**NAME………………………………………………….INDEX NO……………………..**

**SCHOOL………………………………………………CANDIDATE’S SIGN…………**

 **DATE…………………………..**

**451/1**

**COMPUTER**

**(THEORY)**

**PAPER 1**

**MARCH/APRIL 2015**

**Time: 2 ½ Hours**

**KABONDO DIVISION JOINT EVALUATION TEST**

***Kenya Certificate of Secondary Education (K.C.S.E)***

## INSTRUCTIONS TO CANDIDATES

### Write your name, school and Index number in the spaces provided above.

### Answer ALL the questions in the spaces provide

### For Examiners Use Only

|  |  |  |
| --- | --- | --- |
| **Question** | **Maximum** | **Score** |
| **A** | **1 - 15** |  |
| **B** | **16** |  |
|  | **17** |  |
|  | **18** |  |
|  | **19** |  |
|  | **20** |  |
|  | **21** |  |

***This paper consists of 14 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.***

1. Give importance of having the following in computer laboratory (3mks)

i). Standard furniture in the laboratory

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ii). Antiglare screen /monitor

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iii). UPS

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1. Distinguish between ROM and RAM (2mks)

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1. Explain the following computer crimes (2mks)

i). Fraud

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ii). Alteration

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1. a). Define
2. Firewalls

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1. Data encryption

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1. Differentiate between the following terms as used in word processing (3mks)

a). Drop Cap and Case

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b).Superscript and Subscripts

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c). Indent and tab

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1. a).State and explain any one type of computer processing file (1mk)

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b). List any two file organization methods (2mks)

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1. Describe the following terms as used in internet

a). Webpage (1mk)

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b).Blog (1mk)

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c). Hyperlinks (1mk)

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d). Web portal (1mk)

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1. a).Give four advantages of DTP over a word processor (2mks)

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b).Differentiate between the following

i). Kerning and tracking (2mks)

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ii).Margins and column guides (2mks)

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1. Define the term simulation (1mk)

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1. Differentiate between baseband and broadband signal as used in networking (2mks)

a). Baseband signal

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b).Broadband signal

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1. Explain how the operating system controls the following resources (3mks)

i). Processor

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ii). Main memory

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iii). Input and Out put devices

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1. What is deadlock in reference to operating systems (1mk)

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1. a). The most popular type of electronic data storage currently use magnetic disk storage such as hard disk or Winchester disk. Give reasons as to why they are popular (2mks)

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b). Outline two advantages of hard disk over floppy disk (2mks)

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1. Define the following computer crimes
2. Piracy (1mk)

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1. Industrial espionage (1mk)

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1. Explain two ways of protecting data and information against unauthorized access (2mks)

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**SECTION B 60 MARKS**

***Answer question 16 and any three questions***

1. A.)List two examples of

i). Third generation languages (2mks)

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ii). Object oriented languages (2mks)

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b). Define

i). Object code

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ii). Source code

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c). Differentiate between a compiler and an interpreter (2mks)

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e). A car rental firm leases its cars for Kshs.2500.00 per day. The manager gives a discount based on the number of days that the car is rented .If the rental period is greater than or equals to 7 days then a 25% discount is given. Write a peudocode to accept a car number and the rental period, and calculate the total amount earned by the company when a car is leased. (7mks)

1. a). Subtract 0111/2 from 1001/2 (2mks)

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b). Using two’s compliment ,subtract 7 from 4 and give the answer in binary notation. (4mks)

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c).Convert

i). 91 C 16 to octal (3mks)

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ii). 3378 to hexadecimal (3mks)

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iii). 9.625 10 to binary (3mks)

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1. A school computer laboratory is scheduled to undergo major renovations. The lab is schedule to receive new computer whose specification are given below.

Pentium IV 2.GHz processor

40 GB 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

 i). FDD (2mks)

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ii). HDD

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iii). SCGA

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iv) TFT

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The computer is to be networked, name one extra device that should be fifted on every computer to enable this to happen (1mks)

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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. (1mk)

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d). i) the school has to apply star topology to link up the computer. List two advantages of this type of topology (1mk)

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ii). Name the central device used to connect the computers in this topology (1mk)

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e).List two types of topologies that the school could have opted for (1mk)

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f). List four advantages of using a network (2mks)

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g). i). Data transmission via the internet is done using a mode known as switching .Describe this data transmission mode (1mk)

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ii).Name two other modes of transmission (1mk)

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h). i)The school’s LAN is done using UTR cable. List two advantages of using this type of cable (1mk)

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ii). List two advantages of using fibers cable in networking (1mk)

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i). Data flows in the school’s LAN in a duplex manner. Discuss two other types of data transmission in network giving examples (2mks)

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1. a). Consider the topologies demonstrated in the diagram below.



i).Identify the network topologies (3mks)

A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii). In topology A ,Identify the network device that should be at the end point 1 and 2 (1mk)\

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iii).Which of the above topologies is likely to be used in a wide area network? (1mk)

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iv). Highlight three disadvantages of topology B (1mk)

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v). Identify the device labeled X topology A (1mk)

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b).State two main classes of network software (2mk)

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c). briefly describe the following as used in the networking (4mks)

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i). Repeaters

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ii). Network hub

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iii). Fibre optic cables

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iv). Network interface Card (NIC)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. a). Define the following terms

i). Database (1/2mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii). Database management system (1/2 mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii). Hierarchical database (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iv). Relational database (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

v). Network database (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b). List the advantages of using an electronic database system for storage of data over the file approach (4mks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c). Study the spreadsheet below and answer the questions that follow

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | A | B | C | D |
| 1 |  **WESTERN COMP BOOK CENTER SALES** |
| 2 |  BOOK TITTLE |  PRICE PER BOOK |  BOOKS SOLD |   |
| 3 |  D BASE IV |  400.00 |  145 |  |
| 4 |  LOTUS FOR DUMMEIES |  460.00 |  15 |  |
| 5 |  OFFICE WORD IN THREE DAYS  |  300.00 |  65 |  |
| 6 |  LEARNING C++ IN 3 DAYS |  700.00 |  100 |  |
| 7 |  TEACH YOURSELF PASCAL |  700.00 |  200 |  |
| 8 |  COMPUTER STUDIES |  500.00 |  300 |  |
| 9 |  THE CLEVER FOOL COMPUTER |  300.00 |  10 |  |
| 10 |   |   |   |   |

i). Write down the formula that can be used to find the price of the most costly book(3mks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii). Write down the formula that can be used to determine the total sales for the book tittled COMPUTER STUDIES (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii)Write down the formula that can be used to determine the average price of the books (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iv). Write down the formula in cell D6 that can be used to find the new price per book if they went up by a percentage written in cell B 10 and the formula has to be entered only in cell D3 then be copied to others (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

v).Write down the output in D 7 if in B6 is 10% (1mk)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d). State any four advantage of using an electronic spreadsheet as compared to a traditional worksheet (2mks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_