

ARIZONA STATE UNIVERSITY (ASU) CON 495 CONSTRUCTION PLANNING AND SCHEDULING EXAM 1 PRACTICE (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. If production rate is quantity divided by duration, which change will increase production rate?**
 - A. Increase duration
 - B. Decrease duration
 - C. Increase quantity
 - D. Decrease quantity
- 2. An integrated schedule includes both pre-construction and construction activities.**
 - A. False
 - B. True
 - C. Not sure
 - D. It depends
- 3. Which metric would you review to forecast future cash inflows and outflows on a project?**
 - A. Schedule variance
 - B. Budget at completion
 - C. Cash flow forecast
 - D. Cost performance index
- 4. What is CPM used for in construction planning?**
 - A. To determine the project duration and identify critical activities.
 - B. To allocate resources without regard to timing.
 - C. To minimize all floats to zero.
 - D. To determine the project duration, identify critical activities, understand scheduling constraints, and guide resource and time optimization.
- 5. What is a baseline schedule and why is progress measured against it?**
 - A. The baseline is the approved plan; progress is tracked by comparing actual performance against it to assess variance and trends.
 - B. The baseline is the current schedule that updates automatically with changes.
 - C. The baseline is a cost estimate only.
 - D. The baseline is the initial schedule only used for client approval.

6. When estimating, it is more reliable to use a set of historical production rates with a high standard deviation.
- A. True
 - B. False
 - C. Not sure
 - D. Depends
7. The lead time for electrical gear for low rise office projects is typically how long?
- A. 3 months
 - B. 6 months
 - C. 12 months
 - D. 18 months
8. In earned value management, which metrics are used to measure progress against the baseline?
- A. EV, PV, and AC
 - B. SV and CV
 - C. CPI and SPI
 - D. RFI and Submittals
9. In CCPM, what is the purpose of a buffer?
- A. Time buffers added to protect due dates
 - B. It increases project duration
 - C. Resource buffers to reduce costs
 - D. It is optional
10. If the first coat finishes on Friday and it requires 3 days to dry before applying the second coat, and the work week is 5 days, on which day would you start the second coat?
- A. Tuesday
 - B. Monday
 - C. Thursday
 - D. Sunday

Answers

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1. B
2. B
3. C
4. D
5. A
6. B
7. C
8. A
9. A
10. A

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Explanations

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1. If production rate is quantity divided by duration, which change will increase production rate?

- A. Increase duration
- B. Decrease duration**
- C. Increase quantity
- D. Decrease quantity

Production rate is the amount produced per unit of time, defined as quantity divided by duration. To increase this rate, you need to reduce the time taken for the same amount of work. If you produce the same quantity but in less time, you're spreading the work over a shorter period, so the rate climbs. For example, 100 units in 2 hours is 50 units per hour, but if that same 100 units are produced in 1 hour, the rate becomes 100 units per hour. Therefore, shortening duration directly increases production rate. (Note: increasing quantity while keeping the same duration would also raise the rate, but the change most directly aligned with the given formulation and typical scheduling focus is decreasing duration.)

2. An integrated schedule includes both pre-construction and construction activities.

- A. False
- B. True**
- C. Not sure
- D. It depends

An integrated schedule ties every activity across the project timeline into one continuous, time-based model, spanning from pre-construction through construction and into closeout. This means design development, permitting, procurement planning and long-lead item buys, site logistics, safety planning, and constructability reviews are connected to the actual construction work that follows. The point is to show how pre-construction decisions and approvals directly affect when construction can start, how it proceeds, and when milestones are achieved, with dependencies and resource constraints across the whole project. Because of that, including both pre-construction and construction activities is essential in an integrated schedule. Choosing false would ignore this holistic view, and options like not sure or it depends don't align with how an integrated schedule is defined and used in practice.

3. Which metric would you review to forecast future cash inflows and outflows on a project?

- A. Schedule variance
- B. Budget at completion
- C. Cash flow forecast**
- D. Cost performance index

Forecasting liquidity by projecting cash inflows and outflows over time is the purpose of a cash flow forecast. This tool lays out when money is expected to come in (such as customer receipts or milestone-based fund releases) and when money will go out (labor, materials, subcontractors, equipment, and other expenses), often on a monthly or weekly basis. Because the question asks which metric helps you forecast future cash movements on a project, the cash flow forecast directly provides that visibility and timing you need to manage liquidity, plan financing, and anticipate shortages. The other metrics don't focus on timing of cash. Schedule variance looks at differences between planned and actual project timing, not cash movements. Budget at completion represents the total planned cost as a single number, not the flow of cash over time. The cost performance index measures cost efficiency against work completed, not the timing or amount of cash being received or paid.

4. What is CPM used for in construction planning?

- A. To determine the project duration and identify critical activities.
- B. To allocate resources without regard to timing.
- C. To minimize all floats to zero.
- D. To determine the project duration, identify critical activities, understand scheduling constraints, and guide resource and time optimization.**

CPM is used to plan and control a construction project by mapping activities, their dependencies, and durations to figure out how long the project will take and where delays will have the most impact. It exposes the earliest and latest possible timings for each task and identifies the critical path—the sequence of activities with no schedule float—so you know which tasks must stay on track to finish on time. Beyond just duration and critical activities, CPM reveals scheduling constraints and provides a basis for optimizing how time and resources are used. Knowing which activities are critical guides where to allocate resources to prevent delays, and recognizing float on non-critical tasks shows where there's schedule flexibility or opportunities for adjustment. It's not about reducing all floats to zero; floats exist to offer viable timing options without affecting the project finish. So the best choice captures duration, critical activities, scheduling constraints, and how to optimize both resources and time. The other options miss important aspects: some focus only on duration or critical activities, some imply ignoring timing in resource allocation, and some wrongly suggest forcing all floats to zero.

5. What is a baseline schedule and why is progress measured against it?

- A. The baseline is the approved plan; progress is tracked by comparing actual performance against it to assess variance and trends.**
- B. The baseline is the current schedule that updates automatically with changes.
- C. The baseline is a cost estimate only.
- D. The baseline is the initial schedule only used for client approval.

The baseline schedule is the approved, time phased plan for the project that serves as the reference point for measuring performance. Progress is measured against it to see how actual work compares to what was planned, allowing you to identify variances and trends, and to forecast finish dates and project risk. The baseline remains fixed as the benchmark until a formal change is approved to re-baseline; the live schedule is the one that gets updated with progress and changes. It isn't just a cost estimate, nor is it only for client approval—the baseline provides the yardstick you use to gauge schedule performance and manage the project.

6. When estimating, it is more reliable to use a set of historical production rates with a high standard deviation.

- A. True
- B. False**
- C. Not sure
- D. Depends

Reliability in estimation comes from data that are consistent. Standard deviation measures how spread out the values are around the average. A set of historical production rates with a high standard deviation shows that the rates vary a lot from period to period. That variability makes the simple average rate less trustworthy for forecasting future work, because using that average would carry more risk and a less precise forecast. If you want a more reliable estimate, you'd prefer data with low variability, or you'd explicitly account for the variability in your model—such as using a range, a confidence interval, or a probability distribution. When variability is high, you can still estimate, but you should communicate the uncertainty clearly and consider methods like weighting, updated data, or simulation to reflect the range of possible outcomes.

7. The lead time for electrical gear for low rise office projects is typically how long?

- A. 3 months
- B. 6 months
- C. 12 months**
- D. 18 months

Long-lead procurement is a key idea here: electrical gear for office projects often has to be ordered well in advance because it involves manufacturing, testing, and sometimes custom configurations that don't fit into a quick turnaround. For a typical low-rise office build, critical electrical equipment like switchgear, transformers, large panels, and related gear needs to be planned and ordered far ahead so it arrives and can be installed when the other trades are progressing. That usually puts the lead time at about a year from order to delivery, so planning around a 12-month lead time keeps the schedule realistic and reduces the risk of delays. Shorter windows (3 or 6 months) are generally not feasible for these items, and waiting 18 months tends to add unnecessary time to the project without added benefit.

8. In earned value management, which metrics are used to measure progress against the baseline?

- A. EV, PV, and AC**
- B. SV and CV
- C. CPI and SPI
- D. RFI and Submittals

In earned value management, progress against the baseline is tracked using three budgeted cost values: Planned Value, Earned Value, and Actual Cost. Planned Value represents the budgeted cost of work scheduled to be done by a point in time. Earned Value is the budgeted cost of the work actually completed. Actual Cost is what has been spent to accomplish the work. These three values let you see how you're performing relative to the plan. Compare Earned Value to Planned Value to gauge schedule performance (ahead or behind). Compare Earned Value to Actual Cost to assess cost performance (under or over budget). From these, you derive further metrics like CPI and SPI, but the foundational measurements that reflect progress against the baseline are EV, PV, and AC.

9. In CCPM, what is the purpose of a buffer?

- A. Time buffers added to protect due dates**
- B. It increases project duration
- C. Resource buffers to reduce costs
- D. It is optional

Buffers in CCPM are time reserves designed to absorb variability and protect the project's due date. A project buffer sits at the end of the critical chain to guard against delays that would push the finish date, while feeding buffers guard feeder paths so delays don't ripple into the chain. The purpose is to keep the completion date intact, not to lengthen the project or cut costs, and buffers are not optional in CCPM.

10. If the first coat finishes on Friday and it requires 3 days to dry before applying the second coat, and the work week is 5 days, on which day would you start the second coat?

A. Tuesday

B. Monday

C. Thursday

D. Sunday

The main idea is to count the drying time in calendar days and then pick the earliest feasible day to apply the next coat within the workweek. If the first coat finishes Friday and it needs 3 days to dry before the next coat, those three days are Saturday, Sunday, and Monday. After those days, you can apply the second coat on the next workable day, which is Tuesday. Weekend days can count toward the drying time, but you'd start the second coat on Tuesday, not earlier or later than necessary.

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Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://asu-con495exam1.examzify.com>

We wish you the very best on your exam journey. You've got this!

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