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subject # Operation Research.

Dpt # BS,SE,

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Q4.

A company produces of products P_1 , P_2 and time required

Production	Progress	First time
P_1	12	03
P_2	06	08
P_3	08	06
Company Capacity	3000	1500

Now convert into linear P.

$$12x_1 + 6x_2 + 8x_3 \leq 3000$$

$$3x_1 + 8x_2 + 6x_3 \leq 15$$

$$\text{Maximum } z = 1000x_1 + 800x_2 + 4$$

Now find x_1 intercept

Put $x_2 = 0$ & $x_3 = 0$

$$12x_1 + 6x_2 + 8x_3 = 3000$$

Put $x_1 = 0$ & $x_2 = 1$

$$12x_1 + 6(0) + 8(0) = 3000$$

$$x_1 = \frac{3000}{12} = 250$$

$$P_1 (250, 0, 0)$$

Now for x_2 intercept

put $x_1 = 0$, $x_3 = 0$

$$12x_1 + 6x_2 + 8x_3 = 3000$$

$$12(0) + 6x_2 + 8(0) = 3000$$

$$x_2 = \frac{3000}{6} = 500$$

$$P_2 = (0, 500, 0)$$

Now for x_3 intercept put

$$x_1 = 0 \quad \text{Ei. } x_2 = 0$$

$$3x_1 + 8x_2 + 6x_3 = 1500$$

$$3(0) + (8(0)) + 6x_3 = 1500$$

$$x_3 = \frac{1500}{6} = 250$$

$$P_6 = (0, 0, 250)$$

Thus all points put in
eq (2) to find the
minimum value.

$$Z = 1000x_1 + 800x_2 + 400x_3$$

$$Z = 1000(250) + 0 + 0 = 250000$$

$$Z = 100 + 800(500) + 0 = 400000$$

$$Z = 0 + 0 + 400(375) = 150000$$

$$Z = 1000(500) + 0 + 0 = 500000$$

$$Z = 0 + 800(187.5) + 0 = 150000$$

$$Z = 0 + 0 + 400(250) = 100000$$

Ans =

①

Q2:
Ans=

Suppose x_1 & x_2 be the number of production of A and B. since allowed d_i = under utilization of product capacity variable.

Since goal is the minimization of sales hence positive deviation will not appear in constants related with sales so-

$$x_1 + d_1 = 500$$

$$x_2 + d_3 = 200$$

→ d_2 = under achievement of sales goals products A.

→ d_3 = under achievement of sales products B.

Now the goal programming mathematical model can be minimized.

$$z = P_1 d_1 + P_2 d_2 + P_3 d_3$$

subjected to constraints.

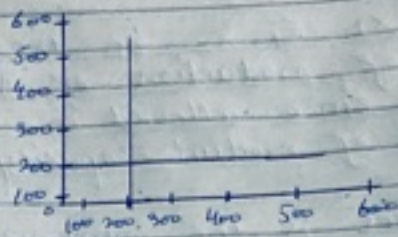
$$x_1 + x_2 + d_1 - d_1 = 500$$

$$x_1 + d_2 = 150$$

$$x_2 + d_3 = 200$$

$$\& x_1, x_2, d_1, d_2, d_3, d_4 \geq 0$$

All the goal constants can be plotted on the graph



Product A as for product B
 Because the profit from the
 sale of product twice the
 amount from that of product B-

Question 3 :-

Ans:- Introduction:- Critical Path
 methodology is a programming
 methodology that with replaced
 all of the various interactions.

Communication & detects the
 Critical path method is an
 algorithms for scheduling
 a set of projects activities
 its an commonly used in
 conjunction with the program
 evaluation & Review techniques

⇒ Research Hypothesis:-
 This study
 uses one rule among many
 simple algorithm rules to
 simulate.

(3)

the calculation of the longest path: Therefore minimization amount of time required to performed an activity from the dragonly algorithms & that the result can be examined.

Literature Review:-

Exploring CPM to calculate the some requires & values required for projects & events CPM is used to appears values & time interchanges by activities that take a shorter time at in expensive.

CPM Simulation:-

CPM analyses the earliest began time the consist E_i time EFP the latest end time ratio frequency & total float TF should be documented for each activity.

Research methodology

The study utilise the dynamic & static group behaviours of dragonly in nature to obtain & dragonly algorithm the benefits of The approach are to use dragonly behaviours to achieve.

→ Result =

Separation from each other si to avoid the dragmoth from static collisions with other fellow human coordination & digment Ai is the dragmoth's behaviour to match speed with other fellow human.

→ Discussion =

Most of the ventures are tactical & theoretical endures whose objective is to create, recreate or change different species definition realized.

Conclusion -

The dragmoth rule is successful invested to optimized the conclusion we have used this techniques to solve the cost duration & activity durations & activity in the required with diagram.

