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Matric Number: 18/sci01/092

Department: Computer science

A= B=

2 4 8

3 0 3

6 4 5

4 6 5

0 2 7

5 2 1

1 4 2

6 0 4

2 2 1

C=

(2)

3 9 8

8 0 6

10 7 6

3 8 10

9 0 7

8 6 6

B+C= (B+C)T=

[(B+C)T]=3(0+42)-9(48+60)+8(56+0)

[(B+C)T]=126-972+448=-398

[(B+C)T]Not equal to 0, therefore, rank of matrix = 3

(3)

(i) A=

4 6 5

0 2 7

5 2 1

[A]= 4(2+14)-6(0+35)+5(0+10)

[A]=64-210+25=-121

[A]Not equal to 0, therefore, matrix A is a non-singular matrix

(ii) B=

2 4 8

3 0 3

6 4 5

[B]= 2(0+12)-4(15+18)+8(12+0)

[B]=24-132+96=-12

[B]Not equal to 0, therefore, matrix B is a non-singular matrix

(iii) C=

1 4 2

6 0 4

2 2 1

[C]= 1(0+8)-4(6+8)+2(12+0)

[C]=8-56+24=-24

[C]Not equal to 0, therefore, matrix C is a non-singular matrix

(1)