



Al- Mustaqbal University College
Chem. Eng. Petr. Ind. Dept.
4th stage

Industrial Management and Ethics

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Lecture 7

Tutorial sheet
PERT & CPM Techniques

2020-2021

Q 1

Find the critical path for the following processes related to a certain project.

Process	Predecessors	Time (week)
A	-	2
B	A	10
C	A,B	2
D	A	5
E	B	3
F	E,C	1
G	D,C	5
H	G,D	6
-	F,H	5

Q 2

Plot PERT network and find the expected time for each process and for the whole project.

Process	A	m	b
1 \longrightarrow 2	6	10	14
1 \longrightarrow 3	10	12	14
1 \longrightarrow 4	12	16	26
2 \longrightarrow 5	8	10	12
3 \longrightarrow 4	4	7	10
3 \longrightarrow 5	4	6	8
4 \longrightarrow 5	8	12	16
5 \longrightarrow 6	3	5	7

Q3

Processes for producing a certain product are shown in the following table. Find the time needed for F and G given that the time for both processes is the same and the earliest start time $M=50$ weeks.

Process	Predecessors	Time (weeks)
A	-	8
B	-	5
C	A	6
D	A	7
E	C,D	3
G	F	?
H	B	4
I	H	9
F	E,I	?
J	H	3
K	I,J	5
L	G,K	10
M	L	15