***1st Run***

Enter population size: 6

Enter minimum value: 0.00

Enter maximum value: 0.50

Enter length of each element in binary string: 5

Enter maximum number of generations: 1000

Enter cross-over probability: 0.9

Enter mutation probability: 0.05

--------------------------------------------------

x1 x2 Max\_func Orig\_func

0.371 0.065 0.847 0.180

0.177 0.065 0.843 0.186

0.274 0.065 0.832 0.202

**0.500 0.081 0.897 0.114**

0.097 0.065 0.874 0.145

0.290 0.065 0.833 0.201

***2nd Run***

Enter population size: 6

Enter minimum value: 0.00

Enter maximum value: 0.50

Enter length of each element in binary string: 5

Enter maximum number of generations: 1000

Enter cross-over probability: 0.90

Enter mutation probability: 0.05

x(:,:,max\_gen)

1 1 1 0 0 0 0 0 0 1

1 0 1 1 1 0 0 0 0 1

0 0 0 1 1 0 0 0 0 1

1 0 1 1 0 0 0 0 0 0

0 1 1 1 0 0 0 0 0 1

0 1 1 0 0 0 0 0 0 1

x(:,:,1)

0 1 1 1 0 0 0 0 0 1

1 0 1 1 1 1 1 0 0 1

1 1 1 1 1 0 1 1 1 1

0 0 1 0 0 1 0 1 0 1

1 0 1 1 0 1 0 0 0 0

0 0 0 1 0 1 1 1 1 0

--------------------------------------------------------

x1 x2 Max\_func Orig\_func

0.452 0.016 0.937 0.067

0.371 0.016 0.895 0.118

**0.048 0.016 0.943 0.060**

0.355 0.000 0.907 0.103

0.226 0.016 0.875 0.143

0.194 0.016 0.879 0.138

***3rd Run***

Enter population size: 6

Enter minimum value: 0.00

Enter maximum value: 0.50

Enter length of each element in binary string: 5

Enter maximum number of generations: 10001

Enter cross-over probability: 0.9

Enter mutation probability: 0.05

x(:,:,1)

0 1 1 1 1 1 1 0 0 1

1 1 1 1 1 1 0 1 0 1

0 1 0 1 0 0 0 0 0 1

0 1 1 0 0 0 0 0 1 0

0 0 1 0 1 0 0 1 0 1

1 0 1 0 0 0 1 0 0 0

x(:,:,max\_gen)

0 1 1 0 0 0 0 0 0 1

1 1 1 1 1 0 0 0 0 1

0 0 1 0 1 0 0 0 0 1

1 0 0 0 1 0 0 0 0 0

0 1 1 0 1 0 0 0 0 1

0 1 0 1 1 0 0 0 0 0

--------------------------------------------------

x1 x2 Max\_func Orig\_func

0.194 0.016 0.879 0.138

**0.500 0.016 0.977 0.024**

0.081 0.016 0.922 0.085

0.274 0.000 0.890 0.124

0.210 0.016 0.876 0.141

0.177 0.000 0.897 0.114

***4th Run***

Enter population size: 6

Enter minimum value: 0.00

Enter maximum value: 0.50

Enter length of each element in binary string: 5

Enter maximum number of generations: 1000

Enter cross-over probability: 0.90

Enter mutation probability: 0.05

x(:,:,1)

1 1 0 1 1 1 1 0 0 0

0 1 0 0 1 0 0 0 1 1

0 0 1 1 1 0 0 1 1 0

0 0 1 1 0 0 1 1 0 0

1 1 0 0 1 0 0 1 1 0

1 1 0 0 1 0 1 1 1 1

x(:,:,max\_gen)

0 1 1 0 1 0 1 0 0 0

1 0 0 1 1 0 1 0 0 0

1 1 1 0 1 0 1 0 0 0

0 0 0 0 0 0 1 0 0 1

0 1 1 1 1 0 1 0 0 0

0 1 0 1 0 0 1 0 0 1

--------------------------------------------------

x1 x2 Max\_func Orig\_func

0.210 0.129 0.793 0.261

0.306 0.129 0.787 0.271

0.468 0.129 0.831 0.203

**0.000 0.145 0.890 0.124**

0.242 0.129 0.788 0.268

0.161 0.145 0.796 0.257

***5th Run***

Enter population size: 5

Enter minimum value: 0.00

Enter maximum value: 0.50

Enter length of each element in binary string: 5

Enter maximum number of generations: 1000

Enter cross-over probability: 0.9

Enter mutation probability: 0.05

x(:,:,1)

1 0 0 0 1 1 1 1 0 0

1 0 1 0 0 1 0 1 0 0

0 1 1 1 1 0 0 0 1 1

1 1 0 1 1 1 0 1 1 1

1 1 1 1 1 0 0 0 0 1

x(:,:,max\_gen)

1 1 0 0 1 0 0 0 0 0

1 1 1 1 1 0 0 0 0 0

0 1 1 0 0 0 0 0 0 0

0 1 0 1 0 0 0 0 0 1

0 0 0 0 0 0 0 0 0 0

--------------------------------------------------

x1 x2 Max\_func Orig\_func

0.403 0.000 0.928 0.078

**0.500 0.000 1.000 0.000**

0.194 0.000 0.894 0.119

0.161 0.016 0.887 0.128

**0.000 0.000 1.000 0.000**