SVKM’S

DWARKADAS J.SANGHVI COLLEGE OF ENGINEERING

SUBJECT: APPLIED MATHEMATICS-1(SCILAB PROGRAMMING)

SEESION: JULY’2012-DEC’2012

NAME OF EXERCISE:GAUSS JORDAN METHOD

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SAP ID NO: 60002120095 BRANCH: EXTC

QUESTION: Solve the following system: 7x+3y+z-w=14;2x+3y+2z+w=17;x+4y+4z+6w=20;3x+y-z+5w=12

PROGRAM:

A=input('enter matrix element A=')*//coefficient matrix*

b=input('enter matrix element b=')*//column matrix*

disp(A,'A=')

disp(b,'b=')

A\_aug=[A b]*//augmented matrix*

disp([A b],'A\_aug')

disp(rref(A\_aug),'Reduced A\_aug')

c=linsolve(A,-b)*//command solves the linear equatiom px+q=0*

disp(c,'Ans=')

INPUT:

enter matrix element A=[7 3 1 -1;2 5 2 1;1 4 4 6;3 1 -1 5]

enter matrix element b=[14;17;20;12]

OUTPUT:

A= b= A\_aug Reduced A\_aug

7. 3. 1. - 1. 14. 7. 3. 1. - 1. 14. 1. 0. 0. 0. 1.013986

2. 5. 2. 1. 17. 2. 5. 2. 1. 17. 0. 1. 0. 0. 2.6818182

1. 4. 4. 6. 20. 1. 4. 4. 6. 20. 0. 0. 1. 0. 0.1398601

3. 1. - 1. 5. 12. 3. 1. - 1. 5. 12. 0. 0. 0. 1. 1.2832168

Ans=

1.013986

2.6818182

0.1398601

1.2832168