Information Technology
Controlled Assessment

Scenario

You are part of a group of volunteers working for the local council to help in IT related issues. You, together with the other volunteers, are helping the citizens of your locality with various IT related issues such as choosing the right computer devices and troubleshooting problems.

Information
Technology
Support
Group

Supported by your local council

Question 1 (K5 – 4 marks)

Select the appropriate peripheral devices depending on the user's needs

The IT Support Group is helping the local citizens by guiding them in choosing the most appropriate peripheral devices for their needs. Following are the citizen's requirements for which you are to choose an appropriate peripheral device for their needs.

Task 1: **Select and write down an appropriate peripheral device for each of the following citizens based on their individual needs.**

a) Joe Vella works for a non-profit organisation which supports visually impaired persons. He would like a device which is capable of printing documents which can be read by both visually impaired and sighted persons.

Peripheral Device: _____

b) Doris would like to communicate with her niece, who is studying in England, through video calling.

Peripheral Device: _____

c) George has a small supermarket. He would like to buy a peripheral device which would help him process bills quickly.

Peripheral Device: _____

d) Mr. Borg is a teacher who usually assesses his students using multiple choice tests. Which device can help him correct such tests in a short time?

Peripheral Device: _____

Question 2 (K3 – 4 marks)

Describe the organisation of a personal computer (PC) system

The room from where the IT Support Group offers its services needs to be decorated with some colourful posters. You decided that each volunteer should create a poster which would be then hung in the room. You were asked to design a poster describing the organisation of a personal computer system.

Task 2: **Describe the organisation of a personal computer system by completing the block diagram.**

a) Complete the following block diagram with appropriate **words** to describe how a computer system is organised.
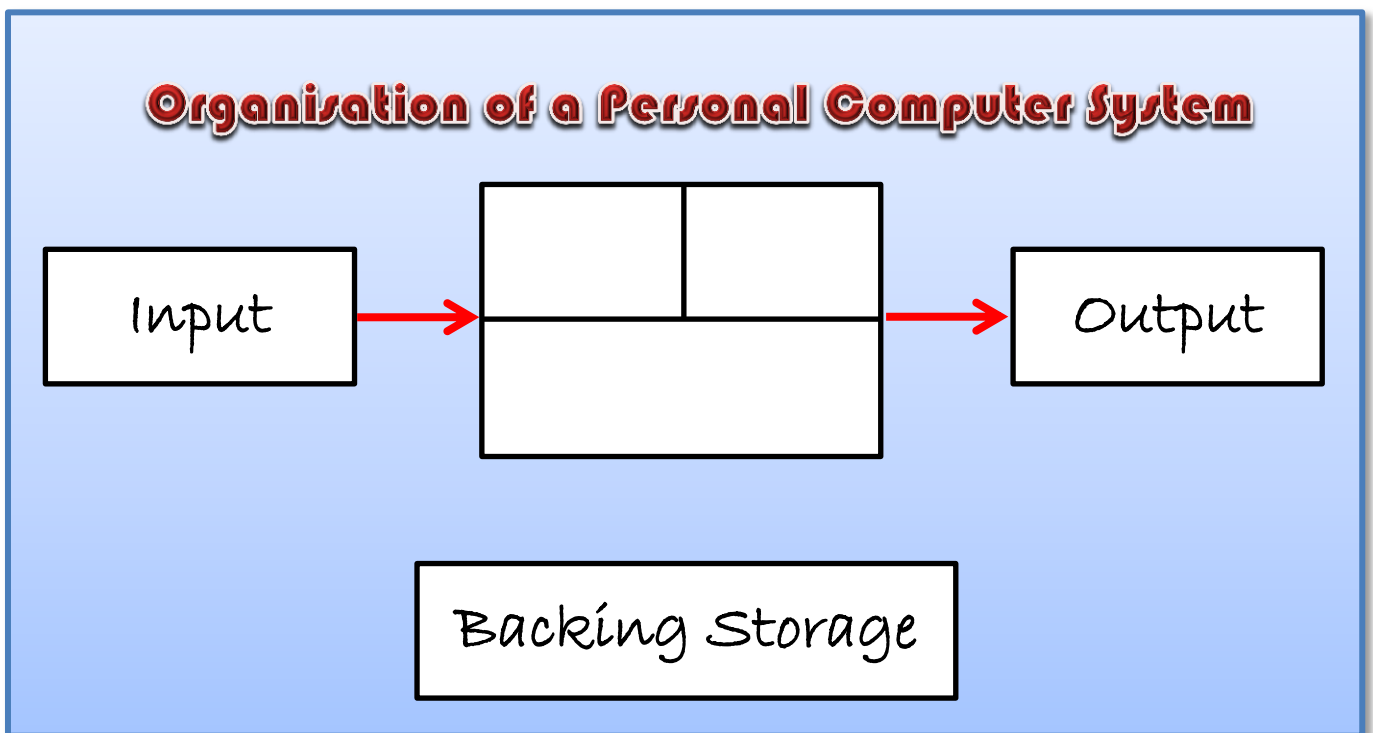
b) In the above block diagram, **draw the missing arrow to show how data flows** between the processing unit and backing storage.

Question 3 (K6 – 4 marks)

State the basic terms related to data communication and network technology

After the success of the IT Support Group, the major has asked you to expand your services by helping school children with their IT, ICT and Computing homework difficulties. One day Mariah visited the local council premises so that you would help her with her homework difficulties regarding Networking.

Task 3: **Help Mariah by stating the appropriate terms for each of the following questions.**

a) State **two** types of networks: _____ , _____ .

b) State **two** network topologies: _____ , _____ .

c) State **two** types of network cables: _____ , _____ .

d) State **two** types of wireless communication: _____ , _____ .

Question 4 (K1 – 4 marks)

Order the types of computer systems used today by their cost, speed and physical size

Word has spread among the local citizens that the IT Support Group is helping students with their homework difficulties. One day Liam, who is studying ICT at school, visited the local council premises so that you can help him carry out his homework which consisted of ordering computer systems using various criteria.

Task 4: **Order computer systems according to the specified criteria.**

a) Order the following computer systems by their **cost**, starting with the cheapest system.

Desktop computer , Super computer , Tablet

_____ , _____ , _____

b) Order these computer systems by their **physical size**, starting with the largest system.

Smartphone , Server , Laptop

_____ , _____ , _____

c) Order the following computer systems by their **speed**, starting with the slowest system.

Super computer , Laptop , Digital Wristwatch , Tablet

_____ , _____ , _____ , _____

Question 5 (C1 – 6 marks)

Explain the specificity of usage for the most used types of computer systems

As a group, you are publishing IT related articles in the local council newsletter. As for next month's edition, you are to write about the use of three computer systems which are very popular and used by many people and organisations.

Task 5: **State and explain two uses for each computer system listed below.**

a) **Server**

Use 1: _____

_____

Use 2: _____

_____

b) **Tablet**

Use 1: _____

_____

Use 2: _____

_____

c) **Smartphone**

Use 1: _____

_____

Use 2: _____

_____

Question 6 **(K7 – 4 marks)**

State the common local user groups

Five desktop computers are donated to the local council as eventually, these will be connected together via a network to enable the sharing of data and resources. The major has asked you to help him figure out the most appropriate user group for the different user needs.

Task 6: **For the following purposes, state which local user group you would create.**

a) This account should allow its user to install software and hardware as well as, create new user accounts.

Local User Group: _____

b) An account which allows users, who do not have a permanent account on the domain, to make temporarily use of the computer such as to browse the Internet.

Local User Group: _____

c) An account which allows users to run programs and perform customisations on their own accounts, though such changes should not affect the entire system including other users.

Local User Group: _____

d) The user of this account is allowed to set and change security settings as to ensure that the network is secure and well-protected from threats.

Local User Group: _____

Question 7   **(K9 – 4 marks)**

Describe the role of firewalls in safeguarding computer networks

Since your local council has set up a new computer network you decided to draw the attention of the major about the importance of protecting the network from potential threats. He would like you to explain to him about protecting the network through the use of firewalls.

Task 7: **Describe the role that firewalls have in protecting computer networks. It is important to mention, what firewalls protect networks from, give examples of threats and describe how firewalls actually protect networks.**

Firewalls protect networks from: _____

_____

Examples of threats: _____

_____

Firewalls protect networks by: _____

_____

_____

_____

Question 8   **(A3 – 10 marks)**

Use local user accounts in conjunction with file and printer sharing

The major would like you to set file and printer sharing between two computers in the network. He would like to:

- allow sharing between two computers, PC1 and PC2;
- share only the files which are located in the Public Libraries;
- add a new library whose content can only be read by others;
- share a printer between these two computers.

Task 8:   **Share files and a printer by carrying out the following steps:**

- Create a **Homegroup** in which **PC1** and **PC2** are allowed to share files located in the **Public Libraries** amongst each other.

- Make sure that the folders *My Documents*, *My Music*, *My Videos* and *My Pictures* found on PC1 are **not shared** with anyone on the Homegroup.

- On PC1, create a **new library** and name it ***Read_Only***. Within it **include the folder** ***Read_Only_Files*** which is found on the Desktop for PC1. **Share** the ***Read_Only*** library with the other computers on the Homegroup but remember that its contents should only be read.

- **Share the printer** named *Printer_ABC,* which is installed on PC1, to allow PC2 to print from the same printer as to allow for printer sharing.