1. Definition of flowchart. (2 m)

Ans:

▯ Flowchart is a diagrammatic representation of an algorithm. Flowchart is very

helpful in writing program and explaining program to others.

▯ Flow charts are drawn using certain special purpose symbols such as Rectangles,

Diamonds, Ovals and small circles. These symbols are connected by arrows called

flow lines.

2. Definition of an algorithm? Write an algorithm to add two number. (3 m)

Ans:

▯ An algorithm is a set of instructions for solving logical and mathematical

problems. It is chalked out step-by-step approach to solve a given problem. It takes

inputs and produces an output.

▯ The characteristics of a good algorithm are:

o Precision – the steps are precisely stated (defined).

o Uniqueness – results of each step are uniquely defined and only depend on the

input and the result of the preceding steps.

o Finiteness – the algorithm stops after a finite number of instructions are executed.

o Input – the algorithm receives input.

o Output – the algorithm produces output.

o Generality – the algorithm applies to a set of inputs.

3.. Explain advantages & disadvantages of algorithm. (2 m)

Advantages

- It is a step-wise representation of a solution to a given problem, which makes it easy to understand.

- An algorithm uses a definite procedure.

- It is not dependent on any programming language, so it is easy to understand for anyone even without programming knowledge.

- Every step in an algorithm has its own logical sequence so it is easy to debug.

- By using algorithm, the problem is broken down into smaller pieces or steps hence, it is easier for programmer to convert it into an actual program.

Disadvantages

- Algorithms is Time consuming.

- Difficult to show Branching and Looping in Algorithms.

- Big tasks are difficult to put in Algorithms.

4. Write an algorithm to add two number.

Step 1: Start

Step 2:Read the two numbers in to a,b

Step 3: c=a+b

Step 4: write/print c

Step 5: Stop.

5. Explain advantages & disadvantages of flowchart.(2 m)

Ans:

Advantages of Flowchart

 It is a convenient method of communication.

 It indicates very clearly just what is being done, where a program has logical

complexities.

⬜ A key to correct programming.

⬜ It is an important tool for planning and designing a new system.

⬜ It clearly indicates the role-played at each level.

⬜ It saves the inconveniences in future and serves the purpose of documentation for

a system.

⬜ It promotes logical accuracy.

⬜ It makes sure that no logical path is left incomplete without any action being taken.

Disadvantages of Flowchart

⬜ The flowchart is a waste of time and slows down the process of software

development.

⬜ The flowchart is quite costly to produce and difficult to use and manage.

⬜ Flowcharts are not meant for man to computer communication.

⬜ If you need to modify or alternate the process then it will be very hard to do in the

flowchart. Because either you will have to erase the end of the flowchart or start.

6.. Write an algorithm to find area of circle. (4 M)

Ans:

Steps of Algorithm:

1. START.

2. INTEGER AREA, RADIUS.

3. PRINT "ENTER THE RADIUS OF CIRCLE - "

4. AREA=3.14*RADIUS*RADIUS.

5. PRINT "AREA OF CIRCLE = "

6. PRINT AREA.

7. EXIT.

7. symbols of flowchart

Symbol	Name	Function
	Start/end	An oval represents a start or end point
→	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectagle represents a process
	Decision	A diamond indicates a decision