**Question 1: (7 Marks)**

Answer the following questions:

1. Risk management should be carried out **only** in the second phase of project life cycle (develop a proposed solution). What’s wrong with this statement?
2. A project has a negative total slack. Can some of its activities have a positive slack? Explain your answer.
3. What issues must be discussed in “team meetings”?
4. Could a CEV (Cumulative Earned Value) be negative? Explain your answer.
5. “A late project should have a positive CV”. What is wrong with this statement?
6. What can you tell about the **overall** performance of a project having CPI=0.82?
7. What is an “activity” in project?

**Answer: (1 Mark each)**

1. It should be carried out **all** over the life cycle of the project.
2. Yes, the slack of activities of the critical path has the least value of slacks of all activities of the project, therefore some of them might have positive values that are greater than negative values.
3. Only team related issues.
4. No since it is the value of executed work.
5. CV has nothing to do with time therefore its value is not related to the execution time of the project.
6. CPI is related **only** to financial performance, therefore without knowing other parameters we can’t tell anything related to allover performance.

It is a piece of work that consumes time.

**Question 2: (8 Marks)**

Answer the following questions:

1. **Regarding the time of execution of a project**, what is the difference between resource leveling and resource-limited scheduling?
2. Name and explain the two methods of allocating the total budgeted costs.
3. The TBC of a project is $300,000. After six months of execution, project manager gave the following results:

CPI=0.90, CV = -25,000, FCAC1 = 333,333, FCAC2 = 275,000

What is your comment on it?

1. When should the RFP (Request for Proposal) be written, who should write it? Is it always the responsibility of the same person (contractor/customer) to write it? Explain your answer.

**Answer: (2 Marks each)**

1. Leveling will not extend the execution time of the project while resource-limited scheduling might.
2. Up-down method where the total budgeted cost is allocated to project tasks, and bottom-up method where the estimated costs of all tasks are summed to get the total budgeted cost.
3. Both FCAC must be greater than TBC.
4. It should be written in the first stage of project’s life cycle. In general, it is the responsibility of the customer, but in some cases, it could be done by the contactor as an unsolicited proposal.

Answer the following questions**:**

1. Explain (explain; **don’t** give the formula) in your own words what is the FCAC (Forecasted Cost At Completion). In what units it should be evaluated? What should its value be approximately in an acceptable project?
2. The slack of an **activity in the critical path** can be negative, positive or zero. What is the meaning of each case?

**Answer: (3 Marks each)**

1. The FCAC is how much the project would cost at the end if the financial performance kept going as it is at the present moment. It should be evaluated in money units ($, €, £ …). In acceptable project it should be close to TBC.
2. Since the activity is in critical path it is the same as the total slack of the project. Therefore, if it is equal to zero the project is planned to be delivered exactly on the time according to the contract; if it is negative the project will be late no matter when it starts, and if it is positive the project has some spare time before delivering it.

ANSWER THE FOLLOWING QUESTION:

1. What is the ideal value of CPI (Cost Performance Index); otherwise, what is the possible range of its values?
2. Explain in your own words what is the Slack of an activity?
3. Give two examples of resources in project.
4. Explain what is resource leveling and what is resource-limited scheduling
5. Would the project be late if any of its activities is late? Explain your answer.
6. In an acceptable project what should be the order of value of FCAC (Forecasted Cost At Completion)?

ANSWER:

1. Ideal value is 1; 0<CPI<∞ **(2 marks)**
2. It is the amount of time a particular activity can be postponed without delaying the project. **(2 marks)**
3. Any two of the following:

-machines

-workers

-equipment **(2 marks)**

1. Resource leveling attempts to establish a schedule in which resource use is made as level as possible **without** extending the project **beyond** the required completion time. While Resources limited schedule is a method for developing the shortest schedule when a number or amount of available resources is fixed. **(3 marks)**
2. No because not all activities are on the critical path and even activities on the critical path have a total free slack of the project that may be greater than 0
3. It is of the order of TBC.

Answer the following questions:

1. A task requires 24 worker.day. How many workers do you need to accomplish this task in 3 days?
2. Can a project having positive CV be late? Explain your answer.
3. Is it sufficient to meet customer’s statement of work and requirements when submitting a proposal? Explain your answer.
4. A contract for a project that can be executed within 80 weeks is signed for 82 weeks. What can you tell about the slack of an activity X of this project?
5. Explain in your own words what is the CPI (Cost Performance Index). Don’t give the formula, explain the meaning. In what units it should be expressed?

**Answers: (2 Marks each)**

1. 24/3 = 8 workers.
2. Yes, because CV has nothing to do with time.
3. No because the customer will look for the proposal, he thinks is the best for him.
4. It must be greater or equal 2.
5. It’s a positive index (grade) indicating only the financial performance of a project. The ideal value is ; when less than 1 the performance is not good

**Question 2: (6 Marks)**

Answer the following questions:

1. Can Cost Variance (CV) of a project be negative? If No explain why; if Yes explain what does a negative CV mean?

Can Cost Performance Index (CPI) of a project be negative? If No explain why; if Yes explain what does a negative CPI mean?

|  |  |
| --- | --- |
| 1. Following graph represents the needed number of workers during a project. What is the minimum duration of execution you can hope to get after resource limited leveling with a maximum of 2 workers? |  |

1. Name three things to do before meeting.

Answer the following questions:

a) The use of some slack by one activity will affect other activities in a project. What are these “other

activities” and how are they affected?

b) Though Resources limited leveling might extend the duration of the project, the project “will not

definitely be late”. Explain this apparently contradiction.

c) What are the two types of a contract?

d) Name two things to do before meetings.

e) What are the units of the following: CPI (Cost Performance Index), CV (Cost Variance)?

f) Explain in your own words what is the CEV (Cumulative Earned Value)?

g) A Cost Variance (CV) of -$5000 could be either a "very bad" financial performance or a "rather

good" financial performance. Explain this statement.

Answer: (2 Marks each)

a) It will affected following activities in the same path by reducing their available slacks.

b) Resource limited leveling is done during planning stage therefore the project can’t be late because

its implementation has not started yet.

c) The two types of a contract are:

 Fixed-Price Contracts

 Cost-Reimbursement Contracts

d) Any two of the following:

 Determine whether a meeting is really necessary.

 Determine the purpose of the meeting.

 Determine who needs to participate in the meeting.

 Distribute an agenda.

 Prepare visual aids or handouts.

 Make room & visual aid arrangements.

e)

i. CPI has no unit because it is a fraction.

ii. CV is evaluated in currency.

f) It is what worth the executed works of the project

g) Because it depends on the CAC, so if 5000 if close to CAC the performance is very bad but if it

is negligible comparing to CAC the performance is rather good.

Question 2: (4 Marks)

Answer the following questions:

a) If you know that your project needs three weeks more than the completion time you mentioned in the contract, what would be the total slack of your project?

b) Why should you carry out the risk management over all the duration of the project?

c) Should a late project have a negative CV (Cost Variance)? Explain your answer.

d) Some of your classmates found in their calculations a negative FCAC (Forecasted Cost At

Completion). What’s wrong with that?

Answer: (1 Mark each)

a) -3 weeks.

b) Because of possible modification of identified risks priorities, disappearance of some risks, or

identification of new risks.

c) CV is related only to financial performance therefore it has nothing to do with time.

d) FCAC is a prediction of the total cost of the project at its completion therefore it cannot be

negative

Answer the following questions:

1. Should all project have the same reporting period?
2. In some cases, when project manager authority, team members can be barrier for an effective “delegation”, why would they do that?
3. Name two thing to do during the presentation?
4. Are “dummy activity” real activity or not? Explain your answer.
5. Supposing a project can be executed in 30 days if unlimited in resources. Can it be executed in 25 days if limited in resources? Explain your answer.
6. Should reporting period be the same all along the project? Explain your answer.
7. A project has a negative CV (Cost Variance). If you calculate its FCAC with the formula FCAC=TBC/CPI, should the result be less or greater than TBC. Explain your answer.
8. What does a total negative slack means in a project?
9. CEV is Cumulative Earned Value. Explain in your own words what it is.
10. Explain in your own word what is CEV?
11. Name two of thing do during meeting.

Answer:

1. No, it depends how big a project is
2. Because they fear criticism for mistakes or lack self-confidence
3. -use appropriate animation 
4. No they are not because by definition an activity “consume time”
5. No, because limiting resources will extend time not reduce it
6. No, it may change according to the execution of the project, for example it must be shortened when problem appears and are solved
7. Greater than TBC because negative CV means that we are paying more than estimated value of the task
8. It means no matter when the project starts it cannot be delivered on time
9. It is what worth the executed works of the project
10. Is the value of the work really executed in the project evaluated according to the cost estimation in each activity and the percentage of the work accomplish to the activity
11. Start the meeting on time , evaluate the time process

Answer the following Questions:





Answer:



