorithm and Pseudocode. **[6 Marks]**

d. Briefly explain the differences between an Interpreter and a compiler. **[6 Marks]**

e. State any ***FOUR*** features of OOPS. **[4 Marks]**

QUESTION TWO

f. Coding describe ***THREE*** types of errors that are encountered during testing and compilation of a program. **[6 Marks]**

g. Outline ***FOUR*** characteristics of a good program **[4 Marks]**

h. Define the term structured programming and List it's ***THREE*** advantages. **[5 Marks]**

QUESTION THREE

i. Briefly describe the development of programming language from machine to 5^{th} generation language. **[10 Marks]**

j. Give ***FIVE*** characteristics of procedure-oriented language. **[5 Marks]**

QUESTION FOUR

k. It is a common programming practice to break a large program into modules:-

Required:-

   i. Outline **FIVE** advantages of module programming **[5 Marks]**

l. This programs written in high level languages are said to be portable and machine independent

Required:-

(i) Explain what is meant by portability and machine independent **[4 Marks]**

(ii) Explain **THREE** advantages of portability **[6 Marks]**

QUESTION FIVE

m. Explain the following basic concepts of OOS?

i. Classes.

ii. Data abstraction

iii. Encapsulation.

iv. Inheritance.

v. Polymorphism. **[15 Marks]**

QUESTION SIX

n. Describe the stages that are involved during Program Development Life Cycle (PDLC).

[12 Marks]

o. State THREE features of Unified Modeling Language (UML). **[3 Marks]**