

## **Project Evaluation and Review Technique (PERT)**

Following are the details of a project

Activity	Predecessors	Duration (weeks)		
		a	m	b
A	-	6	7	8
B	-	1	2	9
C	-	1	4	7
D	A	1	2	3
E	A,B	1	2	9
F	C	1	5	9
G	C	4	2	8
H	E,F	4	4	4
I	E,F	4	4	10
J	D,H	2	5	14
K	I,G	2	2	8

- (a) Construct the project network
- (b) Find the expected duration and variance of each activity
- (c) Find critical path and expected project completion time
- (d) What is the probability of completing project on or before 25 weeks?
- (e) If the probability of completing the project is 0.84, find the expected project completion time.

Where a=optimistic time: execution goes extremely well

b=pessimistic time: execution goes very bad

m=most likely time: execution occurs under normal conditions.