1		- 7
1	١.	
/	1	
-	_	_

Fractional Knapsakk problem Bad SiSe = 14 levoti: 7 8 14 Compute Scare = profit size for each îtem. A B C D E F H2 8/1 Ky 5 5/2 Wy 15/3 =3.5 =8 =2.8 2.5 2.5 3.5 Pick the items into back in the order of mon-BFACDE (you cam pick E first you & Instacyld pad is coubt 9 fece Stace = 111 · O Eisst, bick B' if Occubied. I was I space. : . fore space in the bage 13 prek A Then, pick F,

Next, be commot pick E 3 completely, as

only 1. units of free spacinthe

and E to size is u with. => So & just pick just Yu-Th of item E. 8+15+7+145+10/4 Bag 678e 226 item A B C D E

foraft 24 13 23 15 16

Size 12 7 11 8 9

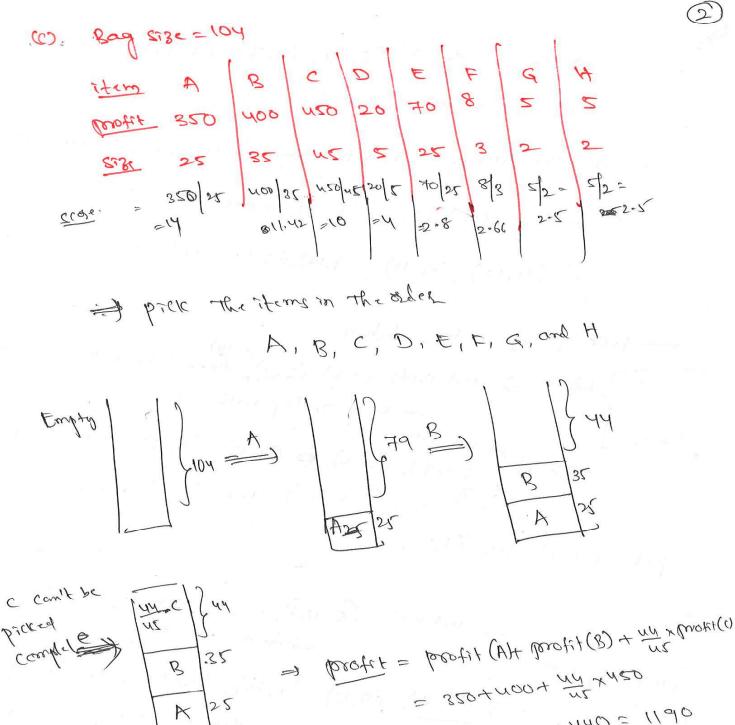
Score = 24/12 13 = 22 | 815 87 16/9 =

foraft 5ize = 2 | 1.85 | 2.09 | =1.895 1.27 Pick The items in The older C, A, D, B, and E empty (26 = prick c) | 3 free

C | 311

C | 11

C | 11 Ilm bick 3/8- Ly bossen fo [3]8.D] 3 Profit = Proofit of Ext profit & A + 3 x 15



= 320+400+ 44 2420

= 320 Froot 1100 = 1100

(a) (1,5), (2,4), (2,6), (5,10), (4,7), (9,14), (8,16), (2,10), (4,12), (7,11), (9,12), and (10,14) · Sort The restervaly wireto see finish end time (yes and time) \Rightarrow (2, w), (1,5), (2,6), (4,7), (5,10), (2,10), (7,11), (4,12) (9,12), (9;14), (10,14), and (8,16) Solution \Rightarrow intervals (1.5), (2.6), commot be in the solution of they overlap with (2.4).

Intervals from (5.10), (5.11), (4.12), (9.12), (9.14). =) Pick (2,4) into Solution (10,14) and (8,16) can be in Colut pick (uit) into solutin (u,t) (t,10), (4,12), cannot be in the solution
(u,t) (t,11), (9,12), (9,14), (10,14), and (8,16) only can be part of the bolistin pick (+111), into colusion -) c9,12), c9,14), (10,14), and (8,16) cannot = olo new intervaly = add to The Solution = { (2,4), (4,7), (7,11)} optimum

(5.9), (9.11), (6.91, (7.12), and (4.12). Set the wheeled w. r. b. farith and point. (2.14), (3.5), (2.5), (2.16) (3.7), (3.8), (6.9), (5.9), (7.10), (4.11), (9.11), (7.12), and (4.11) Pick (2.11) into solution (4.11), (2.11), (2.11), (3.18), (3.15), cound be inthe colut andy intervals (an belong to solution ark (6.9), (5.7), (7.10), (4.11), (4.11), (9.11), (7.12) and (6.9), (5.7), (7.10), (4.11) (4.11) (4.11) Pick (6.0) into solution (5.9), (7.10), (4.11) (4.11) (4.11) (4.11) Pick (9.11) into solution (7.10) cound to inthe colution (8.9) (8.11) Pick (9.11) into solution (7.10) cound to inthe colution (8.11) Pick (9.11) into solution (8.12)	(B) (214), (216), (3,7), (3,5), (2,5), (7,10), (3,8), (4,11)
(2,11) The moderal warter formed and point. (2,11), (3,5), (2,15), (2,16) (3,17), (3,18), (6,17), (5,17), (7,10), (4,11), (1,11), (1,11), and (4,11) Pick (2,11) Into Solution (2,15), (2,6), (3,7), (3,8), (3,5), common be inthe continue (3,11) and (3,11), (4,11), (4,11), (4,11), (4,11) and (6,1), (5,1), (7,10), (4,11), (4,11), (4,11), (4,11) Pick (6,0) Into solution (5,10), (7,10), (4,11) (4,11) common be inthe colub (6,11) and (7,12) Pick (1,11) Into solution (6,11) and (7,12) Pick (1,11) Into solution (7,11) and (7,12)	1591 (a.11) (6.91, (7.12), and (4.12).
(2,4), (3,5), (2,5), (2,6), (3,7), (3,8), (4,12), and (4,12) Pick (2,4) into solution (2,5), (2,6), (3,7), (3,8), (3,5), connect be inthe colut andy intervals can belong to solution are (6,9), (5,9), (7,10), (4,11), (9,11), (7,12) and (4,12) Pick (6,0) into solution (5,9), (7,10), (4,11) (4,11) connect be inthe colut (5,9), (7,10), (4,11) (4,11) and (7,12) Pick (9,11) into solution (7,12)	(2(1), (1),
(2,4), (3,5), (2,5), (2,6), (3,7), (3,8), (4,12), and (4,12) Pick (2,4) into solution (2,5), (2,6), (3,7), (3,8), (3,5), connect be inthe colut andy intervals can belong to solution are (6,9), (5,9), (7,10), (4,11), (9,11), (7,12) and (4,12) Pick (6,0) into solution (5,9), (7,10), (4,11) (4,11) connect be inthe colut (5,9), (7,10), (4,11) (4,11) and (7,12) Pick (9,11) into solution (7,12)	=> Solt The onterval wireto. for the end point.
Pick (2.14) into solution (7,10), (4,11), (4,11), (3,8), (3,5), connet be inthe column are (2.15), (2.6), (3,7), (3,8), (3,5), connet be inthe column are (6,7), (5,7), (7,10), (4,11), (9,11), (7,12) and (6,7), (5,7), (7,10), (4,11) (4,11) connect be in the column are (5,9) (6,9) (5,9), (7,10), (4,11) (4,11) connect be in the column are (6,9) (7,10), (4,11) (4,11) (4,11) connect be in the column are (9,11) and (7,12) (7,10) connect be in the column (9,11) and (7,12) (7,10) connect be in the column (9,11) and (7,12)	(2.5) (2.5) (2.6) (3.7) (3.8) (3.7)
pick (2.14) into solution (2.15), (2.6), (3.7), (3.8), (3.5), common be inthe column and continued combelog to solution and (6,9), (5.7), (7.10), (4.11), (7.11), (7.12) and (6,9), (5.9), (7.10), (4.11), (4.11), (4.11) pick (6.0) into solution (5.9), (7.10), (4.11) (4.11) common to inthe column and common to inthe column and (7.12) pick (9.11) into solution (7.11) and (7.12) pick (9.11) into solution (7.12) pick (9.11) into solution (7.13) common to inthe column (7.14) common to inthe column (7.15) common to inthe column (7.16) common to inthe column	(7,10), (4,11), (9,11), (7,12), and (4,12)
Combin \Rightarrow (2,5), (2,6), (3,7), (3,8), (3,5), common \Rightarrow (2,1), (2,6), (2,1), (3,1), (
Combin \Rightarrow (2,5), (2,6), (3,7), (3,8), (3,5), common \Rightarrow (2,1), (2,6), (2,1), (3,1), (pick (2,4) into solution
proce (6,0) into solution (6,9), (5,9), (7,10), (4,11), (9,11), (7,12) and (6,9), (5,9), (7,10), (4,11) (4,11) connot be inthe (8,9) ady & possible interval in the bold (9,11) and (7,12) proce (9,11) into solution (7,12) proce (9,11) into solution (7,12)	(2, C), (2,6), (3,7), (3,8), (3,5), cannot school
proce (6,0) into solution (6,9), (5,9), (7,10), (4,11), (9,11), (7,12) and (6,9), (5,9), (7,10), (4,11) (4,11) connot be inthe (8,9) ady & possible interval in the bold (9,11) and (7,12) proce (9,11) into solution (7,12) proce (9,11) into solution (7,12)	Colut Colut
pier (6,9), (5,9), (7,10), (4,11) (4,12) pier (6,9) into solution (5,9), (7,10), (4,11) (4,12) cannot be in the solut (6,9), (5,9), (7,10), (4,11) (4,12) and (5,9) (6,9), (5,9), (4,10), (4,11) (4,12) cannot be in the colution (6,9), (5,9), (7,10), (4,11) (4,12) (6,9), (5,9), (4,10), (4,11) (4,12) (6,9), (5,9), (7,10), (4,11) (4,12) (6,9), (5,9), (7,10), (4,11) (4,12) (6,9), (5,9), (7,10), (4,11) (4,12) (6,9), (7,10), (4,11) (4,12) (7,10), (4,12) (7	La Come To 80100
prex (6,0) into solution (5,9), (7,10), (4,11) (4,11) cannot be inther and expossible interval make tolut (9,11) and (7,12) Prex (9,11) into solution (7,12) connot be in the solution (9,11) and connot be in the solution	(Ca) (S.A), (4,11), (9,11), (4,12)
(8.9) (8.9) (8.9) (8.9) (8.9) (8.9) (9.11) and (7.12)	(6,7)
(8.9) (8.9) (8.9) (8.9) (8.9) (8.9) (9.11) (9.1	1. colutro
(8.9) Day & possible interval in the bold Oq. 11) and (7.12) Prek (9.11) into bolding O(7.12) connot be in the column O(7.13)	pick (6,0) into
(8.9) Day & possible interval in the bold Oq. 11) and (7.12) Prek (9.11) into bolding O(7.12) connot be in the column O(7.13)	(5,9), (7,10), (4,11) (chis)
prek (9,11) into solution (9,11) (9,11) The onew interest comadd to the	(6.2)
prek (9,11) into solution (9,11) (9,11) The onew interest comadd to the	(2m) = aly & possible
(9.11) Connot se com add to The	
(9.11) Connot se com add to The	al Am
(9.11) No orew rockeral	beck (d'11) into colors,
(9.11) No orew rockeral) (7,12) connot so
(6,9) (2,4)	anteral continued
(24) The Solution = & (2,4), (6,9), (11)	(a.1)
	(2m), (6,9), (6,9)

(3) (a) Shortest Job frogt.

Shortest Job frogt.

Orders of The Schedule. = 3, 2,5,1, and 4

	5.1	(Leocese)	Chash time	enttime	deadling	Cademen
	JOP .	5	0	(h.s) (()	8	0
~		2	17 2 17 7 00	10.3 m	7	0
	2		2	2	10	0
•	2	2	J	8	4: 20	4
		3	1 S 14 A	12	8	4
	4	4	8	12	7 - 7	, 4 ,

. Man. labeness =4

aptimal: Eeaficit alcadeline first

order of the Jobs: 1, 2, 3, 4, and 5

305	lesocerus	Startime	entime	destine	Labeneus
	3	0	3	4	0
0	2	3	5	7	0
3	1	,5,	6	8	0
4	4	6	10	8	2
2	2	\(\int_{0}\)	12	10	2
	2	1 3 2 2 3 1 4 4	1 3 0 2 2 3 3 1 5 4 4 6	1 3 0 3 2 2 3 5 3 1 5 6 4 4 6 10	1 3 0 3 4 2 2 3 5 7 3 1 5 6 8 4 4 6 10 8

- man. ladeness = 2

Chartely Job first

order: 3,1,4,2,6,5

707	Efluricessin +	Fims Frank	Englise	Leadking	Latence
3	2	0	2	3	0
•	4	2	6	10	0
4	6	6	12	10	2_
2	7	12 12	19	7	12
6	8	19	27	12	15
5	10	27	37	8	29.

- mon. labeness= 29

Optimal: Eeasliet Dealling fish (EDF)

order of the Jobs: 3, 2,5,1,4,6.

207	Processen	Start	end time	delling	ladener
3	3 2	0	2	3	0
	オ	2	9	7	2
	10	9	19	8	
	1.	19	23	10	13
\	6	23	29	OJ	19
	8	29	37	12	25
6					

:. Man. lateness = 25

3 4 5 -Qu) cas job 1 2 deadline 2 1 3 2 1 Desoft 6 .10 5 11 5 Cast the 20ps in the now freezend erger of weapon 2, 1, 4, 3, 5. JOB 2 deadline 76 1 2 Job 1 dealline is 2 / 2 1 job y dealing 2, bobs not passible to schedule job 3 de Drine is 3 2 1 3 => Profit = 10+6+2=18 0 Cb) Job 123456789 deading 9 2 5 7 4 2 5 7 4 Jesufit 15 2 18 1 25 20 8 10 12 - COST The John in the non-increasing proofits. => 5, 6, 3, 1, 91, 8, 7, 10, 12, and 4. 7 6 9 5 3 4 8 11 ponofit= +8+ 25+20+18+ (5+12+10+8+) = 109