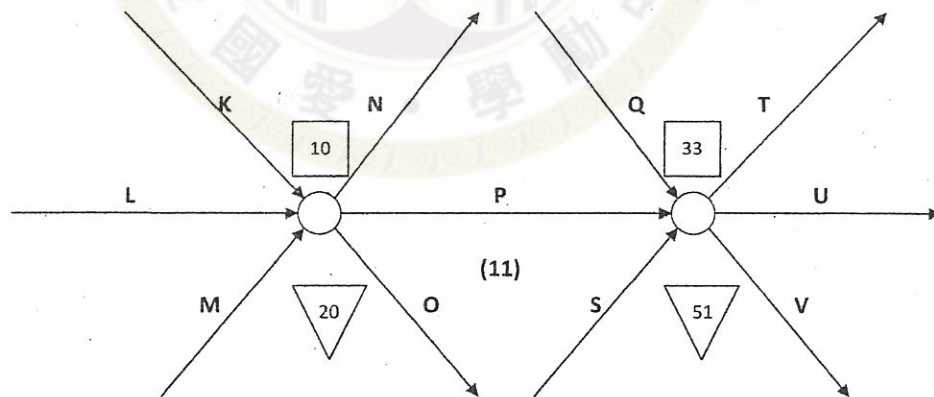


※注意：請於試卷內之「非選擇題作答區」標明題號依序作答。(包含所有計算過程)

1. What is Construction Management? What are the differences between Construction Management and Project Management?(8%)
2. What are the reason behind Planning and controlling in Project Management?(8%)
3. What are the principles of managing project risk?(8%)
4. What are the differences among the following type of contracts?(18%)
 - a. Lump-Sum
 - b. Unit Price
 - c. Cost Plus
 - d. Design Build
 - e. BOT
5. While using PERT, the Standard Deviation for each activity is equal to: $(\text{Pessimistic duration} - \text{Optimistic duration}) \div 6$ (2%)

_____ True _____ False
6. Given Activity Duration EET's and LET's as the following(21%)



- A. At the left node, early event time is 10 and the late event time is 20.
 At the right node, early event time is 33 and the late event time is 51. Activity P has duration of 11.

見背面

B. Determine the Activity P's:

Early Start =

Late Start =

Early Finish =

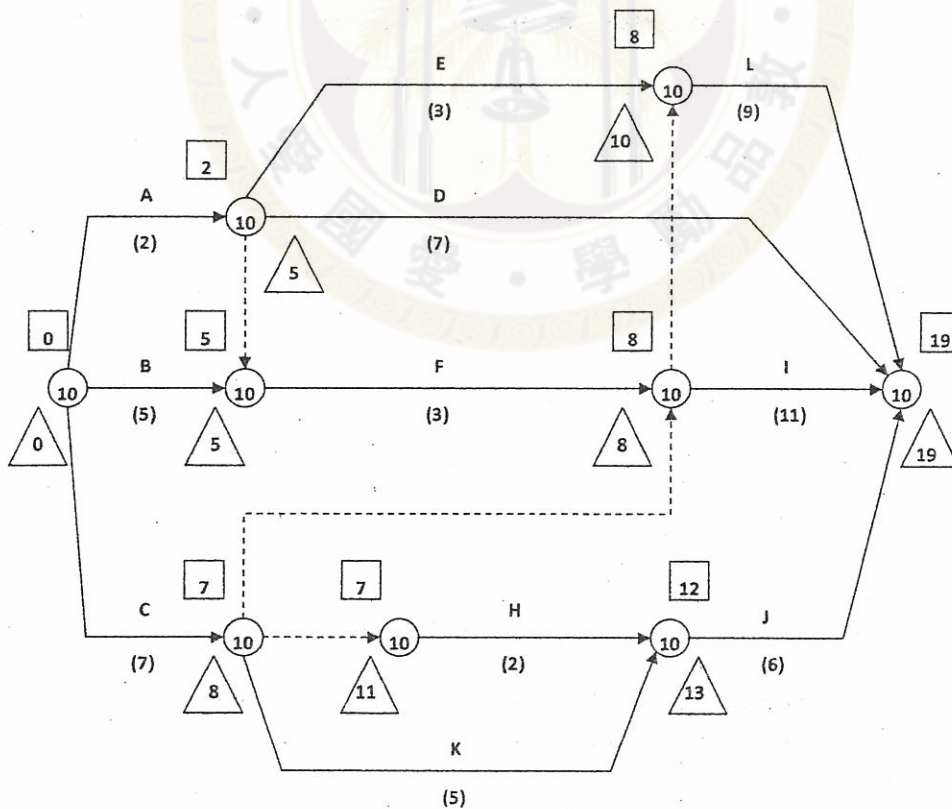
Late Finish =

Total Float =

Free Float =

Independent Float =

7. Given the following activities (unit of time is day) and answer the following questions. Assume that every working day is from 8 am to 5 pm.(21%)



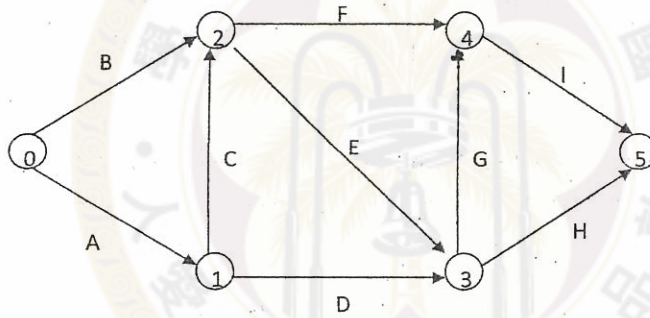
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- (1) The total amount of days required to complete the network (project) is:
- a. 16 b. 17 c. 18 d. 19 e. 20
- (2) The Critical Path includes Activities:
- a. B, F, L b. B, F, I c. C, K, J d. A, E, L
- (3) The earliest time that Activity L can start is in the morning of day:
- a. 8 b. 9 c. 10 d. 11 e. 12
- (4) The early finish time for Activity H is in the evening of day:
- a. 7 b. 8 c. 9 d. 10 e. 11
- (5) The latest time Activity E must be finished is in the evening of day:
(otherwise the project will be delayed)
- a. 7 b. 8 c. 9 d. 10 e. 11
- (6) The latest time Activity D must start is in the morning of day:
(otherwise Activity J can not start at its early start)
- a. 11 b. 12 c. 13 d. 14 e. 15
- (7) Assume that all Activities start at their early start (except Activity J).
If Activity H takes 7 days to complete. What is correct?
- a. That Activity J can not start at its early start (ES).
b. The total project duration will be delayed by 1 day.
c. Neither the project completion nor early starting time of Activity J will be affected.

見背面

8. A. Given data as follow (14%)

Activity	Predecessors	Activity	Optimistic duration	Most likely duration	Pessimistic duration
A	-	A	7	9	11
B	-	B	4	6	10
C	A	C	6	8	10
D	A	D	5	7	8
E	B,C	E	6	9	14
F	B,C	F	10	12	14
G	D,E	G	2	2	4
H	D,E	H	2	5	8
I	F,G	I	1	2	3



B. Answer the following questions and show all your calculations:

- If you want to give an estimate for the project completion time, which is 95% confident, what is your estimated project completion time?
- All calculations should be down to 2 decimal points.
- Put all your calculations and answers in the next page.

試題隨卷繳回