Scholarship Paper 2024

Subject: ICT

Time: 1 hour

You must have:
Pen

Total Marks
90

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name.
- Answer **all** questions.
- Answer the questions in the spaces provided
    - *there may be more space than you need.*
- Show all the steps in any calculations and state the units.

Information

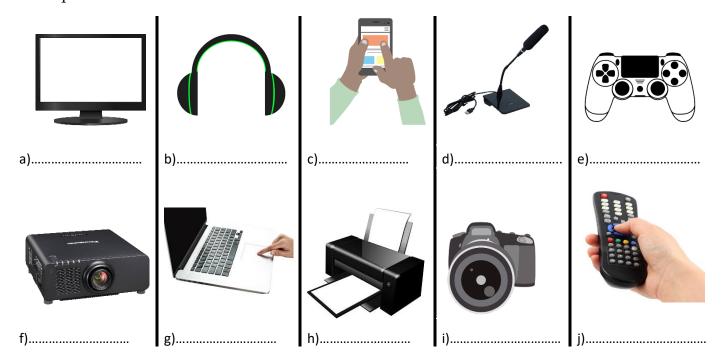- The total mark for this paper is 90
- The marks for **each** question are shown in brackets
    - *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Write your answers neatly and in good English.
- Try to answer every question.
- Check your answers if you have time at the end.

1. A computer system consists of Hardware and Software

    a) Describe the main difference between computer hardware and software

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                   [2]

    b) Give **two** examples of computer hardware and two examples of computer software

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                   [2]

2. The _____, also called a processor, is located inside the computer case on the motherboard. It is sometimes called the brain of the computer, and its job is to carry out commands.

                   [1]

3. For each of the hardware devices shown below. Write down whether it's an input or output device.

a).................................	b).................................	c).............................	d)................................	e)................................
f).............................	g).............................	h).............................	i).............................	j)....................................

[10]

a) One disadvantage of a desktop computer is...
- ☐ More expensive
- ☐ Less portable
- ☐ Less storage than laptops

[1]

b) A component that allows users to enter text, numbers, and other information_____

[1]

c) The main circuit board which contains sockets and accepts additional boards.
- ☐ CPU
- ☐ Motherboard
- ☐ Operating system
- ☐ Software

[1]

d) This computer part is responsible for everything you hear through speakers or headphones.

- ☐ Video Card
- ☐ Sound Card
- ☐ Bluetooth Card
- ☐ Network Card

[1]

4. The diagram below represents a computer system.

a) Name **TWO** input devices apart from a keyboard and touchpad, which could connect directly to the computer system.

    i. ....

    ii. ....

                [2]

b) Name **TWO** storage devices which would be available in the computer shown above.

    i. ....

    ii. ....

                [2]

c) Name **TWO** output devices which could connect directly to the PC shown above.

    i. ....

    ii. ....

                [2]

d) State **TWO** advantages of the computer shown above.

    i. ....

    ii. ....

                [2]

5. The image below represents a popular gaming console.

a) Describe what makes it a computer system.

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[2]

b) List and explain TWO hardware devices that has impact on its speed and performance

   i.   Name of hardware:

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Explanation...

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   ii.   Name of hardware:

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Explanation...

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[4]

6. Every computer system requires an operating system to function.

    a) What is an operating system?

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                            [2]

    b) Give **FOUR** examples of operating systems.

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        • ....   • ....

                              [4]

7. Describe the term Artificial Intelligence

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                              [2]

8. Siri, Google Now, Cortana, Alexa are all powered by AI are examples of

        A. digital personal assistants
        B. assistants
        C. personal assistants
        D. Browsers

                              [1]

9. AI can be used in a variety of fields, including:
        A. Healthcare
        B. Finance
        C. Education
        D. All of the above

                              [1]

10. The use of the latest advancements in AI tools, such as generative AI (e.g. CHATGPT), is gaining popularity in the education sector.

a) Explain how generative AI might assist students with different learning styles.

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[2]

b) Describe potential ethical concerns associated with the use of generative AI in education.

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[2]

11. Robotics is a branch of technology that deals with programmable machines usually able to carry out a series of actions autonomously, or semi-autonomously.

Popular type of robotics are drones.

a) Describe real-world uses of drones.

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[4]

12. A city hospital has decided to use emerging technology to automate its packaging and dispensing of medicines to patients. It has decided to use a robotic system which identifies the medicine using bar codes.

b) Discuss the **advantages** and **disadvantages** to the hospital of using robots within this environment rather than using humans to carry out the task.

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[6]

13. Smartphones and tablet computers are being increasingly used by tourists when travelling overseas.

a) Compare and contrast, using examples, the **advantages** and **disadvantages** of the use of smartphones and tablets by tourists.

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[6]

14. Social media platforms have become an integral part of the lives of many young people.

    a) Discuss both the **positive** and **negative** aspects of social media use among young people, providing specific examples to support your points.

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[6]