**NAME: .......................................................................................ADM NO.: ...........CLASS.................**

**FORM 4 COMPUTER STUDIES**

**PAPER 1**

**END TERM 2 - 2021**

## Section A: answer all questions in this section on the spaces provided.

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |  | State **three** Computer Laboratory precautions and measures necessary to protect the computer user. | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 2 |  | State **two** reasons for system reboot. | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 3 |  | State any **five** uses of computers in a university. | ***[5 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 4 |  | State the purpose of the following parts of the CPU |  |
|  | A | Control Unit; | ***[1 mark]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | B | Arithmetic and Logic Unit; | ***[1 mark]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | c | Main Memory; | ***[1 mark]*** |
| ……………………………………………………………………………………………………………………… | | | |
|  | | | |
| 5 |  | The secretary to the Board of Management of your school wants to purchase a computer screen and has resulted to consult your advice. State any **three** features or terms you could recommend her to consider during the purchasing process. | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 6 |  | List down any **four** hardware components you can add or upgrade in a computer. | ***[4 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………........................................................................................................................................................................................ | | | |
| 7 | a | Differentiate between Batch processing and real time processing modes. | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 8 | a | Define the term normalization as used in data base design | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | b | State **three** objectives of normalization. | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 9 |  | A worksheet contains the data shown below    State the values displayed in G1 | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 10 | a | Name **two** methods of paper orientation as used in DTP | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | b | Differentiate between the following |  |
|  |  | 1. Kerning and tracking | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  |  | 1. Margins and column guides ***[2 marks]*** |  |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 11 |  | Explain one role of a computer technician | ***[1 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 12 |  | What is disk partitioning? | ***[1 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 13 |  | What is the meaning of the phrase ‘semantics’ as used with computer programming? | ***[1 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 14 |  | What is internet? | ***[1 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
| 15 |  | Explain the function of a bridge in computer networking. | ***[1 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Section B: Answer question 16 and any other three questions | | | |
| 16 | a | State **two** qualities of a good pseudo-code. | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | b | With the aid of flowchart diagrams, describe each of the following programme control structures: |  |
|  |  | (i) sequence | ***[3 marks]*** |
|  | | | |
|  |  | (ii) selection | ***[3 marks]*** |
|  | | | |
|  | c | Draw a programme flowchart that would accept three numbers and find their sum. If the sum is greater than 200. It adds 30 to the sum, otherwise subtracts 20 from the sum. The programme should then display the results. | ***[7 marks]*** |
|  | | | |
| 17 | a | What is the hexadecimal equivalent of 7678 | ***[3 marks]*** |
|  | | | |
|  | b | Use one’s compliment to represent -510 in 8-bits formation. | ***[2 marks]*** |
|  | | | |
|  | c | State **two** reasons for using binary in digital technology | ***[2 marks]*** |
| ................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  | d | Explain the role of a modem in data communication | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………... | | | |
|  | e | Describe each of the following computer terminologies as used in data representation | ***[4 marks]*** |
| 1. Word   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………   1. Bit   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………   1. Byte   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………   1. Nibble   ……………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | f | Convert 7.12510 to binary | ***[2 marks]*** |
|  |  |  |  |
| 18 | i | Describe **three** ways in which computers have positively impacted on education | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | ii | 1. Simulation is one of the application areas of computers. What is meant by the term simulation? | ***[1 mark]*** |
| ........................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  |  | 1. State **three** advantages of computer based simulation | ***[6 marks]*** |
| ............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  | iii | Differentiate between a software engineer and a computer engineer. | ***[2 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | iv | Name **three** responsibilities that are carried out by a web administrator. | ***[3 marks]*** |
| .................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................... | | | |
| 19 |  | A school computer laboratory is scheduled to undergo major renovations. The lab is schedule to receive new computer whose specifications are given below:-  Pentium IV 2.8GHz processor  40GB HDD  3 ½ FDD  256MB RAM  56 x CD ROM  17” SVGA TFT monitor  The computers are going to be networked and will be able to browse the internet. |  |
|  | a | Explain what is meant by the terms:-   1. FDD   ……………………………………………………………………………………   1. HDD   ……………………………………………………………………………………..   1. SVGA   ……………………………………………………………………………………   1. TFT   …………………………………………………………………………………….. | ***[2 marks]*** |
|  | b | The computer is to be networked, name one extra device that should be fitted on every computer to enable this to happen. | ***[1 mark]*** |
| ........................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  | c | The computer is to receive internet facilities through the server on a dial; up system. Name and describe the function of a special device that needs to be connected to the server to complete the connection. | ***[1 mark]*** |
| ........................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  | d | 1. The school has to apply star topology to link up the computer. List **two** advantages of this type of topology. 2. Name the central device used to connect the computers in this topology. | ***[2 mark]*** |
|  | e | List **two** other types of topologies that the school could have opted for. | ***[1 mark]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | f | List **four** advantages of using a network | ***[2 mark]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | g | 1. Data transmission via the internet is done using a mode known as packet switching. Describe this data transmission mode. 2. Name **two** other modes of transmission | ***[3 mark]*** |
|  | h | 1. The school’s LAN is done using UTP cable. List **two** advantages of using this type of cable. 2. List **two** advantages of using fibre cable in networking **[2 MARK]** | ***[2 mark]*** |
|  |  | Data flows in the school’s LAN in a duplex manner. Discuss **two** other types of data transmission in network giving examples | ***[1 mark]*** |
| 20 | a | 1. Explain **three** communication services offered through internet | ***[3 mark]*** |
| ............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................ | | | |
|  |  | 1. Describe the following internet terms    1. Links    2. URL | ***[2 marks]*** |
|  | b | The following is a spreadsheet relating to a farmer.    A function = IF (B2<200, “Not Viable”, IF (B2>300, “Moderate”, IF (B2>1000, “Viable”))). Give the appropriate result returned in cells C2, C3, C4 and C5 | ***[2 marks]*** |
|  | c | Text can easily be selected using a mouse in word processing. How do you select   1. Multiple paragraph 2. Vertical block of text | ***[2 marks]*** |
|  | d | List **three** areas where virtual reality is used. | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |
|  | e | Outline **three** ways computers can be used to enhance marketing. | ***[3 marks]*** |
| ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | | | |