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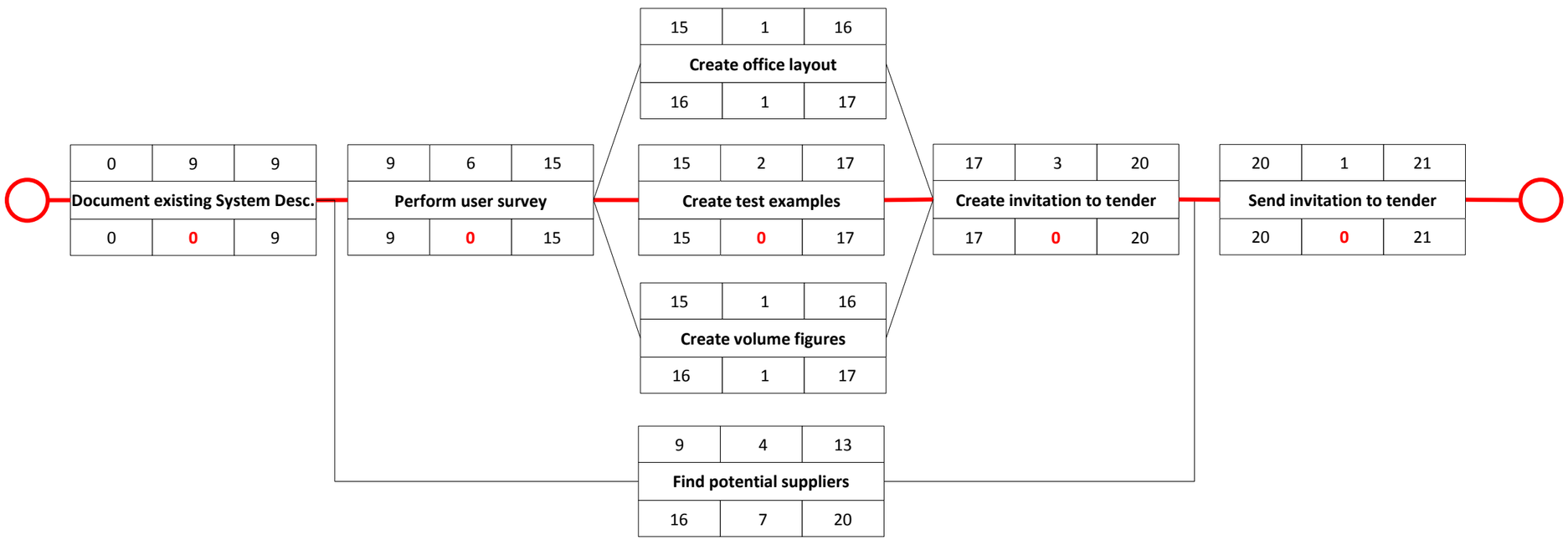
Exercise 6, Project Management

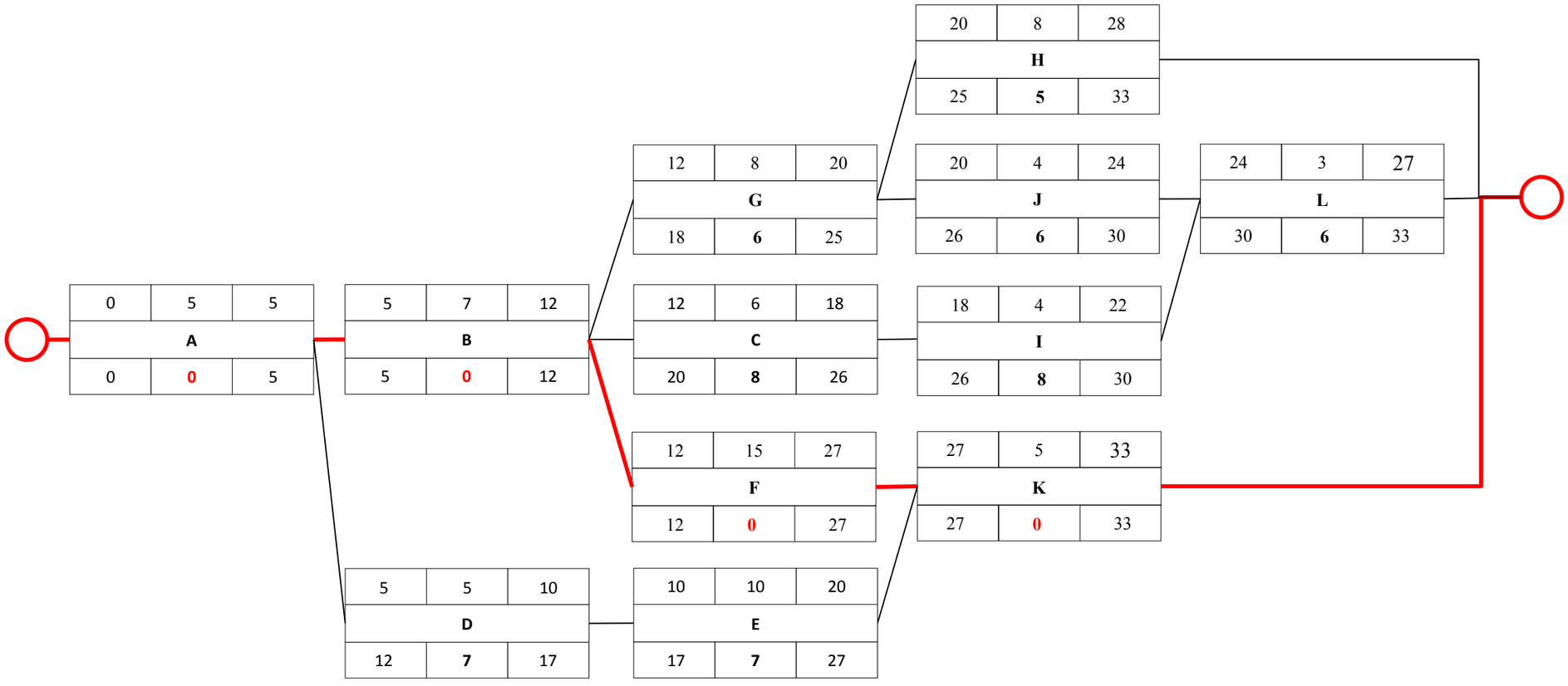
Task 1



The **critical path** is marked in bold red – document existing system description -> perform user survey -> create test examples -> create invitation to tender -> send invitation to tender. Within this path all possible delays (floats) are 0.

The earliest possible finish date is after **21 days**.

Task 2



The **critical path** is marked in bold red – A -> B -> F -> K. The earliest possible finish date is after **33 days**.

Task 3: Selection of Requirements Management/Engineering tool(s)

- Organize and perform surveys
- Organize and lead group meetings
- Review product or requirement specifications
- Create work / expert groups within project
- Resource selection (e.g. create job specifications)
- Time planning and resource scheduling
- Create budget plan, calculate a product’s impacts
- Analyze and evaluate risks and feasibility
- …

Task 4

Effort modifier (em)	Estimates	Multiplier
FCIL	Low	1.10
RCPX	Very Low	0.60
RUSE	Nominal	1.00
PDIF	Very High	1.81
SCED	Very Low	1.43
PERS	Extra Low	2.12
PREX	Low	1.12

$$effort = estimated\ effort \cdot \prod_{i=1}^{n} em_i = 110pm \cdot 1.10 \cdot 0.60 \cdot 1.00 \cdot 1.81 \cdot 1.43 \cdot 2.12 \cdot 1.12 \approx 446.18pm$$

The chosen modifiers enlarge the overall project to **446.18 person-months**.

Task 5: Speed-control system

a) $function\ points = 53$
$fp2Java = 53\ LOC$
$locInJava = function\ points \cdot fp2Java = 53 \cdot 53LOC = 2.809LOC$
The planned project would contain approximately **2.809 lines of code**.

b) $c = 3.6$ (embedded mode)
$k = 1.2$
$effort = c \cdot size^k = 3.6 \cdot 2.809^{1.2} = 12.43pm$
The planned project would need **12.5 person-months**.