Ans 1

Start

Flow Chart

```
              Start
                |
                v
        [int a, int b, int c]
                |
                v
            IS
         a=b & b=c        Yes
          & c=a?    ------------->  Print "Triangle is equilateral"
                |
                | No
                v
            IS
        a≠b & b≠c         Yes
         & c≠a?     ------------->  Print "Triangle is Scalene"
                |
                | No
                v
            IS
        a=b OR             Yes
        b=c OR       ------------->  Print "Triangle is Iscoleles"
        c=a?
                |
                | No
                v
            IS
      a+b<c OR             Yes
      b+c<a OR      ------------->  Print "Not a triangle"
      c+a<b?
                |
                | No
                v
              End
```

Flow Graph

```
        (1)
         |
         v
        (2)
        / \
       v   v
      (4)  (3)
      / \
     v   v
    (6) (5)
    /\
   v  v
  (8)(7)
   |
   v
  R1
  (10) <-- (9)
```

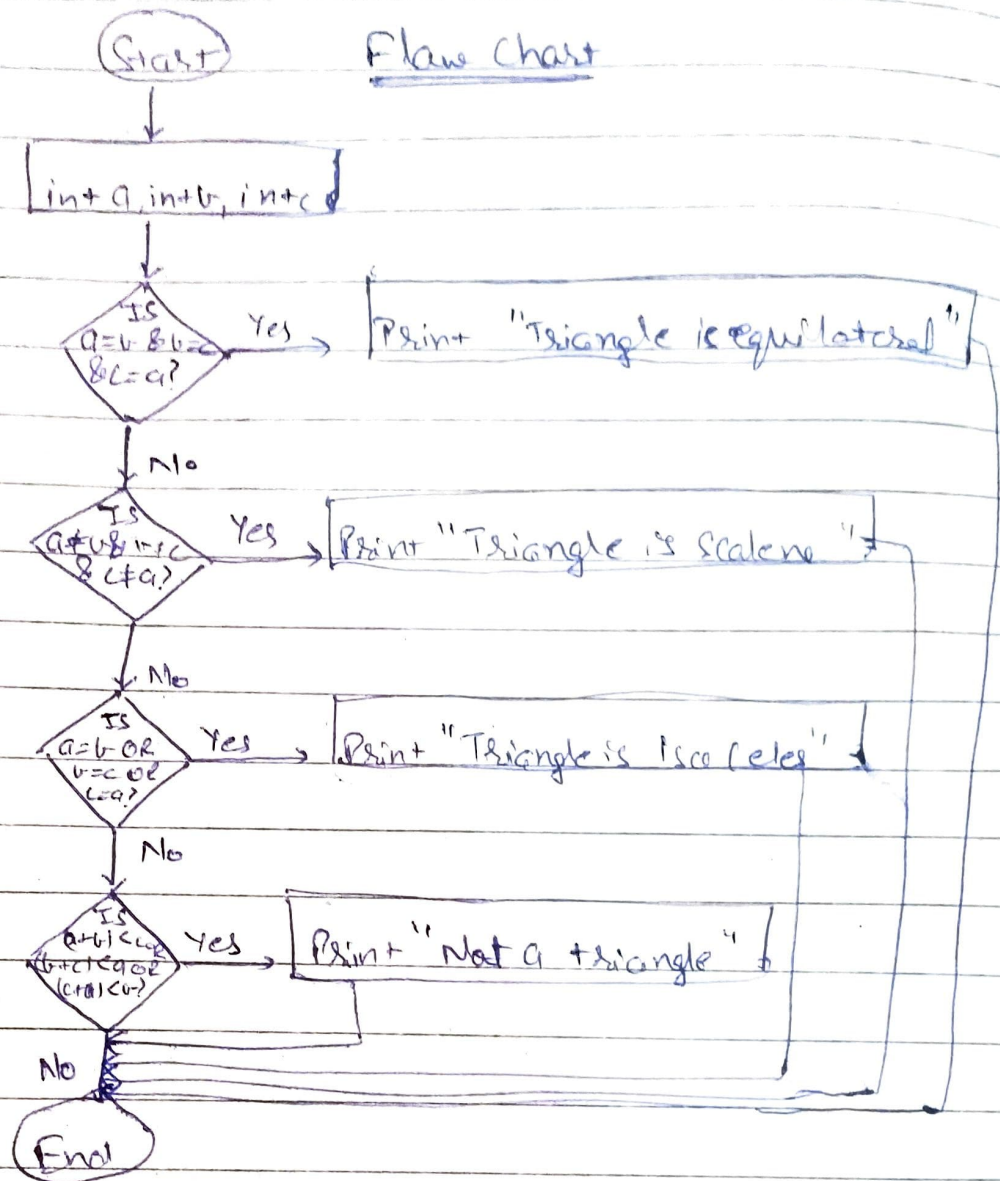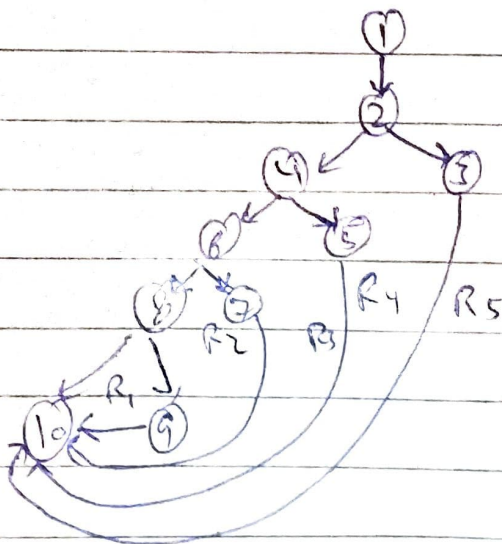R1 R2 R3 R4 R5

Ans2 a) $M = E - N + 2 = 13 - 10 + 2 = 5 = V$

   b) where,

   E = No. of edges in flow graph
   N = " nodes "

   b) No. of regions = $V = 5$

   c) $V = P + 1 = 4 + 1 = 5$
   where, P = No. of predicates in flow graph

Ans3 Independent Paths:
   I: $1 \to 2 \to 4 \to 6 \to 8 \to 10$
   II: $1 \to 2 \to 4 \to 6 \to 8 \to 9 \to 10$
   III: $1 \to 2 \to 4 \to 6 \to 7 \to 10$
   IV: $1 \to 2 \to 4 \to 5 \to 10$
   V: $1 \to 2 \to 3 \to 10$