

## Week 1: Assignment Solution Jan 2023

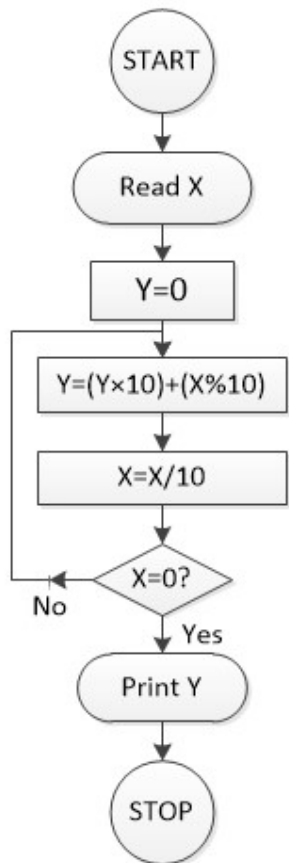
1. Set of instructions to be provided to an electronic machine to perform a task is called
  - a) Programming
  - b) Processing
  - c) Computing
  - d) Compiling

Solution: (a) Programming is the process of creating a set of instructions that tell a computer how to perform a task.

2. A 2D diagram to represent the steps to be followed to solve a problem is known as
  - a) Flow-chart
  - b) Pseudo-code
  - c) Both (a) and (b)
  - d) None of these

Solution: (a) A flow-chart is a representation of an algorithm using diagrams.

3. X is an integer ( $X=1234$ ). The print value of Y of the algorithm below is



- a) 10
- b) 11223344
- c) 4321
- d) 0

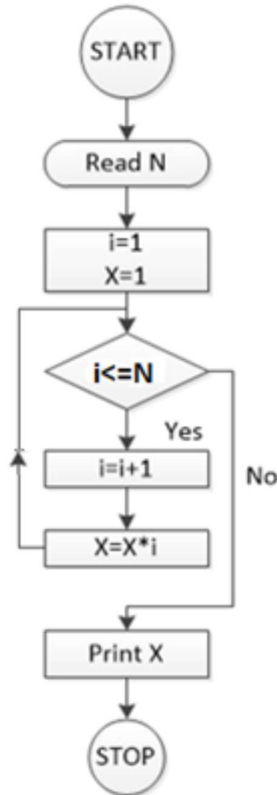
Solution: (c) The algorithm finds the reverse of the number X. Hence, the output is 4321

4. The section of the CPU that selects, interprets and sees to the execution of program instructions
  - a) Memory
  - b) Register Unit
  - c) Control Unit

d) ALU

Solution: (c) Control unit of the computer helps in maintaining sequence of steps and execute the program.

5. The input N from the user is 6. The output of the following algorithm is



- a) 120
- b) 720
- c) 1
- d) 5040

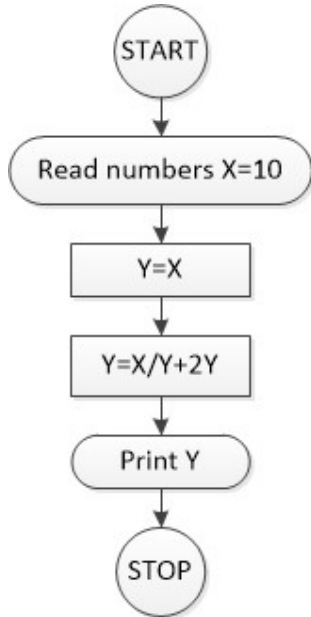
Solution: (d) The condition “ $i \leq N$ ” is checked first and then  $X$  gets multiplied with  $i$ . Therefore, each value of  $i$  gets multiplied with the previous value of  $X$  till  $N+1$ . So the output is  $7! = 5040$

6. Which one is comparatively faster in terms of execution?

- a) Interpreter
- b) Compiler
- c) Both are same
- d) Depends on the programming language.

Solution: (b) Interpreter takes less amount of time to analyse the source code but the overall execution time is slower. Compiler takes large amount of time to analyse the source code but the overall execution time is comparatively faster.

7. What will be the output of the flowchart given below?



- a) 20
- b) 21
- c) 10
- d) 0.33

Solution: (b)  $Y = X/Y + 2Y \Rightarrow Y = 10/10 + 2 \cdot 10 \Rightarrow Y = 1 + 20 = 21$

8. The ALU unit of computer

- a) can perform logical operation only
- b) can perform arithmetic operation only
- c) can perform both arithmetic and logical operations
- d) None of the above are true.

Solutions: (c) Can perform both arithmetic and logical operations

9. What type of device is computer touchpad?

- a) Memory
- b) Output
- c) Storage
- d) Input

Solution: (d) Input

10. Compiler helps in the translation from

- a) Integer to binary
- b) High-level program to binary digits

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- c) High-level language to machine level language
- d) Pseudo code to computer program

Solution: (c) Compiler helps in translating from high-level language to machine level language