Lr=1;

Lw=[2,3,3,4,6,7];

Ow=[1500,1000,2000,800,4000,4800];

Pw=[84,85.0,83,83.5,82.8,82.5];

%Pw=[84.0,84.5,83.2,83.5,82.8,82.5];

Or=500;

BigM=[180,160,150,190,180,210];

qw=[0.970,0.975,0.945,0.955,0.950,0.945]; %Perfect Rate

qr=0.95; %Target Perfect Rate

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 13 -1.633659e+003 -1.633659e+003

10 9 9 -1.487912e+003 -1.633313e+003 -1.120597e+003

20 19 9 -1.482983e+003 -1.552828e+003 -1.141169e+003

\* 20 19 r -1.208833e+003

30 25 INFEASIBLE pr -1.513134e+003 -1.217058e+003

40 33 8 -1.331139e+003 -1.482482e+003 -1.217058e+003

50 43 8 -1.303906e+003 -1.450074e+003 -1.217058e+003

60 51 11 -1.344047e+003 -1.431053e+003 -1.217058e+003

70 57 10 -1.342754e+003 -1.430381e+003 -1.217058e+003

80 59 INFEASIBLE pr -1.400639e+003 -1.217058e+003

90 65 -1.155829e+003 pr -1.398648e+003 -1.217058e+003

100 67 4 -1.395619e+003 -1.398031e+003 -1.217058e+003

\* 100 67 r -1.352899e+003

110 65 -1.327937e+003 pr -1.397407e+003 -1.384208e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -1.39566361977561e+003

Final integrality gap (abs / rel) = 5.68e-009 / 4.07e-012 ( 0.00)

# of nodes processed = 115

# of subproblems processed = 115

Total program time (secs) = 438.465 ( 441.077 CPU time)

Time spent in evaluations (secs) = 439.477

===========================================================================

>> x

x =

9 0 0 15 0 0 1 0 0 1 0 0 1 125 -3

%-------------------------------Initial Parameters-----------------

k=6;

h=1;

b=5;

N=20;

w=100;

Lambda=15;

Lr=1;

Lw=[2,3,3,4,6,7];

Ow=[1500,1000,2000,800,4000,4500];

Pw=[84,85,83,83.5,82.5,82.5];

%Pw=[84.0,84.5,83.2,83.5,82.8,82.5];

Or=500;

BigM=[120,100,150,110,180,210];

qw=[0.970,0.975,0.945,0.955,0.950,0.945]; %Perfect Rate

qr=0.95; %Target Perfect Rate

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 13 -1.608638e+003 -1.608638e+003

10 9 10 -1.537646e+003 -1.608436e+003 -1.187391e+003

20 19 8 -1.480185e+003 -1.480591e+003 -1.226296e+003

30 29 8 -1.479260e+003 -1.479954e+003 -1.238174e+003

40 37 7 -1.439270e+003 -1.479411e+003 -1.238174e+003

50 45 6 -1.439071e+003 -1.478739e+003 -1.238174e+003

\* 50 45 r -1.248512e+003

60 49 -1.153299e+003 pr -1.458434e+003 -1.342141e+003

70 49 -1.299232e+003 pr -1.450745e+003 -1.342141e+003

80 49 8 -1.408006e+003 -1.445649e+003 -1.342141e+003

90 53 -1.335523e+003 pr -1.439934e+003 -1.342141e+003

100 55 7 -1.396866e+003 -1.414795e+003 -1.342141e+003

110 55 7 -1.404593e+003 -1.407633e+003 -1.342141e+003

120 47 -1.329235e+003 pr -1.396752e+003 -1.342141e+003

130 45 INFEASIBLE pr -1.375059e+003 -1.342141e+003

140 43 -1.058305e+003 pr -1.369359e+003 -1.342141e+003

150 37 -1.131671e+003 pr -1.362927e+003 -1.342141e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -1.36084158371894e+003

Final integrality gap (abs / rel) =-2.81e-009 / -2.06e-012 (-0.00)

# of nodes processed = 159

# of subproblems processed = 160

Total program time (secs) = 557.621 ( 560.683 CPU time)

Time spent in evaluations (secs) = 556.689

===========================================================================

>> x

x =

10 0 0 0 15 0 1 0 0 0 1 0 3 122 -3