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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 026**

**COURSE TITLE: INFORMATION SYSTEM ENGINEERING**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 16/08/2021 TIME: 09.00-11.00 AM**

**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. Define the following terms.
2. Assemblers (2 marks)
3. Compilers **(2 marks)**
4. Linkers (**2 marks)**
5. **Loaders (2 marks)**
6. **Information System engineering** (**2 marks)**
7. Discuss the Main Components of Information systems (5 marks)
8. Explain FIVE function of computer hardware (5 marks)
9. Explain the major functions of information systems (10marks)

**QUESTION TWO**

1. Describe the following types of programming languages
2. Machine Language (2 marks)
3. Assembly Language (2 marks)
4. High Level Language (2 marks)
5. Fourth Generation Language (2 marks)
6. Explain the difference between interpreters and compilers as types of language translators (6 marks)
7. Explain THREE characteristics of a system (6 marks)

**QUESTION THREE**

1. Explain the difference between graphical user interface and character user interface operating system (4 marks)
2. Briefly describe the following types of Operating System
3. Single program operating system
4. Multi-tasking operating system
5. Single user operating system
6. Multi user operating system ( 8 marks)
7. State and Explain FOUR different types of software ( 8 marks)

**QUESTION FOUR**

1. Outline the Functions of an operating system? (7 marks)
2. State Factors to consider when choosing an operating system (5 marks)
3. State TWO advantages and TWO disadvantages of using Information System (4 marks)
4. Explain the difference between complex system and simple system ( 4 marks)

**QUESTION FIVE**

Systems can be characterized along a wide range of characteristics. Explain the difference between;

1. Physical systems Vs Abstract systems ( 4 marks)
2. Open systems Vs Closed systems ( 4 marks)
3. Open loop systems Vs closed loop systems ( 4 marks)
4. Stable/Static systems Vs Dynamic systems ( 4 marks)
5. Adaptive systems Vs non-adaptive systems ( 4 marks)