National 4/5
Computer Systems
Homework Booklet

Name_____

Class_____

Types of System 1

1 What is the difference between a palmtop computer and a smart phone?

2. Suggest a business which would use a server computer and why.

3. Which types of computers are unlikely to have a keyboard?

4. Which type of computer will typically use a touchpad?

5. What is usually used for input on a palmtop computer?

6. What is clock speed an indicator of?

Types of System 2

7 What is clock speed measured in?

8 List the key features of a:

(a) Smartphone

(b) Laptop computer

(c) Desktop computer

(d) Server

(e) Games Console

(f) Tablet

Input Devices 1

1 **What** are the most **common input devices** used with a computer?

---

2 **What** is a **mouse** used for?

---

3 **Which** type of computer uses a **touchpad** instead of a mouse?

---

4 **Which** input device can be used with **voice recognition software** to input instructions or data into a computer?

---

5 **Give two input devices** which capture visual data

Input Devices 2

6 **Suggest** a suitable input device which could be used for **video conferencing**?

---

7 **Which** input device used for **capturing images**, has the **lowest resolution**?

---

8 **Which** input device can be used to capture **handwritten signatures**?

---

9 **Give two input devices** which can be used to control **video games**.

---

10 **Explain** what a **scanner** is used for.

---

11 **Which type of software** is needed with a **scanner** to enable documents to be captured in a format which allows computer editing?

Output Devices

1 **What** is the **resolution of a printer** measured in?

---

2 **How** is the **speed of printing** measured?

---

3 **What** is an **LCD screen**?

---

4 **Where** would you usually find **LCD screens** being used?

---

5 **What** is a **TFT screen** and what is the **main advantage** of using one?

---

6 What is needed to **output sound** from a computer system?

Processor

1 **Name** the **three** parts of the **CPU**.

---

2 **Explain** the difference between **RAM and ROM**.

---

3 **What** is **Flash ROM**?

---

4 **Explain** the purpose of the **ALU**.

---

5 **What** does the **Control Unit** do?

---

6 **What** are the **registers** used for?

---

7 **What** is used to **store programs and data permanently**?

---

8 **Explain** the term ***addressability***.

Backing Storage 1

1 **Explain** why **backing storage** is needed.

---

2 **Give two costs** associated with **local storage**.

---

3 **Suggest two advantages** and **one disadvantage** of using **cloud storage**.

---

4 **What** system do computers use to **store data**?

---

5 **Put measurements of storage capacity** in order, **from smallest to highest.**

---

6 **Which backing storage device**, offers faster access to data than any other storage device?

Backing Storage 2

7 **Give two backing storage devices** which use **magnetic storage**.

---

8 **Which backing storage devices** use **optical storage**?

---

9 **What type of backing storage** is a **USB flash drive**?

---

10 **Give two** devices which use **flash memory cards**.

---

11 **Explain** the term ***portability***, when applied to **backing storage devices**.

---

12 **What** is **data transfer speed** generally measured in?

---

13 **List** typical **backing storage capacities** for:

(a) Hard Disk _____

(b) CD-R _____

(c) DVD-R _____

(d) USB Flash Drive _____

(e) Flash Memory Card _____

Binary 1

1. What is a **bit**?

2. Express the binary number 0001 0011 as a decimal number.

3. What is a byte?

4. How many bytes are there in a Kilobyte?

5. Write the following in order of size, with the smallest first: byte – Gigabyte – Kilobyte - Megabyte

Binary 2

6. Express the decimal number 43 as an 8-bit binary number.

7. State three advantages for computers using binary.

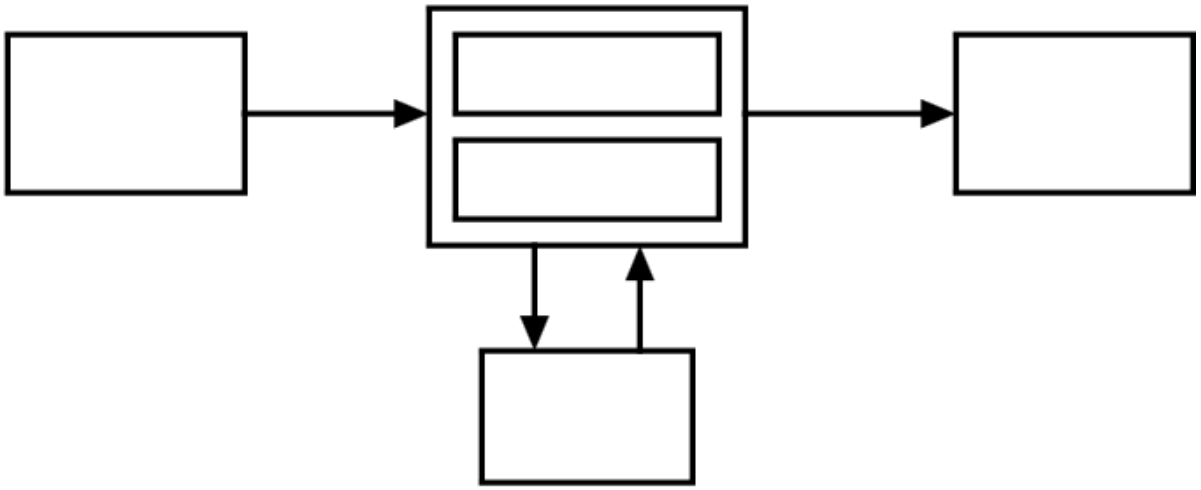
8. Now many bits are used to store a text character coded using ASCII?

9. What is a control character?

10. What is a pixel?

Low Level Machines

1. Complete this diagram of a typical computer system.



2. What is the ALU and what does it do?

3. What does the control unit do?

4. What is a register?

5. For what do the letters ROM stand?

6. Name one input device common on laptops, but very rarely used with desktop computers.

7. For what do the letters RAM stand?

8. State three features of RAM.

Input Devices 3

1. How does a keyboard work?

2. The mouse is a common peripheral. Apart from the standard mouse, there are a number of different types offering additional features. Name one of these, and describe how it differs from the standard mouse.

3. List four features that can be used to compare digital cameras.

4. A LCD panel is used with a laptop computer. For what do the letters LCD stand?

5. How does an inkjet printer work?

6. List four features that can be used to compare printers.

7. What could you use a scanner to do?

8. List three features that can be used to compare webcams.

Backing Storage 3

1. Complete the following table.

	Transfer Rate	Capacity
CD ROM		
Hard Disk Drive		
Floppy Disk		
USB Flash Drive		

2. Two of the devices in the table in Question 1 above use the same basic method to store data. What is this method called?

3. Which type of storage in the table used to be common on desktop computers, but now very rarely comes with a new computer?

4. How does an optical storage device work?

Backing Storage 4

5. What is the capacity of a normal CD-ROM?

6. What is the difference between a CD-R and a CD-ROM?

7. What is the difference between a CD-RW and a CD-ROM?

8.
Why can a DVD hold more than a CD?

9. What is an interface?

10. Why is an interface necessary?

Past Exam Questions 1

1. *(a)* (i) The processor of a computer can be split into three main parts. Name the **three** parts.

1. _____

2. _____

3. _____

(ii) Explain the functions of these **three** parts.

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

Past Exam Questions 2

2 *(a)* The company employs a number of designers that work from home. They hold meetings once a month using *video conferencing*.

(i) What is video conferencing?

_____

_____

_____

(ii) Apart from an Internet ready computer, what hardware and software is required for video conferencing?

Hardware _____

_____

Software _____

_____

(b) The secretary has poor eyesight. The *human computer interface* of the computer system has been altered to make it easier for her to use.
Suggest **two** changes that may have been made to the human computer interface.

1. _____

_____

2. _____

_____

Past Exam Questions 3

3. Low-Kost supermarket uses a computerised database in store.

(a) The store offers a loyalty card system to its customers. The customer fills in an application form to apply for a loyalty card. The details on the application form are then entered into the supermarket's computer system using *Optical Character Recognition.*

(i) What is meant by Optical Character Recognition?

(ii) Give **two** advantages to the supermarket in using Optical Character Recognition.

1.

2.

4. Simon has just bought a new computer system with an up-to-date operating system.

Describe **two** tasks the operating system carries out.

1.

2.

Past Exam Questions 4

5. Julie needs to make a backup of her database and is not sure whether to use a *hard disk* or *magnetic tape*.

What is the difference between a hard disk and magnetic tape in terms of accessing files stored on them?

6. Describe **two** parts of the *CPU* in Julie's computer

7. a)State **one** advantage of storing programs on ROM.

b) State **one** disadvantage of storing programs on ROM.

Past Exam Questions 5

8(a) David and Ian love using *virtual reality* systems. When on holiday in Florida recently they tried out a new skiing simulator.

(i) What is meant by virtual reality?

(ii) State **two** input devices that would be necessary in order to operate this skiing simulation.

1.

2.

(b) The processor of a computer system can be split into three main parts - The *control unit*, the *arithmetic and logic unit* (*ALU*) and the *registers*.

(i) Explain the purpose of a control unit.

(ii) Explain the purpose of the registers.

(c) How does the operating system locate items in main memory?

Past Exam Questions 6

9. The operating system provides the *Human Computer Interface* used by the ATMs.

a) State **two** other functions of an operating system.

b) For what do the letters GUI stand?

c) State three things this type of interface allows.

d) Name four operating systems in common use.