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**Short Answer:**

Describe Agile Project Management (Agile PM). How does it differ from other approaches?

In recent years, a new project planning methodology has become increasingly important as organizations recognize that the traditional, highly structured approach to planning and managing projects may not be effective for all types of projects. Agile Project Management (Agile PM) reflects a new era in project planning that places emphasis on flexibility and evolving customer requirements throughout the development process. Agile PM differs from traditional project management in several ways, most particularly through recognizing that the old approach of carefully “planning the work and then working the plan” does not consider the reality of many modern projects. In modern projects oftentimes customer needs tend to evolve and change over the course of the project.

Define the Theory of Constraints (TOC).

Goldratt originally developed the theory of constraints (TOC), for applications within the production environment. Among the more important points this author raised was the idea that typically, the majority of poor effects within business operations stem from a very small number of causes. This means that, when traced back to their origins, many of the problems we deal with are the result of a few core problems. The main idea behind TOC is the notion that any “system must have a constraint. Otherwise, its output would increase without bound, or go to zero.” The key lies in identifying the most central constraint within the system.

The text defines seven critiques of Critical Chain Project Management (CCPM). Describe any two of these that you want.

There are several arguments against the process of Critical Chain Project Management, including the following: Lack of project milestones makes coordinated scheduling, particularly with external suppliers, highly problematic. Critics contend that the lack of in-process project milestones negatively affects the ability to coordinate schedule dates with suppliers that provide the external delivery of critical components. Furthermore, a review of CCPM contended that although it does offer several valuable concepts, it is not a complete solution to current project management scheduling needs. The authors contended that organizations should be extremely careful in excluding conventional

project management scheduling processes to adopt CCPM as a sole method for planning and scheduling activities.

Describe two constraints that can affect a project, making scheduling and planning more difficult.

Probably the most common type of project constraint revolves around the availability of human resources to perform the project. As previously learned, one of the key methods for shortening project durations is to move as many activities as possible out of serial paths and into parallel ones. This approach assumes that staff is free to support the performance of multiple activities at the same time. In some situations, the physical constraints surrounding a project may be a source of serious concern for the company attempting to create the deliverable. Environmental or contractual issues can create some big problems.

Define resource loading.

The concept of resource loading refers to the amount of individual resources that a schedule requires during specific time periods. We can load, or place on a detailed schedule, resources with regard to specific tasks or the overall project. As a rule of thumb it is generally beneficial to do both, create an overall project resource-loading table as well as identify the resource needs for each individual task. In practical terms, resource loading attempts to assign the appropriate resource, to the appropriate degree or amount, to each project activity.

Define resource leveling. What are the two objectives of it?

Resource leveling is the process that addresses the complex challenges of project constraints. With resource leveling, we are required to develop procedures that minimize the effects of resource demands across the project's life cycle. Resource leveling, sometimes referred to as resource smoothing, has two objectives. The first one is to determine the resource requirements so that they will be available at the right time. The second one is to allow each activity to be scheduled with the smoothest possible transition across resource usage levels.

Multiproject environments should incorporate trying to minimize three key parameters. Briefly describe these.

Any system used to resolve the complex problems with multiproject resource allocation has to consider the need to minimize the negative effects of three key parameters, which are schedule slippage, resource utilization, and in-process inventory. For many

projects, schedule slippage can be more than simply the realization that the project will be late; in many industries, it can also result in serious financial penalties. The goal of all firms is to use their existing pool of resources as efficiently as possible. Adding resources company wide can be expensive and may not be necessary, depending upon the manner in which the present resources are employed. In-process inventory represents the amount of work waiting to be completed but delayed due to unavailable resources.