### Service and Dissilerity Greeks

# A D SI: VALUE OF CHUMHUMINISTAL INCOLOGY

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai) (Religious Jain Minority)

Subject: Applied Mathematics IV

SEM:IV

Relationship blw Primal & Dual Optimal Rolutions

Zmax = Wmin.

Ousing duality solve the following LPP

Maxim ise z=57,-2704213

subject to on, +ono-n3 22 3×1-472 =3

71+37/2 £5

2112912350.

Since the objective function is of maximisation type, we first write the constraints Soln:in less than or equal to form.

Maximise Z=5x1-8x2+3x3

subject to -axi-axa +x3 = -2 3×1-4×2+0×3 = 3 DXI + NO + SX2 = 5

X1172, N3 20.



#### Paralayanadia Sinadealile Gregis

### A P STATE INSTITUTION OF INDOMNOLOGY

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Subject: Applied Mathematics IV

SEM:IV

. The dual is

Minimise W=-24, +342 +543

@) Maximine w'= -w= 24,-342-543

Subject to -24, +342+043 =5

-24,-440+43 =-2

à) 24, +442-43 € 2

 $y_1 + 0y_2 + 3y_3 \ge 3$ 

41142,43 20.

By adding the slark variables and artificial

Variables,

Maximise  $w' = -w = \partial y_1 - 3y_0 - 5y_3 - 0s_1 - 0s_0 - 0s_0 - MA,$  Lam MA3

-24,+340+043-51+050+053+A1+0A3=5-00

24,+44,-43 +05,+8, +053 +0A, +0A3 = 2-13

Y, + Dy2 +343 +DS, +DS2 - 8 +DA, +A3=3 -x0.



#### Parshvaneth Charlette Traces

# A. P. SHALINSHMUMD OF MACHINOLOGY

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**Subject: Applied Mathematics IV** 

SEM:IV

To eliminate MAI & MA3 from the objective function Multiply @ & @ by M and add it to O.

: w= 2y,-3y,-5y,-0s,-0s2-0s3-ms,-ms,-my,+
3my2+3my3-0A,-0A3-8m.

w'= (2-M)y, + (-3+31M)y2+ (-5+3M)y3-MS1-06-MS3-053 -0A1-0A3-8M.

 $+ 620 + (-2+m) y_1 + (3-3m) y_3 + (5-3m) y_3 + MS_1 + 0S_0 + MS_3 + 0A_1 + 0A_3 = -8M$ .

Simplex table



### Parshvanschi Giardiadie Brust's

# A P SINI MEMBER TO CHUMPHEND WELL

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# Parshvanath Charitable Trust's

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