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MATRIC NUMBER:16/ENG/04/019

**DEPARTMENT: ELECTRICAL AND ELECTRONICS
ENGINEERING**

i)

```
commandwindow  
clear  
clc
```

ii)

```
commandwindow  
clear  
clc  
A=[2,3,7,9,4;3,7,9,12,5;4,8,5,6,9;5,9,2,4,5;6,2,3,7,8]  
At=A'  
I=inv(A)  
D=det(A)  
sym(I)
```

A =

2	3	7	9	4
3	7	9	12	5
4	8	5	6	9

5 9 2 4 5
6 2 3 7 8

At =

2 3 4 5 6
3 7 8 9 2
7 9 5 2 3
9 12 6 4 7
4 5 9 5 8

I =

1.8915 -1.4026 -0.3124 0.7843 -0.2078
-0.4379 0.3268 0.0523 -0.0392 -0.0196
2.5725 -1.8392 -0.0863 0.7647 -0.5176
-1.8876 1.4654 0.0105 -0.6078 0.3961
-0.6222 0.3778 0.2444 -0.3333 0.1333

D =

-765.0000

ans =

[1447/765, -1073/765, -239/765, 40/51, -53/255]

[-67/153, 50/153, 8/153, -2/51, -1/51]

[656/255, -469/255, -22/255, 13/17, -44/85]

[-1444/765, 1121/765, 8/765, -31/51, 101/255]

[-28/45, 17/45, 11/45, -1/3, 2/15]

>> -67/153, 50/153, 8/153, -2/51, -1/51]

[656/255, -469/255, -22/255, 13/17, -44/85]

[-1444/765, 1121/765, 8/765, -31/51, 101/255]

[-28/45, 17/45, 11/45, -1/3, 2/15]

iii)

```
commandwindow
clc
clear
A=[0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,10,-10]
B=[-4;2;6;4]
X=A^-1*B
```

A =

0	10	4	-2
-3	-17	1	2
1	1	1	0
8	-34	10	-10

B =

-4
2
6
4

X =

4.1782

-0.1188

1.9406

5.2871

>>