



Strathmore
UNIVERSITY

SCHOOL OF COMPUTING AND ENGINEERING SCIENCES (SCES)
BACHELOR OF SCIENCE IN COMPUTER NETWORKS AND CYBER SECURITY
END OF SEMESTER EXAMINATION
CNS1101 COMPUTING FUNDAMENTALS

DATE: 10th November 2022

Time: **2 Hours**

Instructions

1. This examination consists of **FIVE** questions.
2. Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

Question 1.

(30 Marks)

- a) Electrostatic discharge (ESD) occurs when there is a build-up of an electric charge and can cause permanent damage to electrical equipment. List four measures you can take to prevent an ESD damage. **(4 Marks)**
- b) Along with the **POST** what else does **BIOS** help identify? **(5 Marks)**
- c) Briefly explain the two factors that influence the development of a maintenance plan. **(2 Marks)**
- d) Giving examples, list the three categories of network devices. **(3 Marks)**
- e) You are a network administrator of an organisation and with COVID, hybrid working has been introduced and now people are working from home. You have collaborated with Safaricom to get monthly internet bundles at a reduced rate for your colleagues. They start misusing the bundles and they do not sustain them for the month as per the requirements because they are using the same bundles to do their own personal things. Explain how you would resolve this. **(4 Marks)**
- f) You have been consulted by your organisation again to help in buying a printer. Give a list of five things that you would emphasize on. **(5 Marks)**
- g) Explain the difference between Virtualization and cloud computing. **(3 Marks)**
- h) Giving an example, advantage and disadvantage explain any two types of a network. **(4 Marks)**

Question 2.

(15 Marks)

- a) Describe any three major components of a computer and state two factors for each that you would consider when buying the components. **(6 Marks)**
- b) Explain the functionality of any four redundant array of independent disks level technology that can be used to store data across multiple storage devices and give an advantage and disadvantage for each technology. **(8 Marks)**

- c) What is BIOS in full? **(1 Mark)**

Question 3. **(15 Marks)**

- a) By use of a diagram explain the TCP/IP Model stating the two major protocols used by the model. **(7 Marks)**
- b) A network service is a capability that helps facilitate a network operation, its typically provided by client server relationship. List and explain four network services examples. **(8 Marks)**

Question 4. **(15 Marks)**

- a) List four different types of printers that you have learnt in class, explain the difference between the printer and state two merits and demerits of each type of printer. **(8 marks)**
- b) Explain the seven types of TCP/IP Attacks. **(7 Marks)**

Question 5. **(15 Marks)**

- a) Computer problems are attributed to hardware, software, networks, or some combination of this three. List and explain some of the common hardware problems. **(10 Marks)**
- b) By use of an example of a common PC problem explain how you would implement the six steps of troubleshooting. **(5 Marks)**