Flowcharts And Pseudocodes

Flowcharts: Flowcharts are visual representations of a process/algorithm components include —

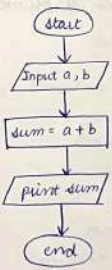
* Oval – start/End
* Rectangle – Process/instruction
* Parallelogram – Input/Output
* Diamond – decision

Pseudocode: Pseudocode is a high-level, language-agnostic way to represent an algorithm. It provides structured outline for writing actual code and enhances portability as code can be translated into any programming language.

Q write pseudocode and draw flowchart for –

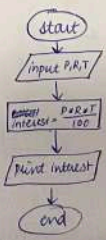
a) printing sum of two numbers, a and b.

1. Start
2. Input numbers, a and b
3. Calculate sum = a+b
4. Print sum
5. End



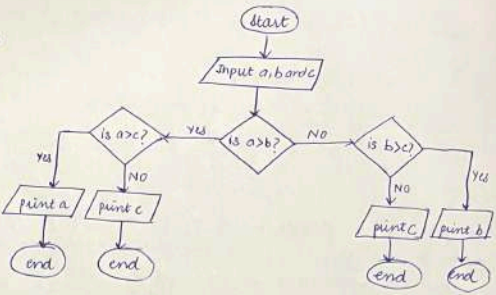
b) calculating simple interest.

1. Start
2. Input P, R and T
3. Calculate Interest = (P*R*T)/100
4. Print Interest
5. End



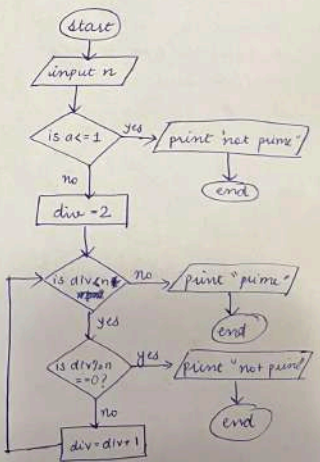
c) finding maximum of 3 numbers

1. Start
2. Input a, b and c
3. if a > b do
   if a > c do
   print a
   else
   print c
   else
   if b > c do
   print b
   else
   print c
4. Exit



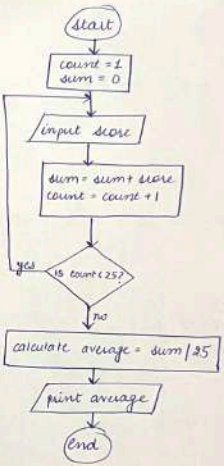
d) checking if a number is prime or not

1. Start
2. Input n
3. if a <= 1 do
   print "not prime"
   else
   let div = 2
   while div < n do
   if n % div == 0 do
   print "not prime"
   else
   div = div + 1
4. print "prime"
5. End



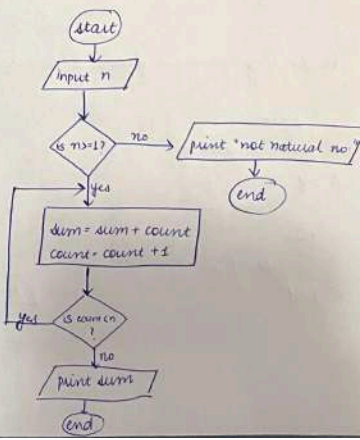
e) Calculating average of 25 test scores

1. Start
2. Let count = 1 and sum = 0
3. While count < 25 do
   input score
   sum = sum + score
   count = count + 1
4. Calculate average = sum/25
5. print average
6. End



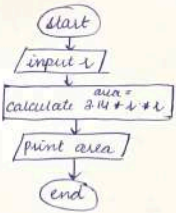
f) calculating sum of first n natural numbers

1. Start
2. input n
3. if n >= 1 do
   let sum = 0 and count = 1
   ~~sum = sum + count~~
   while count < n do
      sum = sum + count
      count = count + 1
   else
      print " not natural no."
4. print sum
5. End



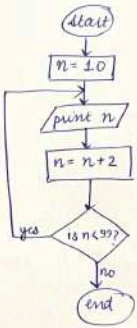
g) calculating area of a circle

1. Start
2. Input r
3. Calculate area = 3.14 * r * r
4. print area
5. End



h) printing even numbers between 9 and 100.

1. Start
2. Let n = 10
3. While n < 99 do
   print n
   n = n + 2
4. End



i) finding greatest from 2 numbers

1. Start
2. Input a and b
3. If a > b do
   print a
   else
   print b
4. End