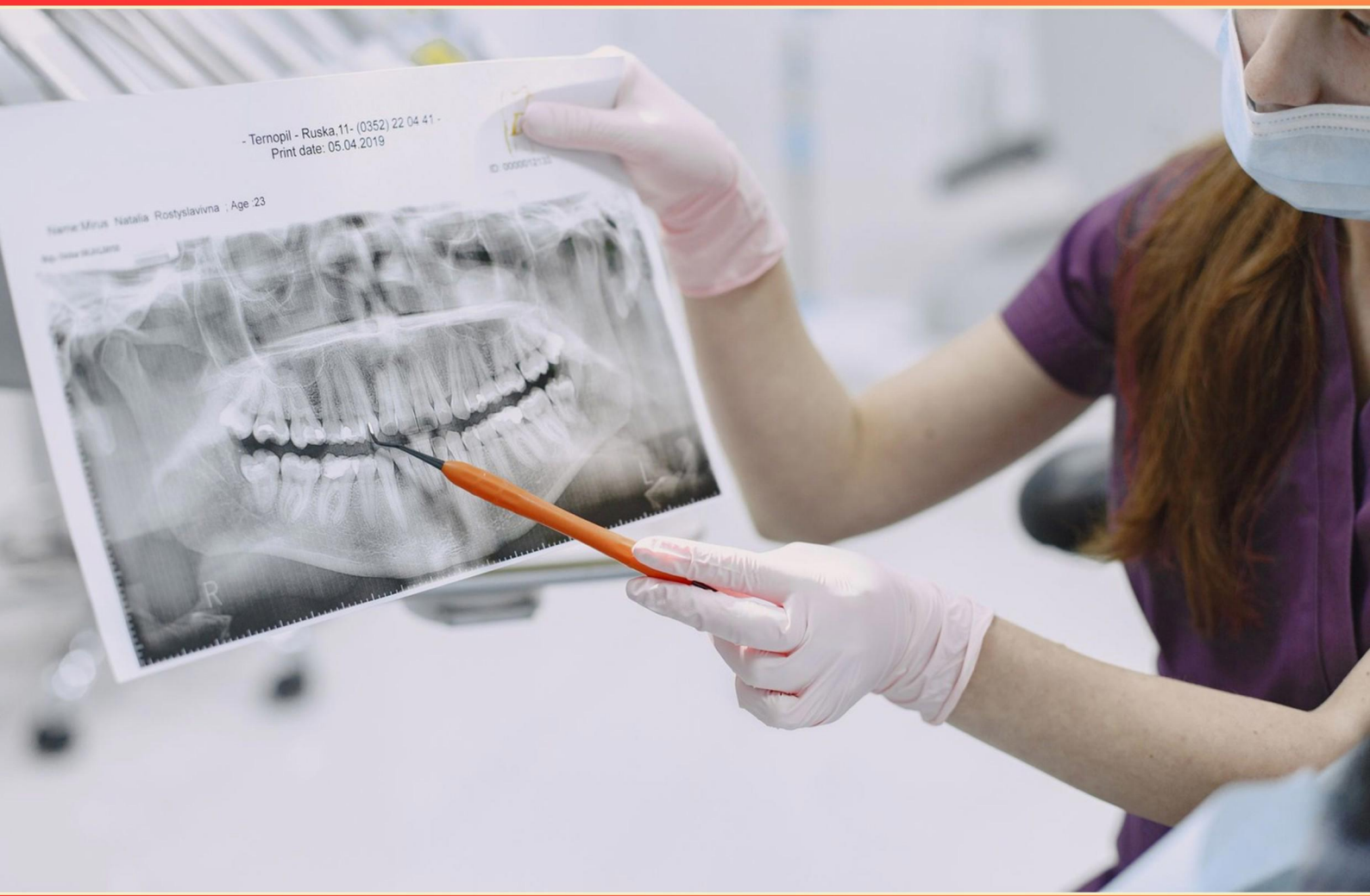
EVIDENCE-BASED DENTISTRY (EBD) EXAM 1 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

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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.

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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!

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Questions

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1. To make inferences from a sample, researchers rely on which?

A. Statistics

B. Descriptive summaries

C. Opinions

D. Random chance

2. Usually sensitivity and specificity are _____ factors, meaning...

A. Opposing

B. Independent

C. Complementary

D. Unrelated

3. NNT definition: proportion of patients with at least 50% pain relief over 6 hours compared to placebo

A. Time to relief

B. Proportion of patients with at least 50% pain relief over 6 hours compared to placebo

C. Difference in mean pain scores

D. Absolute risk reduction

4. In cohort studies, which outcome is most commonly measured?

A. Prevalence of the disease

B. Incidence of the disease or harm, or protective effect due to exposure

C. Mortality rate

D. Case fatality rate

5. Secondary or pre-appraised evidence

A. bottom of pyramid: systematic reviews, critical summaries of systematic reviews, clinical practice guidelines

B. top of pyramid: randomized trials

C. primary research articles

D. expert opinion

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6. CONSORT criteria is

A. a 25 item checklist and flow diagram

B. a guideline for reporting adverse events

C. a minimum set of recommendations for reporting clinical trials

D. a checklist for observational studies

7. Which study type is most suitable for testing hypotheses under controlled conditions?

A. Case-Control

B. Case Study

C. Ecological Study

D. Animal and Lab Study

8. Approximately what percentage of data lie within three standard deviations of the mean?

A. 99.7%

B. 68%

C. 95%

D. 100%

9. External validity is primarily concerned with?

A. Generalizability to patients or larger populations

B. Randomization integrity

C. Blinding of outcome assessment

D. Statistical power

10. In observational research, timing of data collection in cross-sectional designs is typically

A. Data are collected at multiple time points

B. Data are collected at a single point in time

C. Data are collected after outcomes occur

D. Data are collected before exposures

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Answers

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

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Explanations

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1. To make inferences from a sample, researchers rely on which?

A. Statistics

B. Descriptive summaries

C. Opinions

D. Random chance

Statistics provide the formal tools to estimate population parameters and to draw inferences from a sample while accounting for sampling variability. From a sample you can calculate values like the mean or proportion, then use inferential methods to generalize to the population and quantify uncertainty with confidence intervals or hypothesis tests. Descriptive summaries describe the sample but don't by themselves generalize; opinions aren't scientific tools for inference; and while random chance affects what a sample shows, the methods that quantify and manage that uncertainty come from statistics.

2. Usually sensitivity and specificity are _____ factors, meaning...

A. Opposing

B. Independent

C. Complementary

D. Unrelated

Sensitivity and specificity typically trade off against each other because the threshold that defines a positive result determines how many true disease cases are detected versus how many non-diseased individuals are mislabeled as positive. Lowering the threshold increases sensitivity by catching more true positives, but it also raises the number of false positives, reducing specificity. Raising the threshold has the opposite effect: it reduces false positives and increases specificity, but misses more true disease, lowering sensitivity. Since adjusting one threshold parameter moves both metrics in opposite directions, they are opposing factors rather than independent or complementary. In practice, clinicians balance them based on the clinical context—whether it's more important to avoid missing disease or to minimize unnecessary follow-up for healthy individuals.

3. NNT definition: proportion of patients with at least 50% pain relief over 6 hours compared to placebo

A. Time to relief

B. Proportion of patients with at least 50% pain relief over 6 hours compared to placebo

C. Difference in mean pain scores

D. Absolute risk reduction

NNT reflects how many patients need treatment for one to experience a defined benefit, and it comes from comparing the proportion who achieve that benefit with treatment versus placebo. In pain trials, a common defined benefit is at least 50% pain relief within a set time, such as 6 hours. The NNT is the reciprocal of the absolute risk reduction, where ARR is the difference between the responder rates in the treatment and placebo groups. So describing NNT in terms of the proportion achieving at least 50% pain relief over 6 hours compared with placebo captures the outcome used to compute it. The other options refer to different concepts: time to relief is a time-to-event measure, the difference in mean pain scores is a continuous outcome, and absolute risk reduction is the ARR itself, not the NNT.

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4. In cohort studies, which outcome is most commonly measured?

A. Prevalence of the disease

B. Incidence of the disease or harm, or protective effect due to exposure

C. Mortality rate

D. Case fatality rate

In cohort studies, you follow groups over time based on their exposure status to see what happens to them prospectively. This design is built to measure new occurrences, so the natural outcome is incidence—the number or rate of new cases of disease or harm after exposure. It also lets you assess a protective effect if the exposure reduces risk. Prevalence reflects existing cases at a single point in time, which is more suited to cross-sectional designs. Mortality rate can be studied, but isn't the defining outcome of a cohort; case fatality rate focuses on deaths among people who already have the disease, a scenario more typical of other study designs. So, the incidence of the disease or harm, or a protective effect due to exposure, is the most characteristic outcome in cohort studies.

5. Secondary or pre-appraised evidence

A. bottom of pyramid: systematic reviews, critical summaries of systematic reviews, clinical practice guidelines

B. top of pyramid: randomized trials

C. primary research articles

D. expert opinion

Secondary or pre-appraised evidence consists of sources that summarize and evaluate primary research. Systematic reviews gather all relevant studies on a question, assess their quality, and synthesize the findings, sometimes with a meta-analysis. Critical summaries of systematic reviews briefly distill those syntheses and appraisals for quick use. Clinical practice guidelines take the best available evidence from systematic reviews and translate it into actionable recommendations for care. Because these sources already evaluate and integrate multiple primary studies, they are categorized as secondary or pre-appraised evidence, often shown toward the base of the pyramid in this framework. Randomized trials and other primary research articles provide original data from individual studies, not synthesized evaluations. Expert opinion, while useful, is not pre-appraised evidence and sits lower in many hierarchies.

6. CONSORT criteria is

A. a 25 item checklist and flow diagram

B. a guideline for reporting adverse events

C. a minimum set of recommendations for reporting clinical trials

D. a checklist for observational studies

CONSORT is a guideline that provides a minimum set of recommendations for reporting randomized controlled trials. The aim is to improve transparency, completeness, and quality of trial reporting so readers can judge the validity and applicability of the study. It is typically applied as a 25-item checklist plus a flow diagram that shows how participants moved through enrollment, allocation, follow-up, and analysis. While these tools cover specific aspects of trial reporting—design, randomization, blinding, sample size, outcomes, and adverse events—the overarching purpose is to standardize how randomized trials are reported. It is not a guideline for adverse events alone, and observational studies use different reporting guidelines (such as STROBE).

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7. Which study type is most suitable for testing hypotheses under controlled conditions?

A. Case-Control

B. Case Study

C. Ecological Study

D. Animal and Lab Study

To test hypotheses under controlled conditions, you need an approach that lets you manipulate variables while keeping others constant. Animal or laboratory studies are built precisely for this: the environment, dosages, timing, and other factors can be tightly controlled, and researchers can introduce or withhold specific exposures to observe direct effects. This setup makes it possible to establish causal relationships and explore mechanisms without the same level of confounding present in real-world settings. In contrast, observational designs like case-control, case studies, or ecological studies rely on existing data and natural variation, where many factors differ between subjects or groups and biases or confounding can obscure causal inferences.

8. Approximately what percentage of data lie within three standard deviations of the mean?

A. 99.7%

B. 68%

C. 95%

D. 100%

In a normal distribution, the spread of values around the mean follows the empirical rule: about 68% lie within one standard deviation, about 95% within two, and about 99.7% within three. Therefore, roughly 99.7% of data fall within three standard deviations of the mean. This framing also explains why very few values lie beyond that range, which is why three standard deviations is used to flag potential outliers. The other numbers correspond to smaller ranges (one or two standard deviations) or to an impossible all-encompassing range (100%), which isn't the correct capture for the normal spread.

9. External validity is primarily concerned with?

A. Generalizability to patients or larger populations

B. Randomization integrity

C. Blinding of outcome assessment

D. Statistical power

External validity centers on whether study findings can be applied beyond the exact people and setting studied. It asks if the results generalize to other patients, other clinical environments, or different times and conditions. For example, a trial showing benefit in a controlled hospital population of middle-aged adults may raise questions about whether that benefit would appear in community clinics, in older patients, or in those with multiple health issues, or in settings with fewer resources. Factors like patient characteristics, treatment delivery, and follow-up practices influence whether the results reflect real-world practice. In contrast, internal validity is about how confidently the study shows a true treatment effect within the study itself. Randomization integrity helps prevent selection bias and confounding; blinding of outcome assessment reduces measurement bias—all focusing on accuracy of the effect within the trial. Statistical power pertains to the study's ability to detect an effect given the sample size, affecting precision rather than generalizability. So, external validity is the idea of generalizing findings to broader patient populations and settings.

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10. In observational research, timing of data collection in cross-sectional designs is typically

A. Data are collected at multiple time points

B. Data are collected at a single point in time

C. Data are collected after outcomes occur

D. Data are collected before exposures

Cross-sectional observational studies capture a single moment in time, providing a snapshot of both exposure status and outcome in the population. Because all data are collected at that one point, you get prevalence information and a simultaneous view of exposure and outcome, not a sequence of events. That's why collecting data at one time point is the defining timing feature. In contrast, gathering data at multiple time points describes longitudinal or repeated-measures designs; collecting data after outcomes occur implies follow-up to observe outcomes following exposure (cohort or similar designs); and collecting data before exposures wouldn't reflect the simultaneous snapshot characteristic of cross-sectional research.

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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://ebdexam1.examzify.com

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

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