

RESOURCE ELOCATION

Resource :- Resource is a physical or non-physical variable. It means required for completion of the project.

Type of Resources

① Man Power Resource } Active Resource

② Equipment

③ Material

④ Money

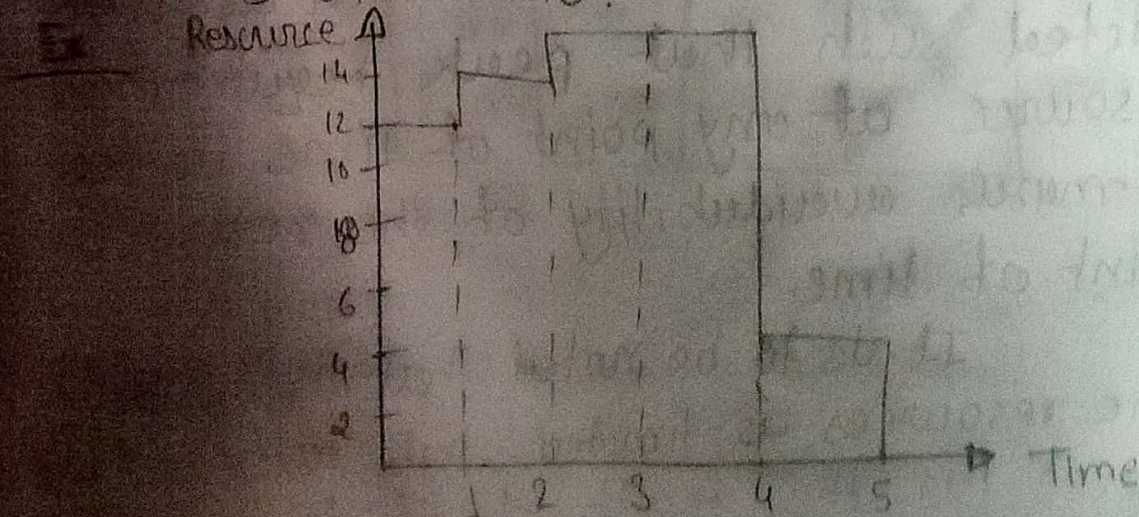
⑤ Space

⑥ Time

} Passive Resource

Resource elocation means finding out "which resource is required for which activity at in what quantity

The elocation of Resources is analysed with the help of a curve termed as resource usage profile, also known as Histogram. That represent the relationship b/w variation in the requirement of Resources with time.



Allocation of Resources is Generally done by following methods -

- Resource Smoothing
- Resource Levelling

Resource Smoothing :- It is a method of resource allocation ^{in which} activities are delayed by the total available float. Such that uniform demand of resources is created throughout the project duration.

It is to be noted that in this method availability is assumed to be infinite and no change in activity duration. Takes place during the allocation of resources. It is no change in critical activities, critical path in this method, unlimited resource availability.

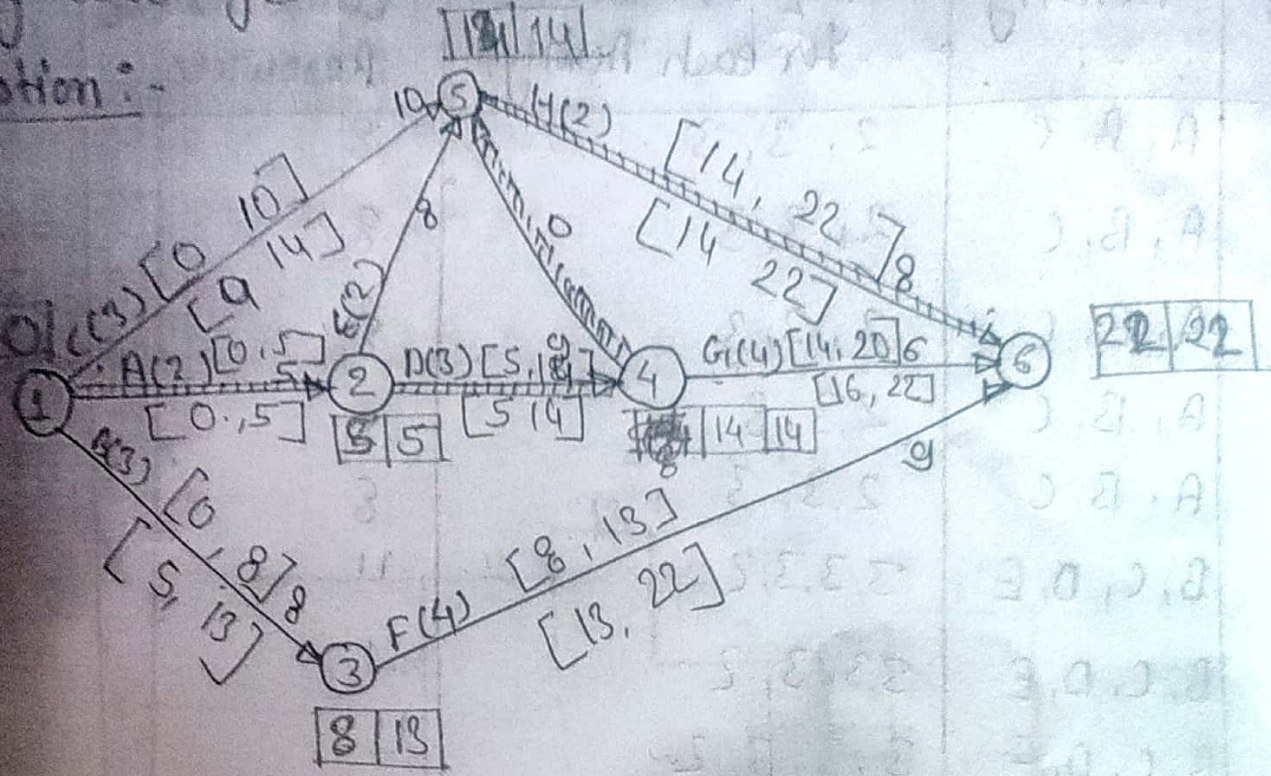
② **Resource Levelling** :- It is the method of resource allocation in which activities are restricted such that peak requirements of the resource at any point of time is less than the max. availability of the resources at that point of time.

It is to be noted that in this method the resources is limited, but activity duration may get change as the result of which critical

How
own

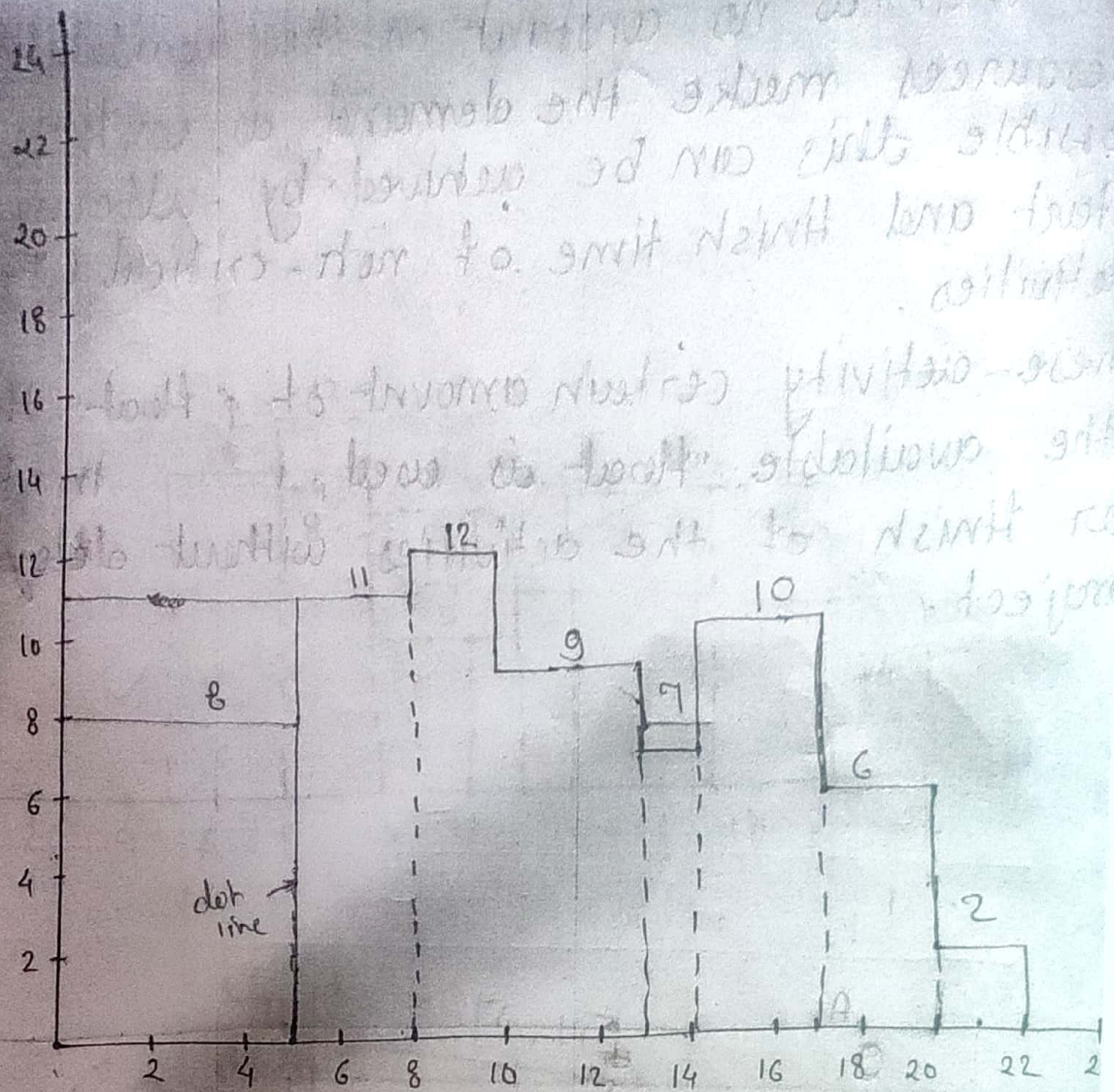
may also get altered.

Question :-



Activity	EST	EFT	LST	LFT	FT
A					
B					
C					
D					
E					
F					
G					
H					

Activity	Req. of Resource for each Activity.	Cumulative Resources
1 A, B, C	2, 3, 3	8
2 A, B, C	2, 3, 3	8
3 A, B, C	2, 3, 3	8
4 A, B, C	2, 3, 3	8
5 A, B, C	2, 3, 3	8
6 B, C, D, E	3, 3, 3, 2	11
7 B, C, D, E	3, 3, 3, 2	11
8 B, C, D, E	3, 3, 3, 2	11
9 C, D, E, F	3, 3, 2, 4	12
10 C, D, E, F	3, 3, 2, 4	12
11 D, E, F	3, 2, 4	9
12 D, E, F	3, 2, 4	9
13 D, E, F	3, 2, 4	9
14 D, F	3, 4	7
15 F, G, H	4, 4, 2	10
16 F, G, H	4, 4, 2	10
17 F, G, H	4, 4, 2	10
18 G, H	4, 2	6
19 G, H	4, 2	6
20 G, H	4, 2	6
21 H	2	2

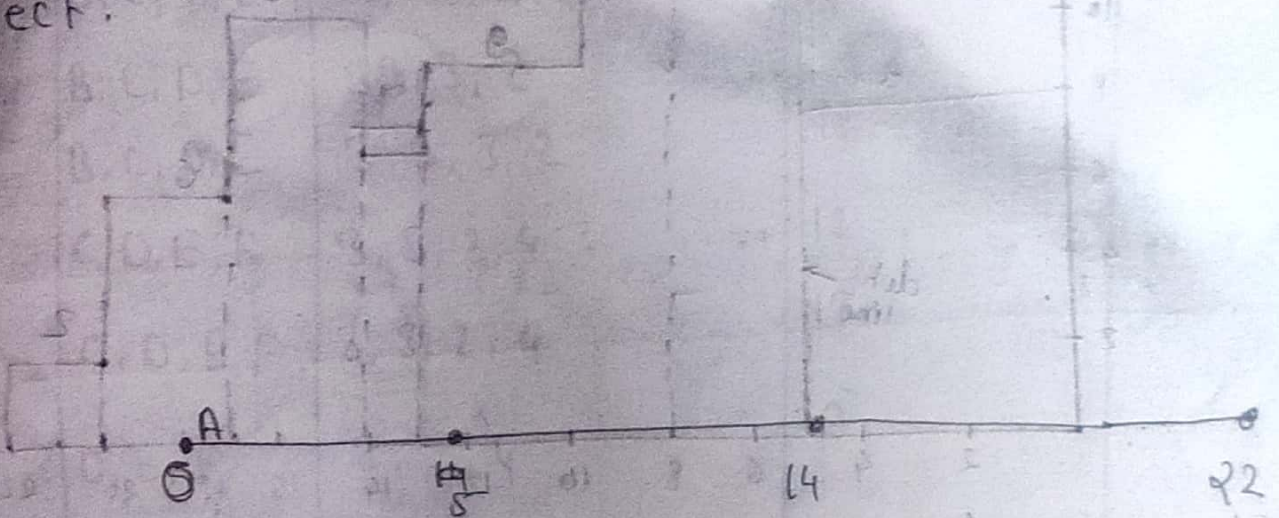


Steps involved in Resource sor

- 1) List out the resource which will be execution of the various activity and identify one which one considered important.
- 2) Resource Profile one prepare by carrying the resource execer and commulative resources seq. for each activity/unit and plot form of histogram.
- 3) The duration of peak and low demand one identify and an attempt is made to lower the peaks and to fillup the lowest one.

if there is no constraint on the availability of resources make the demand as uniform as possible this can be achieved by altering the start and finish time of non-critical ($FT \neq 0$) activities.

These activity certain amount of float, therefore the available float is used in the start or finish of the activities without delaying the project.



from the histogram peak demand is 12 unit which is required from 9th and 10th day. During this time activity F is running having float of 5 units (days) so to reduce the peak demand starting of activity F is shifted by 5 days. (It starts at 13th days instead of 8th day)

