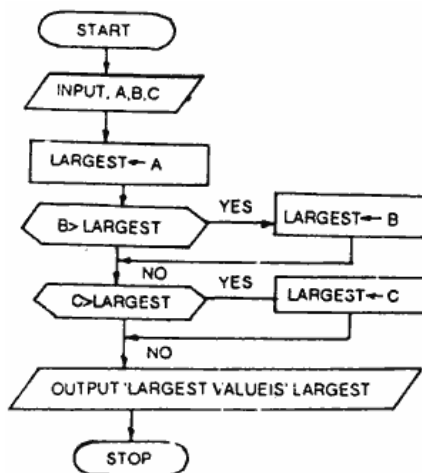


**Model Questions**

**QUESTION 1 – Select the most appropriate answer**

1. Choose what is a not program design structure
  - a. Selection
  - b. Iteration
  - c. Sequence
  - d. Process
2. Which of the following is not a typical processing instruction?
  - a. Count = Count - 1
  - b. Display Count
  - c. Duration = EndDate - Startdate
  - d. Count++
3. A program flowchart indicates the \_\_\_\_\_ to be per formed and the \_\_\_\_\_ in which they occur.
  - a. Sequence, place
  - b. Logic, Order
  - c. Sequence, program
  - d. Repetition, Order
4. Flowcharting symbols are connected together by means of \_\_\_\_\_
  - a. Lines
  - b. Arrows
  - c. Links
  - d. Selection
5. The problem represented by the flow chart is



- a. To compare A, B and C
- b. To find lowest of A, B and C
- c. To find average of A,B and C
- d. To find largest value of A, B and C

## **QUESTION 2**

Write a pseudocode to convert a given integer into its reverse. For example, if a user enter 479 as the input, output should be displayed as 974

## **QUESTION 3**

Design a flowchart to read a series of integers. The first integer is special, as it indicates how many more integers will follow. Your program then calculates the sum of the integers, excluding the first integer and displays the sum value to the screen.

## **QUESTION 4**

- i. Convert the following numbers to their binary equivalents.
  - a)  $39_{10}$                       b)  $B3A_{16}$
- ii. Convert the following numbers to octal equivalents.
  - a)  $420_{16}$                       b)  $51B_{16}$

## **QUESTION 5**

Explain the following terms:

- i. CD-RW Technology
- ii. Application Software and System software
- iii. Dual Core Processors
- iv. Data storing mechanism in system RAM

## **QUESTION 6**

- a). Design **three** files giving File Names, Field Names, Field Types and Field Sizes and mentioning primary keys to store Account details, Account Type details, and Transaction details of a bank. Assume that each customer will have only one account.
  - b). If there are 100 000 Accounts, 20 different Account Types, and 1 000 000 transactions per day Calculate the total file size
  - c). What is the total file size after 10 days

## **QUESTION 7**

A magnetic disk has 10 platters, 80,000 tracks on each surface and 400 sectors per track. The capacity of a sector is 2 KB. Compute the capacity of a Track, Surface, Cylinder and Disk.

**QUESTION 8**

- a. Explain how a computer stores picture in its memory
- b. Explain what is Internet

**QUESTION 9**

- i. Perform the following operations using 1's Complement method (use 8 bits).
  - a)  $30_{10} + (-27_{10})$
  - b)  $(-16_{10}) - (+12_{10})$

**QUESTION 10**

Explain the difference between the architecture of a computer and other machines using two diagrams