

Gemological Institute of America (GIA) Graduate Diamonds Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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. Alluvial Deposit is defined as a deposit where gems are eroded from their source rock and transported away from the source and further concentrated in rivers and streams.**
 - A. A deposit where gems are eroded from their source rock and transported away from the source and further concentrated in rivers and streams.**
 - B. A deposit formed by lava flows on the surface**
 - C. A deposit of sedimentary rock only found in deserts**
 - D. A deep mantle-derived deposit**

- 2. Which statement best describes production and cost of diamond simulants compared to diamonds?**
 - A. They can be produced in nearly any size and quantity and cost less than natural or lab-grown diamonds.**
 - B. They can only be produced in limited sizes and typically cost more than diamonds.**
 - C. They are only produced by natural processes and cost the same as diamonds.**
 - D. They are always standard size and more expensive.**

- 3. Which is rarer: diamond-bearing lamproite or kimberlite?**
 - A. Lamproite**
 - B. Kimberlite**
 - C. Both**
 - D. Neither**

- 4. What is the Earth's core?**
 - A. The Earth's mantle layer.**
 - B. The Earth's crust.**
 - C. The Earth's innermost layer.**
 - D. The Moon's core.**

- 5. In terms of processing advantages, laser sawing over traditional blade sawing is most accurately described as which?**
- A. Less control over cut direction**
 - B. Less weight retention than blade sawing**
 - C. More precise and efficient than blade sawing and retains more weight**
 - D. Cannot handle large rough pieces**
- 6. What does repolishing a polished diamond refer to?**
- A. Refinishing a polished diamond to correct minor faults in its clarity or finish.**
 - B. Recutting a diamond to change its shape.**
 - C. Polishing a rough diamond for additional brilliance.**
 - D. Reframing a diamond into jewelry.**
- 7. What lighting condition is most widely accepted for color grading?**
- A. Incandescent tungsten light**
 - B. Balanced, daylight-equivalent fluorescent light**
 - C. Direct sunlight**
 - D. UV-rich lamp**
- 8. Why do fancy cuts have different weight correction factors? What do they take in account?**
- A. The weight correction factors for fancy cuts allow for variations that aren't seen in rounds**
 - B. They adjust for color differences**
 - C. They are identical to rounds**
 - D. They ignore girdle thickness**
- 9. Which materials commonly exhibit a vitreous luster?**
- A. Opals**
 - B. Quartz and glass**
 - C. Pearls and coral**
 - D. Moonstone and peridot**

10. Lamproite pipes form at which part of cratons?

- A. Center**
- B. Edges**
- C. Throughout**
- D. Inside core**

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Answers

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

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Explanations

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1. **Alluvial Deposit is defined as a deposit where gems are eroded from their source rock and transported away from the source and further concentrated in rivers and streams.**
 - A. A deposit where gems are eroded from their source rock and transported away from the source and further concentrated in rivers and streams.
 - B. A deposit formed by lava flows on the surface
 - C. A deposit of sedimentary rock only found in deserts
 - D. A deep mantle-derived deposit**

Alluvial deposits form when material is broken down from its source rock and carried by running water, then dropped and concentrated where the flow slows. For gems, this means minerals are eroded and transported by rivers or streams, eventually settling in places like riverbeds, bars, or floodplains where heavier grains accumulate. This hydraulic sorting by water is the hallmark of alluvial (placer) deposits. The other descriptions point to processes not involving water-lain sedimentation: lava-flow surfaces come from molten rock, desert sedimentary deposits form in arid, often wind-driven conditions, and mantle-derived sources originate deep underground. So the idea of gems being eroded, transported away, and concentrated in rivers and streams fits an alluvial deposit.

2. **Which statement best describes production and cost of diamond simulants compared to diamonds?**
 - A. They can be produced in nearly any size and quantity and cost less than natural or lab-grown diamonds.**
 - B. They can only be produced in limited sizes and typically cost more than diamonds.
 - C. They are only produced by natural processes and cost the same as diamonds.
 - D. They are always standard size and more expensive.

Diamond simulants are materials that imitate diamond but aren't diamond themselves, and they're designed to be produced readily in a factory setting. Because their production relies on scalable manufacturing processes rather than the slow, natural formation of crystals, they can be made in a wide range of sizes, shapes, and quantities. This flexibility means you can obtain large stones or many stones quickly and without the supply constraints that affect natural diamonds or even lab-grown diamonds. Cost follows the same logic. The raw materials for simulants are abundant and easier to process, so the overall production cost is much lower. As a result, these stones typically sell for far less than diamonds—whether natural or lab-grown—while still offering the look and brilliance that makes diamond imitations appealing. In contrast, natural diamonds depend on geological processes that take millions of years and limited reserves, and lab-grown diamonds require specialized equipment and energy-intensive production. Those factors push prices higher and constrain the possible sizes and quantities at a given price point. So, the statement that captures the practical distinction is that diamond simulants can be produced in nearly any size and quantity and cost less than natural or lab-grown diamonds.

3. Which is rarer: diamond-bearing lamproite or kimberlite?

- A. Lamproite**
- B. Kimberlite**
- C. Both**
- D. Neither**

Diamond-bearing rocks show that kimberlite is the usual host for natural diamonds, forming deep in the mantle and rising quickly to the surface as pipes. Kimberlites are far more common as diamond carriers, which is why they're known as the primary source of many of the world's diamonds. Lamproite can also carry diamonds, but such occurrences are much rarer; there are only a few well-documented diamond-bearing lamproite pipes (Argyle is a famous example), whereas diamond-bearing kimberlites are widespread. Because of this disparity in frequency, diamond-bearing lamproite is the rarer of the two.

4. What is the Earth's core?

- A. The Earth's mantle layer.**
- B. The Earth's crust.**
- C. The Earth's innermost layer.**
- D. The Moon's core.**

The concept being tested is where the Earth's core is located and what it comprises. The core is the center part of the planet, lying beneath the mantle, and it is the innermost layer. It isn't the crust or the mantle, and it isn't related to the Moon. In fact, the core has two parts: an outer liquid layer made mainly of iron and nickel, and an inner solid sphere also mainly iron-nickel. The inner core remains solid because the pressures at Earth's center are immense, while the outer core is liquid and flows, which helps generate Earth's magnetic field. So the best description is that the core is the Earth's innermost layer.

5. In terms of processing advantages, laser sawing over traditional blade sawing is most accurately described as which?

- A. Less control over cut direction**
- B. Less weight retention than blade sawing**
- C. More precise and efficient than blade sawing and retains more weight**
- D. Cannot handle large rough pieces**

Laser sawing delivers greater precision and efficiency because the process uses a focused energy beam to remove material with minimal physical contact. This allows you to follow exact cut paths and produce a very narrow kerf, which reduces material waste and mechanical stress on the rough. As a result, you retain more of the original weight than with a traditional blade saw, where a larger kerf and more aggressive cutting action remove more material and can introduce more stress. Modern laser systems are also capable of handling large rough pieces with high throughput, making the overall process faster and more controllable. So the best description is that laser sawing is more precise and efficient than blade sawing and retains more weight. The other options don't fit because lasers actually offer improved control of cut direction, preserve weight better than blade sawing, and can process sizable rough pieces.

6. What does repolishing a polished diamond refer to?

- A. Refinishing a polished diamond to correct minor faults in its clarity or finish.**
- B. Recutting a diamond to change its shape.**
- C. Polishing a rough diamond for additional brilliance.**
- D. Reframing a diamond into jewelry.**

Repolishing a polished diamond means refinishing the surface of a stone that's already been cut and polished in order to improve its appearance by removing minor blemishes and restoring the facet finish. It focuses on the surface quality to regain sparkle and smoothness without changing the diamond's overall shape or proportions. This can slightly reduce weight because some material is removed, but the goal is to refresh the look of the facets, not to alter the cut. It's different from recutting, which would change the diamond's shape, and from polishing rough, which is the initial step of creating a finished stone. It's also unrelated to reframing, which involves setting the diamond in jewelry.

7. What lighting condition is most widely accepted for color grading?

- A. Incandescent tungsten light**
- B. Balanced, daylight-equivalent fluorescent light**
- C. Direct sunlight**
- D. UV-rich lamp**

Color grading hinges on seeing color as it would appear under neutral, true daylight. A balanced, daylight-equivalent fluorescent light delivers a broad, even spectrum that mimics noon daylight and provides a stable color temperature around 6500K (D65). This setup yields a neutral color cast and high fidelity in color rendition, so hue, saturation, and tone can be compared consistently across stones and settings. It minimizes shifts from lighting that is too warm or too cool and avoids the directionality and glare issues of direct sun. Fluorescent daylight-balanced sources also tend to have a high color-rendering index, meaning they reveal true colors rather than distorting them. In contrast, incandescent tungsten lighting is warm and skews colors toward yellowish tones; direct sunlight varies with time of day and weather, creating harsh shadows and uneven illumination; UV-rich lamps can induce fluorescence and add an unpredictable spectral component, undermining consistency. So, the most widely accepted lighting for color grading is a balanced, daylight-equivalent fluorescent source, because it provides a stable, neutral, daylight-like spectrum that accurately renders color.

8. Why do fancy cuts have different weight correction factors? What do they take in account?

A. The weight correction factors for fancy cuts allow for variations that aren't seen in rounds

B. They adjust for color differences

C. They are identical to rounds

D. They ignore girdle thickness

Weight correction factors for fancy cuts exist because the mass inside a given outline varies with shape. Rounds have a very uniform weight distribution for a given diameter, but fancy cuts—marquise, pear, oval, emerald, heart, etc.—distribute material differently, so stones with the same approximate outline can have different carat weights. The correction factors account for this by considering how the cut's proportions—length-to-width, depth, table size, culet, and girdle thickness—influence the actual weight within that outline. They help standardize size perception and pricing across different shapes. They're not about color, they aren't identical to rounds, and girdle thickness is a factor that can affect weight and is included, not ignored.

9. Which materials commonly exhibit a vitreous luster?

A. Opals

B. Quartz and glass

C. Pearls and coral

D. Moonstone and peridot

Vitreous luster describes a bright, glass-like shine, similar to polished glass. Quartz and glass are classic examples because they have smooth, highly reflective surfaces that scatter light in a way that produces that clear, glassy gleam. Pearls and coral, on the other hand, tend to show a pearly or waxy sheen; moonstone often displays a milky glow called adularescence rather than a pure glassy shine; opal and peridot can have varied appearances, but the most representative and consistently described glassy look comes from quartz and glass.

10. Lamproite pipes form at which part of cratons?

A. Center

B. Edges

C. Throughout

D. Inside core

Lamproite pipes form at the edges of cratons. Cratons are thick, cold, and mechanically strong in their interiors, which tends to impede deep-sourced magmas from reaching the surface there. At craton margins, however, the lithosphere is weaker and often cut by sutures, faults, and zones of extension. These structural weaknesses provide ready-made paths for mantle-derived, volatile-rich lamproite magmas to ascend and erupt as pipes. This marginal setting contrasts with the craton center, where the conditions are less favorable for such rapid ascent, and explains why lamproite pipes are typically found near craton edges rather than throughout the interior.

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://giagraduatediamonds.examzify.com>

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

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