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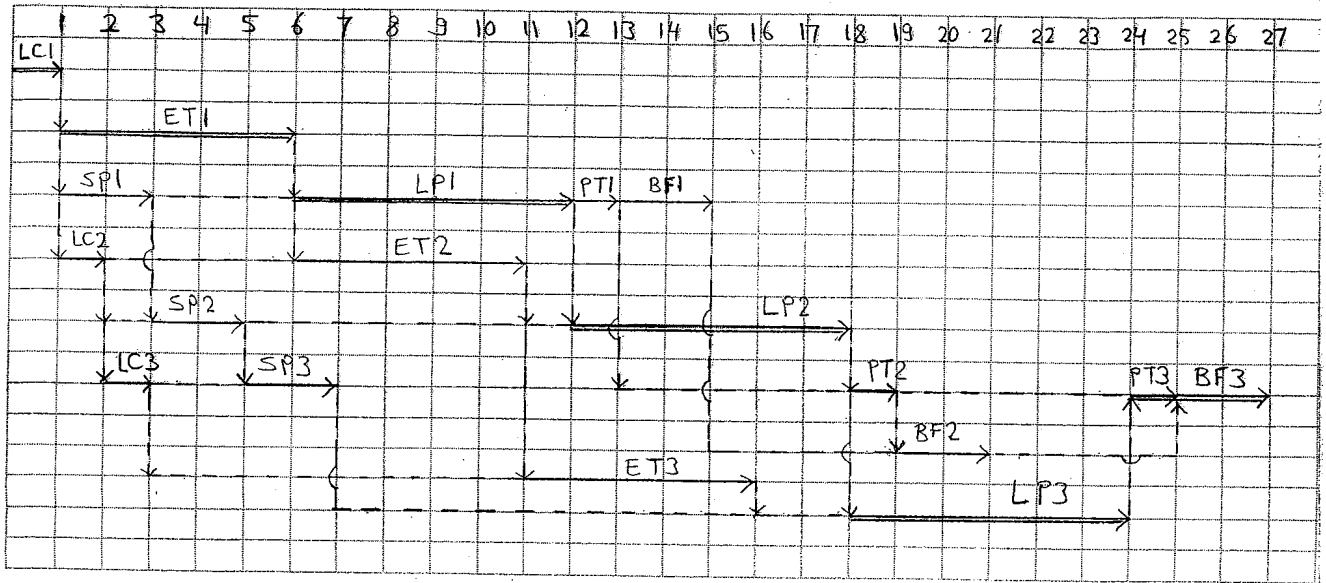
Question 1 (35% of max. credit)

Consider plan of a small project given in Table below. Draw the corresponding AOA network. Analyze the network to determine the critical path and project completion time.

Activity	Duration (weeks)	Predecessor(s)
A	4	-
B	4	A
C	4	A
D	7	A
E	7	D
F	6	B, D
G	7	C, E, F
H	14	F
I	14	G, H
J	15	B
K	10	C

Question 2 (40% of max. credit)

Consider the time-scaled network given below. Draw the corresponding AON network showing each activity four timings and free float.



Question 3 (25%)

Consider the precedence diagram network shown below, with activity durations noted inside of each node. Find out the following:

- Compute the Early/Late start/finish times and Total Float for each activity where the initial time for the project is zero, and the terminal time for the project completion is 30.
- Write down the Critical Path (s).

$$ES_j = \text{Max}_{\text{all } i} \begin{cases} \text{Initial Time} \\ EF_i + FS_{ij} \\ ES_i + SS_{ij} \\ EF_i + FF_{ij} - D_j \\ ES_i + SF_{ij} - D_j \end{cases} \quad LF_i = \text{Min}_{\text{all } j} \begin{cases} \text{Terminal Time} \\ LS_j - FS_{ij} \\ LF_j - FF_{ij} \\ LS_j - SS_{ij} + D_i \\ LF_j - SF_{ij} + D_i \end{cases}$$

