

KK03 — Features of project management using Gantt charts

Analysis & Design · Comprehensive exam study guide

STUDY DESIGN — YOU MUST KNOW

- identification of tasks
- sequencing of tasks
- time allocation
- dependencies
- milestones
- critical path
- monitoring and documenting the progress of projects

A **Gantt chart** is the main project-management tool in this course. You must read one and explain its features — dependencies and the **critical path** are the highest-value concepts.

Features of a Gantt chart

Feature	Meaning
Tasks	The activities that make up the project, listed down the side.
Sequencing	The order tasks are arranged in over time (left to right).
Time allocation	The duration of each task, shown by the length of its bar.
Dependencies	A task that cannot start until another finishes (shown by links/arrows).
Milestones	Key checkpoints or deliverables, often shown as a diamond.
Critical path	The sequence of dependent tasks that determines the shortest possible project duration; delaying any of these delays the whole project.
Monitoring	Recording actual progress against the plan to manage the project.

Why the critical path matters

Tasks on the critical path have **no slack** — a delay to any of them pushes back the finish date. Tasks not on the critical path can slip a little without affecting the deadline. Identifying it lets a manager focus attention where delays are most damaging.

REMEMBER

Critical path = the longest chain of **dependent** tasks. Its length = the minimum time the whole project can take.

Key definitions to memorise

Gantt chart

A horizontal bar chart showing project tasks, their durations, sequence, dependencies and milestones over time.

Dependency	A relationship where one task cannot begin until another is completed.
Milestone	A significant checkpoint or deliverable in a project.
Critical path	The sequence of dependent tasks that determines the minimum project duration; any delay on it delays the whole project.

Exam technique

EXAM TIP

- When reading a Gantt chart, trace dependency arrows to find the critical path.
- To explain a milestone, call it a checkpoint/deliverable, not just 'an important task'.

COMMON MISTAKES

- Saying the critical path is the longest task — it is the longest chain of dependent tasks.
- Confusing a milestone (checkpoint) with a dependency (ordering rule).

Quick revision checklist

- I can name and explain the seven Gantt features.
- I can identify dependencies, milestones and the critical path on a chart.

Exam practice — questions & model answers

Q1. Define a dependency in a Gantt chart.

Define · 1 mark

Model answer

- A relationship where one task cannot start until another finishes (1).

Q2. Explain what the critical path represents and why it is important.

Explain · 3 marks

Model answer

- It is the sequence of dependent tasks determining the minimum project duration (1).
- Tasks on it have no slack (1),
- so delaying any of them delays the whole project, focusing the manager's attention (1).

Q3. State one purpose of monitoring progress on a Gantt chart.

State · 1 mark

Model answer

- To compare actual progress against the plan so issues/delays can be identified and managed (1).