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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2018/2019 ACADEMIC YEAR ONE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF INFORMATION SCIENCE AND TECHNOLOGY**

**FOR THE DEGREE OF BACHELOR OF INFORMATION SCIENCE**

**COURSE CODE: TED 102**

**COURSE TITLE: INTRODUCTION TO COMPUTERS STUDIES**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 07/02/2020 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. Garissa University wants to set a computer network to be used by the school community.
   1. Explain five benefits of internet to an institution **[5 marks]**
   2. Explain the components they require to set up computer networks **[5 marks]**
   3. Explain five challenges they will face as a result of computer networks **[5 marks]**
2. An organization has purchased computers to be used in an office
   1. Explain the application areas of computer in an organization **[5 marks]**
   2. Explain five types of application software they will install in the computers **[5 marks]**
   3. Explain the benefits of computerized system thy will enjoy **[5 marks]**

**QUESTION TWO**

1. Explain four objectives of security **[4 marks]**
2. Explain the following terms **[6 marks]**
   1. Threats
   2. Risk
   3. Vulnerability
3. Information in a computer system must be protecting against illegal access.
   1. Explain five factors that motivates attackers to penetrates networks **[5 marks]**
   2. Explain five mechanisms to protect computers against attackers **[5 marks]**

**QUESTION THREE**

1. Explain the role of secondary memory.in a computer system **[6 marks]**
2. Differentiate the following terms **[6 marks]**
   1. RAM and ROM
   2. Direct access and sequential access
   3. Cache memory and registers
3. Explain the factors to consider while purchasing a computer system **[8 marks]**

**QUESTION FOUR**

1. Explain three advantages of digital communications over analogue communications **[6 marks]**
2. Perform the following calculations
   1. add 1310 two 2710 using binary **[3 marks]**
   2. subtract 1210 from 5310 using twos compliment **[3 marks]**
3. with the help of a diagram explain the functional components of a computer system **[8 marks]**

**QUESTION FIVE**

1. Explain two roles of operating system in a computer system **[4 marks]**
2. Explain the three roles of operating system in a computer system **[6 marks]**
3. Explain the following emerging technologies in computing
   1. Mobile computing **[5 marks]**
   2. Cloud computing **[5 marks]**