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REVIEW QUESTIONS;

1. True
2. True
3. False
4. True
5. False
6. True
7. True
8. True
9. False
10. False

MULTIPLE CHOICE

1. b
2. d
3. d
4. a
5. b
6. b
7. c
8. b
9. a
10. d

DISCUSSION

NO. 1

a)

Hardware refers to the tangible devices of a computer such as keyboards, mouse whereas Software refers to programs that operate with computers and execute specific tasks. For example, system software and application software

b)

Algorithm refers to the step-by-step procedure for solving a problem while Program refers to the sets of instructions that a computer follows to perform a task.

c)

Programming language refers to set of instructions written down for the computer to follow such as python, JavaScript whereas Natural language refers to the developed naturally languages in humans through use and repetition like English, French.

d)

High-level language refers to the programming languages that are designed to be easy for humans to read and write such as python, Java whereas Machine language refers to the lowest-level programming language that consists of binary code which the computer’s CPU can execute directly such as Binary code 10101000.

e)

Interpreter translates and executes code line by line and converts each high-level programming statement into machine code during runtime whereas Compilers translates the entire high-level program into machine code before execution, creating and executable file.

f)

Syntax refers to the set of rules that define the structure and arrangement of words and symbols in a language to form grammatically correct sentences whereas Semantics refers to meaning and interpretation of words and sentences in language.

NO.2

Input devices refer the components that allow users to enter data into the computer and include keyboards, mice among others. These devices convert user data into signals that can be process by the computer.

Main memory is where the computer stores its data and instructions temporarily as its currently processing. In the main memory, there is manipulation of data and the quick access of the data.

The CPU performs the processed tasks since it’s the brain of the computer. It executes the instructions from the software applications and further operates them.

Secondary memory is where data is stored for a long-term such devices include the hard drives, SSD. The secondary memory provides a permanent storage place of the data when the computer is off.

Output devices refer to components that allow users to display the information such as the printers, monitors among others. These devices convert the processed data into information that the user can read and understand.

NO.3

**Algorithm for Making a Peanut Butter and Jelly Sandwich**

1. **Gather Ingredients and Tools**:
   * Two slices of bread
   * Peanut butter
   * Jelly or jam
   * A butter knife
   * A plate
2. **Prepare the Workspace**:
   * Place the plate on a clean surface.
   * Put the two slices of bread on the plate.
3. **Open the Jars**:
   * Open the jar of peanut butter.
   * Open the jar of jelly or jam.
4. **Spread Peanut Butter**:
   * Pick up the butter knife.
   * Scoop a small amount of peanut butter with the knife.
   * Spread the peanut butter evenly on one slice of bread.
5. **Spread Jelly**:
   * Wipe the knife clean or use a different knife.
   * Scoop a small amount of jelly with the knife.
   * Spread the jelly evenly on the other slice of bread.
6. **Assemble the Sandwich**:
   * Place the slice of bread with peanut butter on top of the slice with jelly, so the peanut butter and jelly sides are facing each other.
7. **Cut the Sandwich (Optional)**:
   * If you like, use the knife to cut the sandwich into halves or quarters.
8. **Enjoy**:
   * Your peanut butter and jelly sandwich is ready to eat. Enjoy your meal!

**Tips:**

* Be careful with the knife.
* Spread the peanut butter and jelly evenly to avoid making a mess.
* Clean up your workspace after making the sandwich.

PROGRAMMING EXERCISES.

Python 3.12.7 (tags/v3.12.7:0b05ead, Oct 1 2024, 03:06:41) [MSC v.1941 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license" for more information.

>>> print("Hello, world!")

Hello, world!

>>> print("Hello", "world!")

Hello world!

>>> print(3)

3

>>> print(3.0)

3.0

>>> print(2 + 3)

5

>>> print(2.0 + 3.0)

5.0

>>> print("2" + "3")

23

>>> print("2 + 3 =",2+3)

2 + 3 = 5

>>> print(2 \* 3)

6

>>> print(2 \*\* 3)

8

>>> print(2 / 3)

0.6666666666666666