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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2020/201 ACADEMIC YEAR ONE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF SCHOOL OF PURE AND APPLIED SCIENCES**

**DIPLOMA IN INFORMATION TECHNOLOGY**

**COURSE CODE: DIT 005**

**COURSE TITLE: OBJECT ORIENTED PROGRAMMING 1**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 18/08/2021 TIME: 12.00-2.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) 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 TWO (2) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Describe any two high level programming languages. (4 marks)
2. Distinguish between Object Based Programming Languages and Object oriented programming languages (6 marks)
3. Describe the following types of testing when developing a system
   * 1. Black Box Testing
     2. White Box Testing
     3. Beta Testing
     4. Unit Testing
     5. Alpha Testing (10 marks)
4. Discuss Five Fundamental concepts of Object Oriented Programming (10 Marks)

**QUESTION TWO**

1. With reference to computer programming, differentiate between:
2. Syntax and semantic errors;
3. Assembly Language and Machine Language. (8 marks)
4. Discuss Six Fundamental concepts of Object Oriented Programming (12 Marks)

**QUESTION THREE**

1. Explain any Five Programming Paradigms: (10 Marks)
   1. Distinguish between an algorithm and a pseudo code as used in programming (6 Marks)
   2. List Four characteristics of a good program (4 Marks)

**QUESTION FOUR**

1. Explain the following terms as applied in programming languages:
   1. Library function;
   2. Machine independence. (8 marks)
2. Differentiate between procedural oriented programming languages and object oriented programming languages (6 Marks)
3. Distinguish the following terms as used in programming:
4. Global variables and local variables;
5. Source code and object code. (6 marks)

**QUESTION FIVE**

1. State two examples of fourth generation programming languages (2 marks)
2. Describe the term program specification (2 marks)
3. Highlight the processes taken in program specification (4 marks)
4. Explain two functions of a compiler in programming (4 marks)
5. Outline three advantages of portable computer programs (3 marks)
6. Highlight any Five symbols used when drawing a flow chart (5 marks)