Central Administration for General Education

Educational Computer Material Development Department

Under the patronage of His Excellency the Minister of Education,

Mr. Mohamed Abdel Latif

Weekly Assessments for Programming and Artificial Intelligence for General Education (First Secondary Grade)

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Eighth Week

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Weekly assessment

First test

First:

1. **What is meant by "Computer Hardware Architecture", and what are the basic elements and components that make up a complete computer system?**
2. **Explain the main function of the Central Processing Unit (CPU) and the key internal sub-units it consists of.**

Put (√) mark in front of the correct statement and (×) mark in front of the wrong statement:

3. **The CPU is considered the 'brain' of the computer and is responsible for carrying out all the arithmetic and logical operations. ( )**

Choose the correct answer:

4. **The main electronic component on the motherboard responsible for processing data and directing operations inside the computer is:**

    A) Secondary memory unit

    B) Central Processing Unit (CPU)

    C) Optical input unit

    D) Serial communication ports

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Second test

First:

1. **Briefly compare the main types of memory inside the computer: Random Access Memory (RAM) and Read-Only Memory (ROM) in terms of how they work and the function of each.**

2. **What is meant by the term "Secondary Storage Devices", and how important are they for saving and retrieving long-term data?**

Put (√) mark in front of the correct statement and (×) mark in front of the wrong statement:

3. **Random Access Memory (RAM) loses all its contents and data as soon as the power supply is cut off or the device is turned off . ( )**

Choose the correct answer:

٤. **The memory that is permanent and contains the basic instructions needed to start up and boot the computer (BIOS) is:**

A) Random Access Memory (RAM)
B) Cache Memory
C) Read-Only Memory (ROM)
D) Dynamic RAM (DRAM)

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Third test

First:

1. **What role do the 'input units' and 'output units' play in the data processing system inside a computer? Give two examples for each type.**
2. **Briefly explain the importance of the 'motherboard' as a key connecting element that brings together the components of the computer's physical structure.**

Put (√) mark in front of the correct statement and (×) mark in front of the wrong statement:

3. **The screen and speakers are classified as basic input units responsible for entering text commands into the computer. ( )**

Choose the correct answer:

٤. **The "Keyboard" and "Mouse" are considered hardware components available for the computer and fall under the category of:**

A) **Output units**
B) **Processing units**
C) **Input units**
D) **Cloud storage units**

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Classroom Assessment:

First:

1. **How do hardware components integrate with each other to carry out the processing of input data and display results to the user?**
2. **What are the technical reasons that make the speed and size of cache memory have a direct impact on the overall performance of the computer?**

Put (√) mark in front of the correct statement and (×) mark in front of the wrong statement:

3. **The hard disk (Hard Disk) and solid-state drives (SSD) are used to store data and software permanently, even after the device is turned off. ( )**

Choose the correct answer:

4. **4. The unit responsible for performing arithmetic operations (like addition and subtraction) and logical operations (like comparison) inside the processor is:**
   - **A) Control Unit**
   - **B) Arithmetic and Logic Unit (ALU)**
   - **C) Cache Memory**
   - **D) Input and Output Unit**

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Homework Assignment:

First:

1. Give an example of how output units transfer processed information from inside the digital system to the user in an understandable way.

2. What is meant by a "bus" in computer engineering, and what is its importance in transferring data between the processor and the other components?

Put (√) mark in front of the correct statement and (×) mark in front of the wrong statement:

3. The Control Unit is responsible for managing and directing the flow of operations inside the processor and coordinating between the different units.( )

Choose the correct answer:

4. Examples of secondary storage units that rely on fast electronic chip technology and do not have moving mechanical parts:

A) Old floppy disks
B) Solid-state drives (SSD)
C) Cables
D) Mechanical keyboard

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