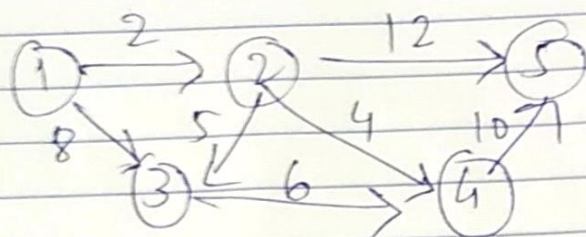


Q3



First item: ① → permanent label and other as  $\infty$  and temporary label.

∴

|    | 1        | 2        | 3        | 4        | 5        |
|----|----------|----------|----------|----------|----------|
| 0* | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

Itm ② ⇒

|    | 1  | 2 | 3        | 4        | 5 |
|----|----|---|----------|----------|---|
| 0* | 2* | 8 | $\infty$ | $\infty$ |   |

(∵ updating 1-2 and 1-3 with 2 and 8  
(∵ less than  $\infty$ ))

itm ③ ⇒

|    | 1  | 2 | 3  | 4  | 5 |
|----|----|---|----|----|---|
| 0* | 2* | 7 | 6* | 14 |   |

itm ④ ⇒

|    | 1  | 2 | 3  | 4   | 5 |
|----|----|---|----|-----|---|
| 0* | 2* | 7 | 6* | 14* |   |

(14 remains unchanged after checking 2-5 and 4-5)  
(5 had 14 which is < 16)

∴ now going backward in this critical path, of 1-2-4-5 we see that.

for 2-5 slack=0 and 4-5 there is slack of 2

∴ we drop 4-5 but we have now, 5-2 then from 2-1 we have least distance.

∴ 1-2-5 is the shortest path.

∴ shortest distance is 14