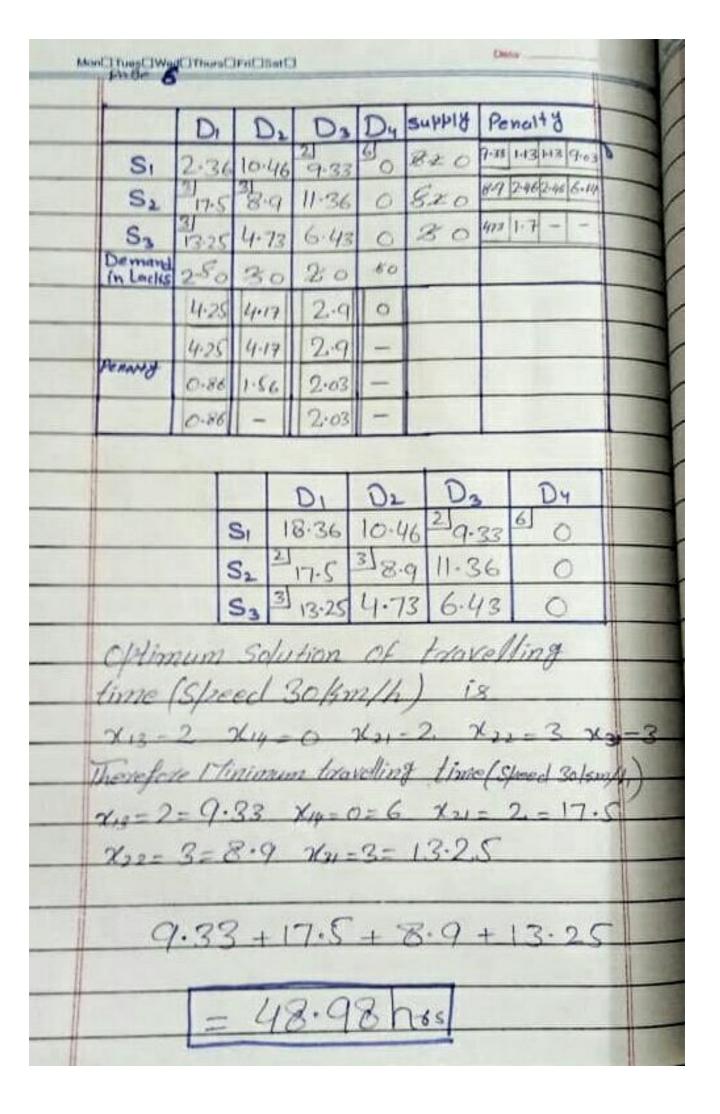
Operation Research Project Haider Chardhary 025 Faizan Nadeen (000 Shan Abdullah Sarfraz Transportation of EGGS: case study using multi-objective MOTP

Oxidin	D,	D,	D,	Name and Address of the Owner, where	Supp	_		alto	_	1	
Si		314	280	6)	8.2	-			_		
Sı	2) S21	3 267	341	Ø	82	0 2	267	4 74	180	53	
Sa	396	1425	193	.0	3	0	12	51 -	-		
Supply	520	30	20	60	16					1	
	12.5	125	87	0					_		
	125	125	87	-							
Penalty	30	47	61	-							
	30	-	61	-							
	52	-		-							1
	1-	1-		-							
	Si		D1 551	2000	14 :	280	e C	1			
	SI		551	2000	14 :	280	10	+		-	
	S		52	1 20		341	C	+	-		
	S3		31 39	6 14	2 1	93	(1		-	
								1			
		-					cal	011	+	+1	10
			9 5	V-1.	tions		March	The second second		_	
		mal	1	blu	tion	,)(-)		4	1	
The C		Ce	115	11	2110	26	ex		the	t	Ĭ.
		Ce	115	solu 1	2110	26	ex		th.	.t	i 6
	1	Ce	/ <i>ls</i> = 2.	11	SI	26 D	er 4	2	14 14	<u>t</u>	63

Ü	Date: Date:	
1	Minimum distance = ?	
1	Minimum Cost = ?	
1		
1	X13 -2 -280, X14-6-0(dumay)	
	X21 = 2 - 521 , X22 - 3 - 267	
	X31 - 3 - 396	
	So	
	Minimum distance - 280+521+267+396	
	= 1464	
	Minimum Transportation Cost =	
	9×521 2×280 + 6×0 + 2×521 +267×3	
	+396×3	
	= 560+0+1042+801+1188	
	= 3591	
1		
1		
-		

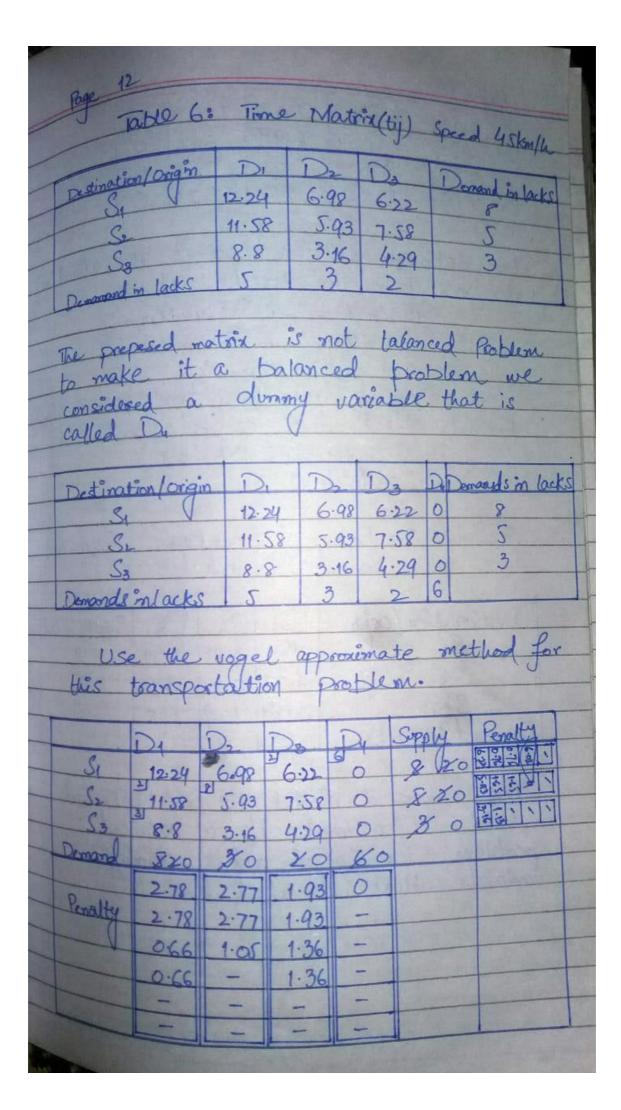


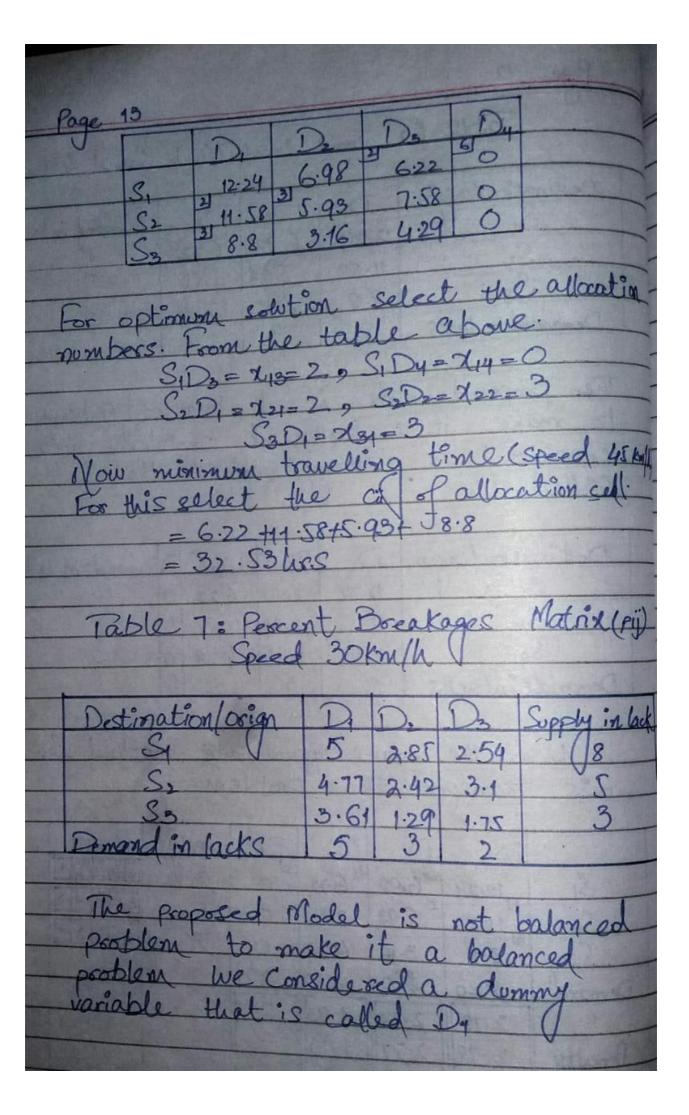
	Di	D,	Da	Dy	Supply	Penculty.	
Sı	15-74	8-97	2]8	6)	820	8 097097	70
			9.74	0	820	7-63 2-11 2-11	5.
S ₃	3	4.06	5.51	0	8 0	4-06 1-45 -	-
Demand	82	30	20	60			
			2-49				
	3-32	DESCRIPTION OF	2-49	-			
Penalty	0-85	1.34	1-74	-			
	0.85	-	174	-			
	-	-	-	-			
	-	-	-	-			
							Ī
							Ī
		D)1	D ₂	Ds	Dy	
3	Sı	15.		8-97		60	
	Sı	145	39 3	7-6	3 9.74	0	
	33	3 11		4.06		0	
						0	

limum Solution of Travelling time (speed 35 km/h is Therefore Minimum travelling time (Speed 30 km/h) 112-2-8 14-0-6 (dumny) 11-2=14.89 N22-7.63=3 731 = 3 = 11.31 - 8+14.89+7.63+11.31-41.83 hours -41.83 hours

the state of the s	Tim		letrix	(til)	Speed
40 15	m/h				
onigin/destinati	0 D	1	02	Da	Supply
SI		.78	7.85	17	8
S2	13-	03	6.68	8. 23	
Sa	9.	9	3.55	4.8	3 3
Demand	3	5	3	2	
					Commence of the Commence of th
Origin	Di		Da	04	Supply
origin Si	D1			04	8 Supply
		7-85			
S ₁ S ₂ S ₃	13.03	7-85 6-68 3-55	7 8-53 4-83	0 0	
S ₁	13.03	7-85 6-68 3-55	7 8-53 4-83	0 0	

2 BI





Page	4									
Destination S. S. S. S.	ion long	3	5 2 4·77 2 3·61 1), D ₃ -85 23 -42 329 17 3 2	5 0	Supply in lacks 8 5 3 16				
metho	Now we solve it with the transportation method of vogel approximate method									
St Sz Sz Danand Penantty	3.61 SZO 1.16	2.42	23 259 3.1 1.75 20 0.79 0.79 0.56 0.56	00000000000000000000000000000000000000	Suppl 8x 8x 30	2.42 0.68 0.68 1.67				
1 1 1 2 2 2 2 4 6 0 Si 2.85 2.54 6 0 Si 2.477 2.42 3.1 0 Si 3.61 1.29 1.75 0 Optimum solution of percent breakage of eggs is given as: 113-2 144=6 144=2 142=3 X31=3										

Page 15 Minimum Break	ges with speed 30km/h
413-2-2-5	34
721=2=4	17
722-3-2 74 = 3-3	42
= (23/+ 4·77+	-2.4p+3.61) 4
= 3.34% B	Breakages.
Table 8:- Perco	ent Breakage(Pij) Matix ed 35km/h (Pij) Matix
Destination/arigin Si	DI DS Supply in locks _ 5.5 3.13 2.8 (8
Se Se Demand in lacks	5.2 2.6 3.4 5 3.95 1.42 1.93 3 5 3 3,
- POODUN TO MANY	rodel is not balanced -
is called Dy	dummy variable that
Dectination locign Si	D. D. D. Supply in less 5:5 313 2.8 0 Supply in less
0	5.2 2.66 3.4 0 S 3.95 1.42 1.93 0 3 5 3 2 6 16
SKON FAMILIA	

Page 16										
Now solve it with the transportation method of vogel approximation.										
St.	5.5 5.2 3.95 820 1.25 0.3 0.3	D, 3.13 2.66 1.42 3/0 1.24 1.24 0.47 -	2.8 3.4 1.93 20 0.87 0.6 0.6	00000	Sopply 8x0 8x0 \$0 16	Penalty Service Ser				
1	Opptimum Solution of percent breakage of Eggs is gives as 213-2 214=6 221=2,222=3 23-3									
Minimum Brekage with speed 35km/h 713= 2.8=2 \										

Page 17 Table 9: Page	scent 4	Brea	kge W	Mo	ateix (Pij)
Destination Lorign Si Si Si Si Si Demand in Locks The Ropased Ma	D1 6 5.67 4.13 S del is	D2 3.42 2.91 1:55 3 not	Da 3.0 3.0 2 2 Dal Prot	of 71	Supply interests 3 ed problem
considered a	demon	y v	riabl	0.	
Destination/Orign Si Si		3.42	4.43	0	Supply in lacks
Demand in lacks	4.13	1.55		6	16
Now solve it	with vogel	the	trans	post	tation.
	12 305 91 371 5 21 0 X0	00000	3	0 13	15 95
	0.00 0.00 0.00 0.01	_			
BOTTO			1		_

