

1. PT. Holding Tbk. menyusun kelompok khusus untuk mengerjakan suatu proyek, diketahui kegiatan-kegiatan yang harus dilaksanakan adalah sebagai berikut:

<b>Tugas</b>	<b>Kode Tugas</b>	<b>Tugas Pendahulu</b>	<b>Waktu (Hari)</b>
Design frame	A	-	4
Design wheels	B	-	3
Design gears	C	-	3
Design handle-bars	D	C	2
Test steering	E	A dan B	1
Test gears	F	A, B, dan D	2
Performance test	G	E dan F	3
Manufacturing layout	H	A dan B	3
Manufacture demonstrators	I	H	5
Prepare advertising	J	G	2
Prepare user's manual	K	G	4
Distribute to dealers	L	I, J, dan K	2

Dengan menggunakan metode PERT:

- Gambarkan jaringan kerja kemudian lengkapi Activity scheduling (Early start, early finish, late start, late finish)
- Tentukan jalur kritis-nya.

2. U Corp mempunyai kebutuhan bahan mentah 10.000 unit per bulan, Biaya pemesanan barang setiap kali pembelian Rp 250.000,- dan biaya sewa gudang Rp 500.000,-

Hitung:

- a. Economical order quantity (EOQ)
- b. Biaya rata-rata persediaan
- c. Biaya simpan (TCC)
- d. Biaya pesan (TOC)
- e. Total biaya inventory (TIC)

## JAWABAN

1. A. Early start, late start, early finish, dan late finish

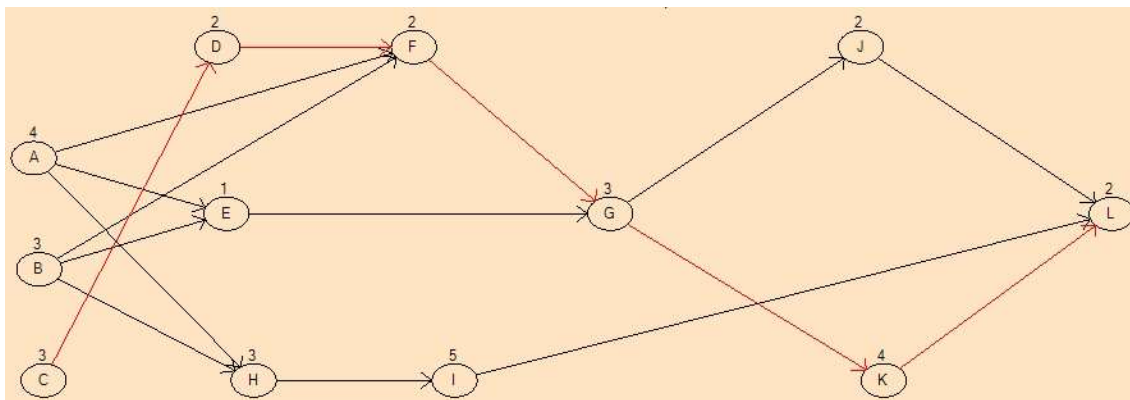
☒ Immediate predecessor list
 ☐ Start/end node numbers

Single Time Estimate

single\_time\_estimate solution

Activity	Activity time	Early Start	Early Finish	Late Start	Late Finish	Slack
Project	16					
A	4	0	4	1	5	1
B	3	0	3	2	5	2
C	3	0	3	0	3	0
D	2	3	5	3	5	0
E	1	4	5	6	7	2
F	2	5	7	5	7	0
G	3	7	10	7	10	0
H	3	4	7	6	9	2
I	5	7	12	9	14	2
J	2	10	12	12	14	2
K	4	10	14	10	14	0
L	2	14	16	14	16	0

- B. Jalur kritis (C [3] > D [2] > F [2] > G [3] > K [4] > L [2])



2. A. Economical Order Quantity (EOQ) = 346 Unit  
 B. Biaya rata-rata persediaan = 173 Unit  
 C. Biaya simpan (TCC) = 86.602.540 Rupiah  
 D. Biaya pesan (TOC) = 86.602.540 Rupiah  
 E. Total biaya penyimpanan (TIC) = 173.205.100 Rupiah

<input checked="" type="radio"/> No reorder point		<input type="text" value="0"/>	
<input type="radio"/> Compute reorder point			

economic_order_quantity Solution			
Parameter	Value	Parameter	Value
Demand rate(D)	120000	Optimal order quantity (Q*)	346,41
Setup/ordering cost(S)	250000	Maximum Inventory Level (Imax)	346,41
Holding/carrying cost(H)	500000	Average inventory	173,21
Unit cost	20000	Orders per period (N)	346,41
		Annual Setup cost	86602540
		Annual Holding cost	86602540
		Total Inventory (Holding + Setup) Cost	173205100
		Unit costs (PD)	2400000000
		Total Cost (including units)	2573205000