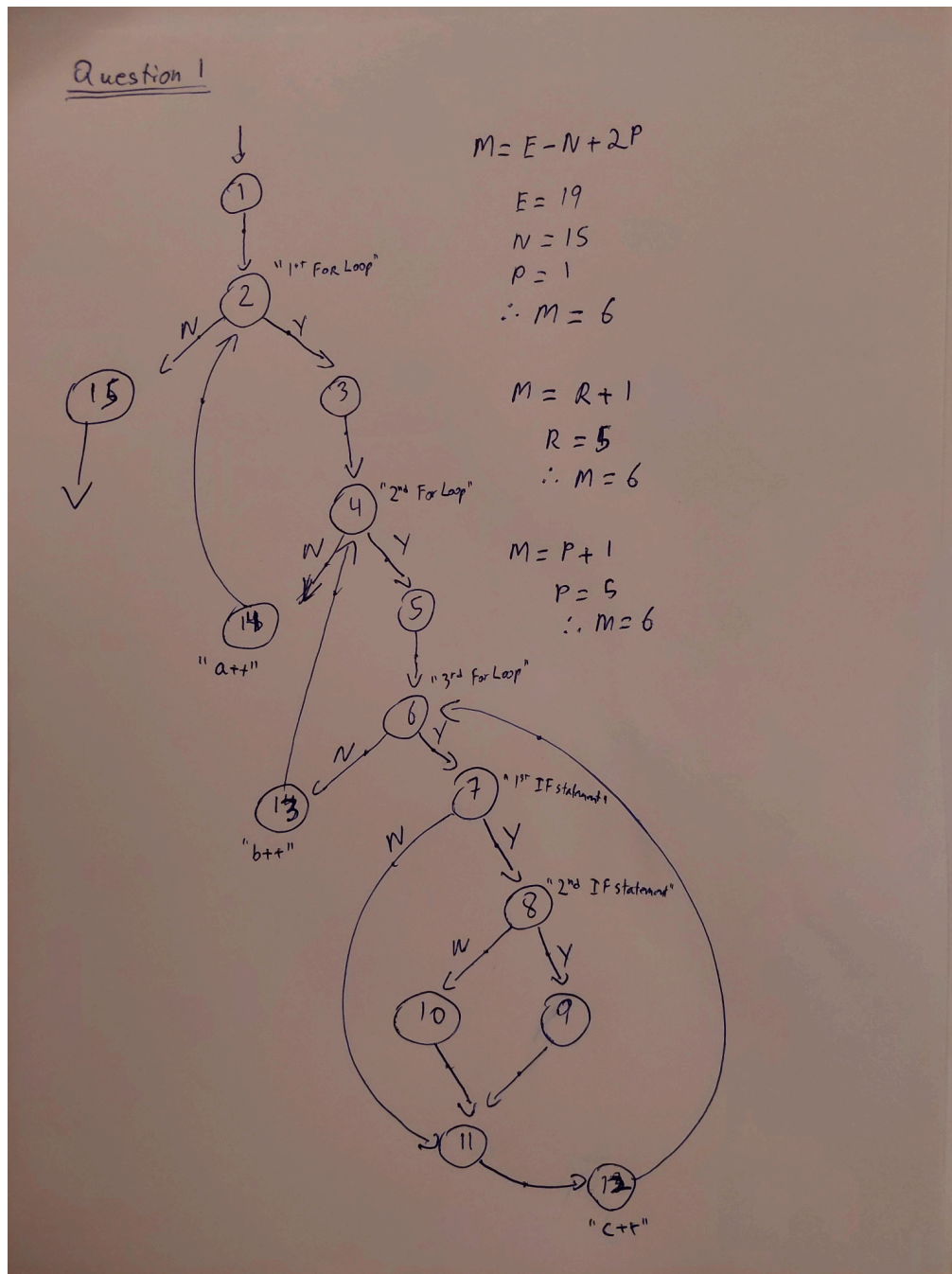


Question 1:



Path Set:

1-2-15

1-2-3-4-14-2-15

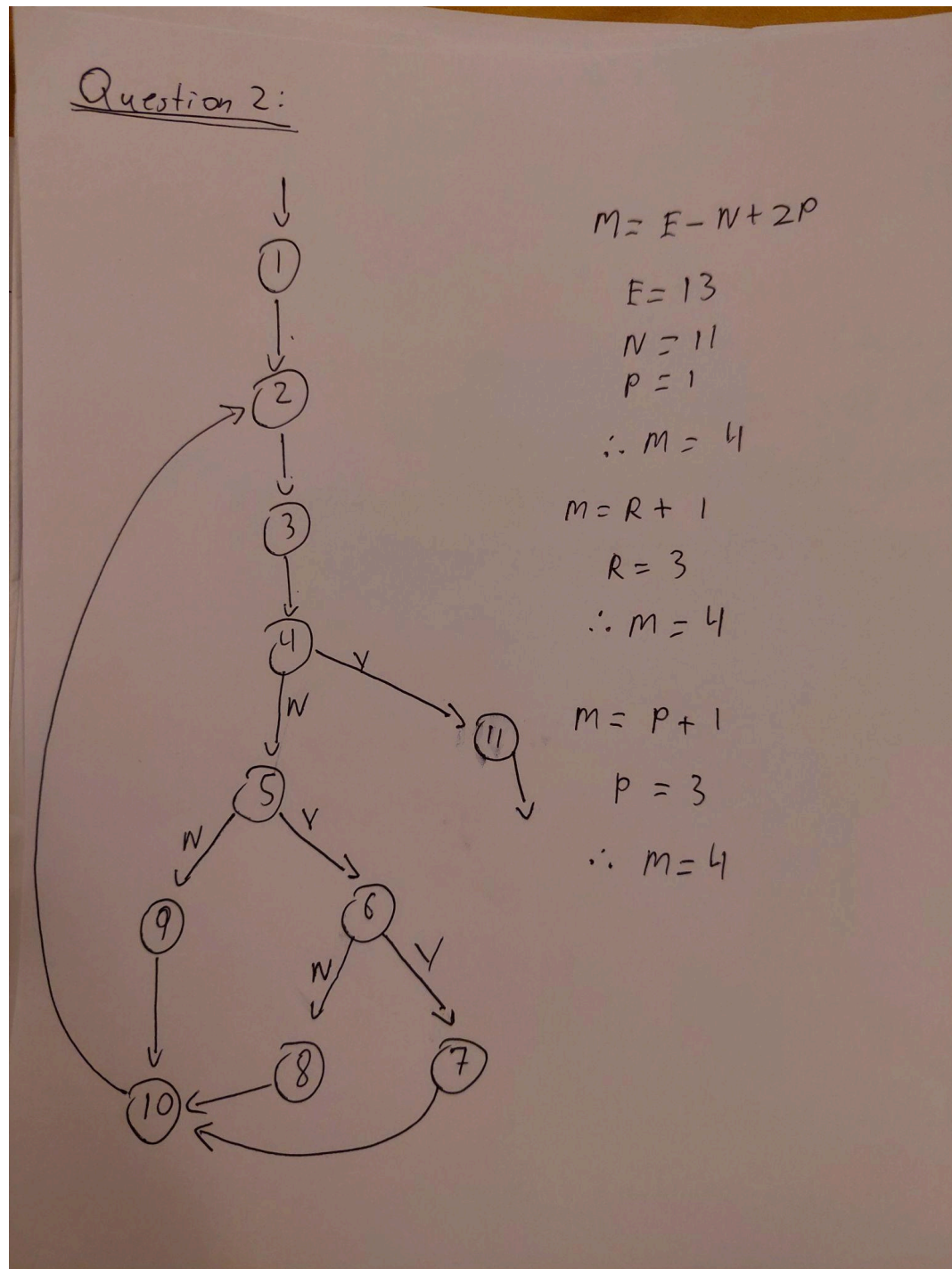
1-2-3-4-5-6-13-4-14-2-15

1-2-3-4-5-6-7-11-12-6-13-4-14-2-15

1-2-3-4-5-6-7-8-9-11-12-6-13-4-14-2-15

1-2-3-4-5-6-7-8-10-11-12-6-13-4-14-2-15

Question 2:



Path Set:

1-2-3-4-11

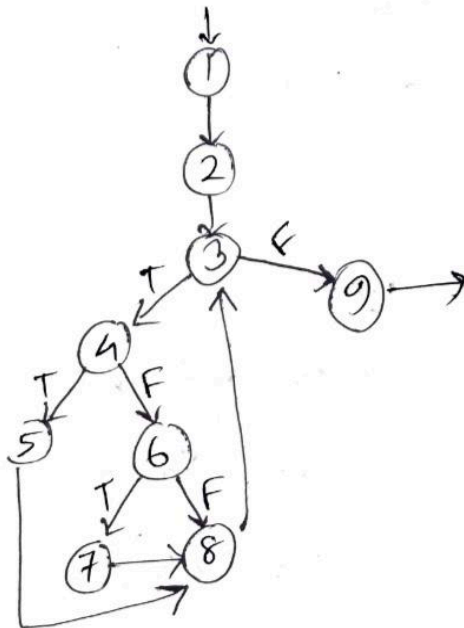
1-2-3-4-5-9-10-2-3-4-11

1-2-3-4-5-6-8-10-2-3-4-11

1-2-3-4-5-6-7-10-2-3-4-11

Ques Ans - 3

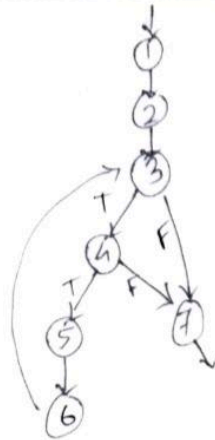
Code 1 :



$$\begin{aligned} CC &= E - N + 2P \quad \text{or,} \quad CC = R + 1 \quad \text{or} \quad CC = P + 1 \\ &= 11 - 9 + 2 \quad \quad \quad = 3 + 1 \quad \quad \quad = 3 + 1 \\ &= 4 \quad \quad \quad \quad \quad = 4 \quad \quad \quad = 4 \end{aligned}$$

\therefore Cyclomatic Complexity = 4

code 2



$$CC = 8 - 7 + 2$$

$$= 1 + 2$$

$$= 3$$

$$CC = P + 1$$

$$= 2 + 1 = 3$$

$$CC = P + 1$$

$$= 2 + 1 = 3$$

∴ Cyclomatic complexity = 3

as CC is less in code-2 than code 1. So we can say that code 2, has better cyclomatic complexity.

② For code 1:

Path 1: 1-2-3-4-5-8-3-9

Path 2: 1-2-3-4-6-7-8-3-9 Test case for Path 2: A.length = 1, A = [5]

Test case for Path 1: A.length = 1, A = [4]

For code-2:

Path 1: 1-2-3-4-5-6-3-7

Test case for Path 1: A.length = 1, A = [6]

Question Answer-4.

Hence,

$$NMI = 1$$

$$NMO = 1$$

$$NMA = 2$$

$$DIT = 1$$

$$SIX = \frac{NMO \times DIT}{NMO + NMA + NMI}$$

$$= \frac{1 \times 1}{1 + 2 + 1}$$

$$= 0.25 \times 100\%$$

$$= 25\%$$

∴ SIX is 25% (Ans.)