Question I: MCQ (10 points)

1.	Technique for determining if and when an investment will pay itself	a. **Payback Analysis** b. Creeping commitment c. Time Value of money d. Present Value
2.	The relationship between two use cases in the use case diagram can be:	a. A "includes" relationship b. A "extends" relationship c. A "depends on" relationship d. **All the above**
3.	"Customer Bank" in a use case diagram is an appropriate _____	a. Use case name b. Use case behavior c. **Actor name** d. Actor behavior
4.	Which diagram demonstrated who does what in a system?	a. Activity b. **Use case** c. Class d. Object
5.	_____is a textual description of the business event and how the user will interact with the system to accomplish the task.	a. **Use-case narrative** b. Scenario c. Use-case diagram d. Sequential diagram

Question II: True / False (5 points)

1	Actor is anyone or anything that needs to interact with the system to exchange information.	**true**
2	Measuring feasibility throughout the life cycle of an information system is known as the creeping commitment approach to feasibility.	**true**
3	Operational feasibility is a measure of how well a solution meets the identified system requirements.	**true**
4	Data modeling provides a tool for capturing the functional requirements of a system.	**true**
5	Association is a use case relationship used to model the relationship between a use case and an actor	**true**

Question III:(30 points)

A project is broken into the tasks shown in the following table along with the dependencies, duration and the need staff size for each task.

| Task	Duration (Day)	Dependency	Staff
A	2	-	3
B	4	A	2
C	6	A	4
D	4	A	3
E	5	B	4
F	7	B,C	2
G	3	D,E,F	4

1. Build the Gantt chart to calculate the requested duration to finish the project in addition to the needed staff size. (**15 points**)

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
A	▨	▨																
B			▨	▨	▨	▨												
C			▨	▨	▨	▨	▨	▨										
D			▨	▨	▨	▨												
E							▨	▨	▨	▨	▨							
F									▨	▨	▨	▨	▨	▨	▨			
G																▨	▨	▨
Staff	3	3	9	9	9	9	8	8	6	6	6	2	2	2	2	4	4	4

Duration is 18 weeks
Minimum nbr of staff is 9

2. Given the following project's pert graph, fill the tables below and find the critical path. (10 points)
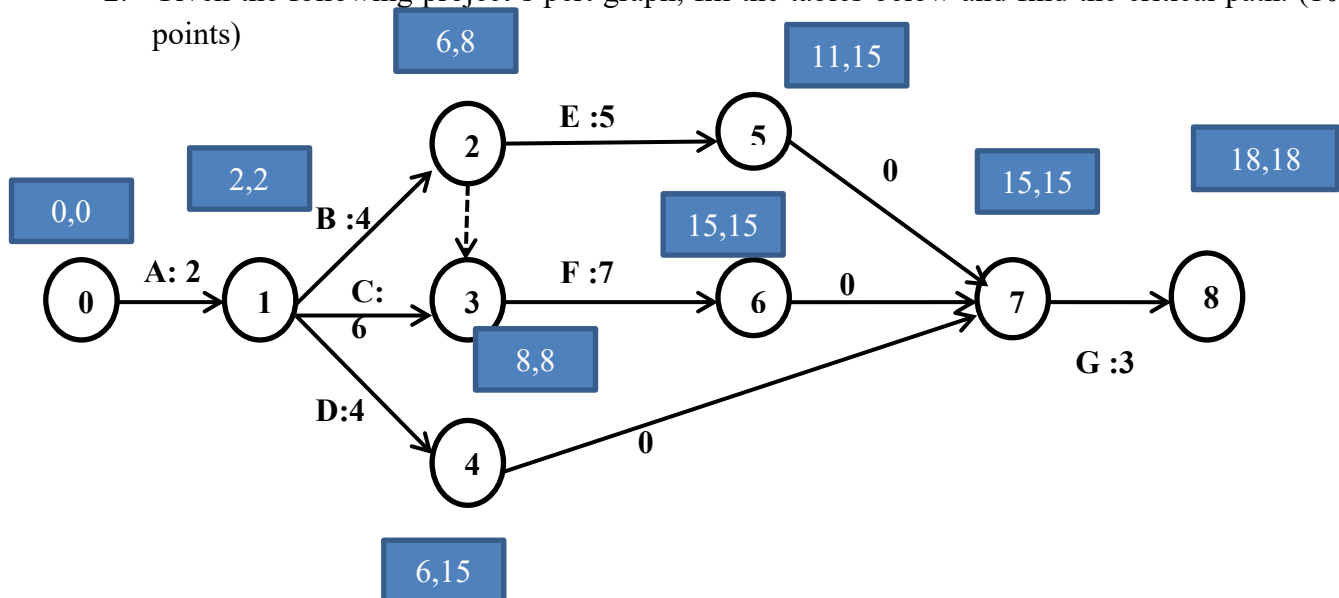
Step	ET	LT
0	0	0
1	2	2
2	6	8
3	8	8
4	6	15
5	11	15
6	15	15
7	15	15
8	18	18

Task	Arc	Slack	Critical (Y/N)
A	0,1	0	Y
B	1,2	2	N
C	1,3	0	Y
D	1,4	9	N
E	2.5	4	N
F	3,6	0	Y
G	7,8	0	Y

3. Critical path: (05 points)

A-C-F-G