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Module 5 Assignment

1. Describe three advantages of using activity networks for project scheduling.

The three advantages that come to mind are would be the flow of communication, statement of priorities in task accomplishment, and a declaration of which activities or tasks will be dependant on the other activities.

2. Define the critical path in a project. Why is it important to understand what it is and what affects it?

In simplistic terms, the critical path is the path through the project network that has the longest duration. It can change in duration as the activities are completed either on time or behind schedule. The importance is in the definition that understanding this path can determine the ultimate time frame of your project.

3. Define the Critical Path Method (CPM). Both chapters might assist with this question.

CPM is a type of network analysis to determine which activities has the least amount of scheduling flexibility. This also will heavily input and determine when the project will be completed. So determining the resources needed and the timing of all these paths and evaluating an estimated finish time is the CPM.

4. Define Program Evaluation and Review Technique (PERT). Both chapters might assist with this question.

PERT is an event and probability network analysis system that is used specifically for difficult-to-define projects. Projects that have variables that extend beyond one location and involve multiple organizations. Having a multi location and multi involved organizations can be difficult to find the exact time lines for the activities. Yet if they use PERT they may be able to structure and solidify a schedule.

5. The two most common methods for constructing activity networks are Activity-on-Arrow (AOA) and Activity-on-Node (AON). Briefly compare and contrast the two. Both chapters might assist with this question.

The activity on Arrow is the structure that defines the activity through the use of the arrow and uses the mode to determine the link between activities. Whereas the Activity on Node uses the node to determine the activities and uses the arrow to signify the link between activities. AOA was used largely in construction circumstances but as technology progressed we have leaned more to AON techniques.

6. The text describes four methods for reducing the critical path. Describe two of these.

Step one is to eliminate tasks on the critical path. Meaning that some of the tasks stated are a waste of time or can be eliminated as a time sensory thing. If there is extra slack then these tasks can be accommodated other wise it is best to leave them outside of the project. Second step would be to replan serial paths to be in parallel. This means that when projects are overloaded with excessive serial activities they should just be moved to parallel paths.

7. What is a Gantt chart? Describe two benefits of using them for project management.

The Gantt chart is a project network that establishes a time phased network. Meaning it links project activities to a project schedule baseline. It can also be used as a project tracking tool to assess the difference between planned and actual performance. Two benefits can be that they are easy to read and understand and they identify the current date to see which activities should already have been completed.

8. What do we mean by 'crashing a project'? What are two reasons for crashing a project?

The term crashing a project just means accelerating the speed of the project. So it is used when it is necessary for the development to quicken in a desire to reach an earlier completion date. These often requires more money and materials but can be necessary and beneficial in specific circumstances. One situation would be that the initial schedule was too optimistic and the speeding up of the project is essential in its success. The next possibility would be that the market must be changed because of a demand that comes earlier than anticipated. Whether it is by the consumer or managers, if there is a time of earlier anticipated completion, this crashing may be necessary.

9. The text describes six techniques for crashing a project/accelerating it. Describe two of them.

The two methods that come to mind would be improving the productivity of existing project resources and changing the working method employed for the activity. So finding a more efficient way to do more work with the same available staff and materials. Or altering the

technology and types of resources used to employ each activity. Each of these methods may take a higher amount of financial resources to shift the progress of the project all together.