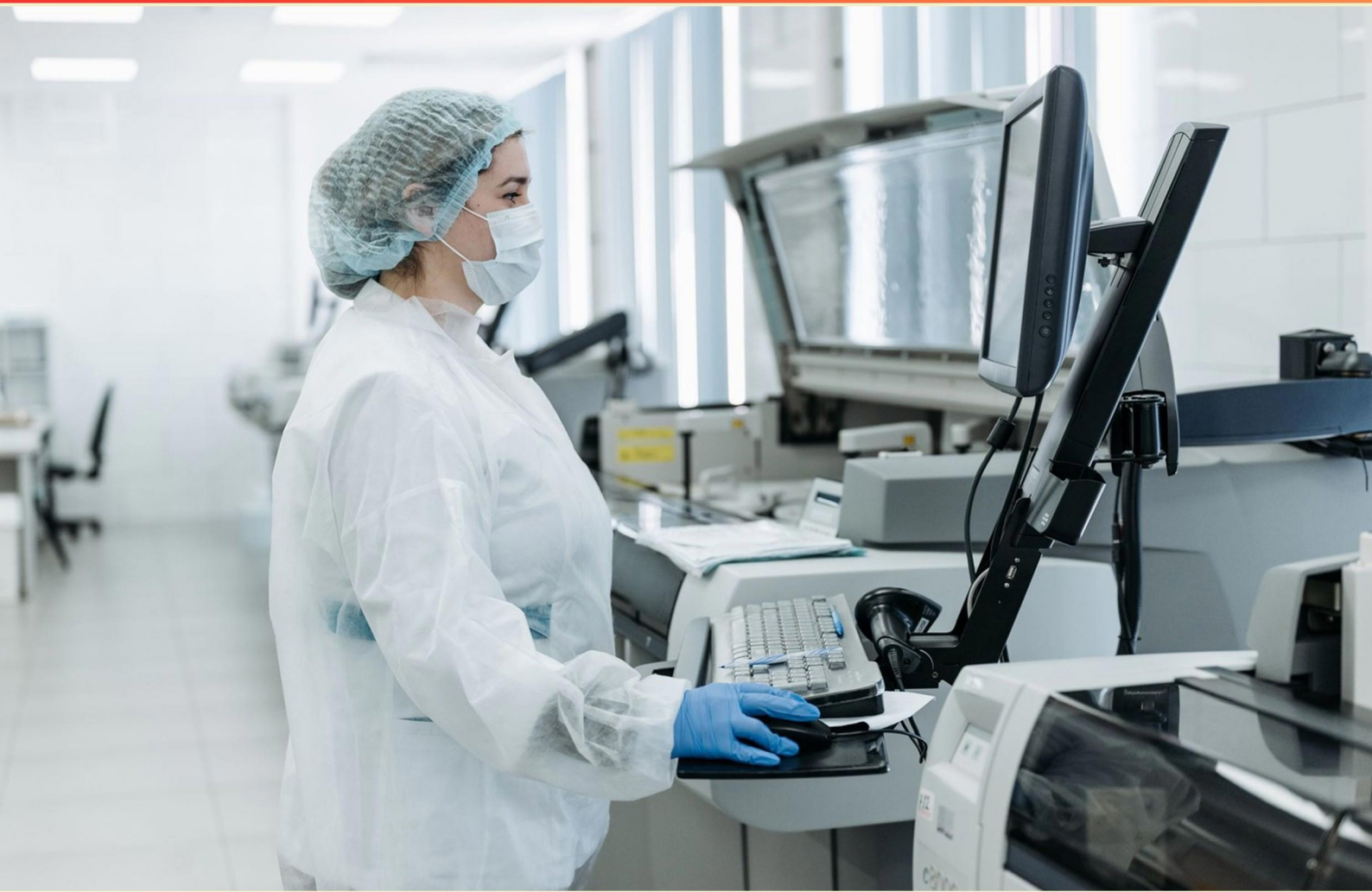


SONOGRAPHY ENTRANCE PRACTICE EXAM (SAMPLE)

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.

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. What is the sum of -5 and -9?
 - A. -14
 - B. -12
 - C. -6
 - D. -19
2. What will the outcome be when a positive number is divided by a negative number?
 - A. Positive
 - B. Negative
 - C. Zero
 - D. Undefined
3. What is the result of adding 5 and -12?
 - A. -7
 - B. -5
 - C. 7
 - D. 12
4. What does a sonographer need to evaluate in the first trimester of pregnancy?
 - A. Fetal heartbeat, gestational age, and any anomalies
 - B. Maternal blood pressure and weight
 - C. Placenta position and size
 - D. Infertility status
5. Why do bread and beer contain yeast?
 - A. To add flavor
 - B. The yeast will consume the sugars as soon as the water is added
 - C. To preserve the product
 - D. To improve texture

- 6. What substance makes up about 60% of the body's weight?**
- A. Blood
 - B. Bone
 - C. Water
 - D. Muscle
- 7. What is a notable historical aspect of the development of sonography?**
- A. The first medical ultrasound was conducted in the early 1950s for obstetric purposes
 - B. Ultrasound technology was developed in the 1970s
 - C. The technique was first invented for cardiac evaluation
 - D. Sonography was created in the 19th century
- 8. In which area is an ultrasound typically less effective?**
- A. In pregnant women
 - B. In healthy, lean patients
 - C. In obese patients or those with high gastrointestinal gas
 - D. In children under five
- 9. How many legs do spiders have?**
- A. 6
 - B. 8
 - C. 10
 - D. 12
- 10. What does the term 'resolution' refer to in sonography?**
- A. The time taken to perform the ultrasound
 - B. The detail in the images produced
 - C. The number of patients seen in a day
 - D. The cost associated with ultrasound imaging

Answers

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

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Explanations

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1. What is the sum of -5 and -9?

- A. -14**
- B. -12
- C. -6
- D. -19

To find the sum of -5 and -9, you simply add the two negative numbers together. When adding two negative numbers, the result is also negative. In this case, combine the absolute values of the two numbers: $5 + 9$ equals 14. Because both numbers are negative, the sum is -14. Thus, the correct answer is -14, as it accurately represents the result of the sum of -5 and -9, which is a greater negative value than either of the original numbers alone.

2. What will the outcome be when a positive number is divided by a negative number?

- A. Positive
- B. Negative**
- C. Zero
- D. Undefined

When a positive number is divided by a negative number, the outcome is a negative number. This is because division can be thought of as repeated subtraction. When you divide a positive quantity by a negative one, you are essentially determining how many times the negative number can be subtracted from zero without exceeding the positive number in magnitude, which leads to a negative result. For instance, if you take the number 10 (positive) and divide it by -2 (negative), the calculation would yield -5. This result highlights that the property of signs in arithmetic dictates that a positive divided by a negative results in a negative outcome. The concept of signs in division aligns with the rules of arithmetic: if two numbers have opposite signs, their product (and hence division as a form of multiplication by the reciprocal) will also have a negative sign. This principle is fundamental in understanding how numbers interact in arithmetic operations.

3. What is the result of adding 5 and -12?

- A. -7**
- B. -5
- C. 7
- D. 12

When adding 5 and -12, you are essentially combining a positive number with a negative number. This can be viewed as starting at 5 and then moving 12 units in the negative direction. To break it down, start with the positive number 5. When you subtract 12, since subtraction is equivalent to adding the negative, you move down the number line. Since the absolute value of -12 (which is 12) is greater than 5, the result will be negative. Calculating this gives: $5 + (-12) = 5 - 12 = -7$. Thus, the result of adding 5 and -12 is -7. This finding aligns with basic arithmetic rules regarding the addition of positive and negative integers, reaffirming that the process of combining these values results in a correctly calculated negative number.

4. What does a sonographer need to evaluate in the first trimester of pregnancy?

- A. Fetal heartbeat, gestational age, and any anomalies
- B. Maternal blood pressure and weight
- C. Placenta position and size
- D. Infertility status

In the first trimester of pregnancy, the primary focus for a sonographer is to assess critical elements that indicate the health and development of the fetus. Evaluating the fetal heartbeat is essential because it confirms that the pregnancy is viable and that the fetus is alive. Gestational age is also measured during this period, typically through the crown-rump length, as establishing the correct gestational age is vital for monitoring growth and determining important timelines for prenatal care. Additionally, screening for any anomalies during this early stage can provide valuable information that may influence medical management or further diagnostic evaluations as the pregnancy progresses. These evaluations are foundational to ensuring both maternal and fetal health.

5. Why do bread and beer contain yeast?

- A. To add flavor
- B. The yeast will consume the sugars as soon as the water is added
- C. To preserve the product
- D. To improve texture

The presence of yeast in bread and beer primarily serves the function of fermentation, which is a crucial process in both these products. When yeast is added to the ingredients, it consumes the sugars present and, through fermentation, produces carbon dioxide and alcohol. In the case of bread, the carbon dioxide produced helps to leaven the dough, creating the light and airy texture that is characteristic of baked bread. For beer, the alcohol and carbon dioxide develop the beverage's flavor and carbonation. This consumption of sugars is a vital step in both processes; it highlights the biological role that yeast plays beyond merely enhancing texture or flavor. While yeast does contribute to these aspects, its primary function revolves around the fermentation process, making it essential for transforming basic ingredients into the final products of bread and beer.

6. What substance makes up about 60% of the body's weight?

- A. Blood
- B. Bone
- C. Water
- D. Muscle

Water is the substance that makes up approximately 60% of the body's weight. This high percentage is due to the essential role that water plays in various physiological processes. Water is crucial for maintaining body temperature, transporting nutrients, removing waste, and providing the environment for biochemical reactions to take place. In adults, this percentage can vary somewhat depending on factors such as age, sex, and body composition, but it generally hovers around the 60% mark for most individuals. In contrast, while blood, bone, and muscle each contribute to body weight, they do so to a significantly lesser extent. Blood comprises about 7-8% of total body weight, while bones make up roughly 15% and muscles account for around 30-40%. In comparison, water is far more abundant and is a vital component of all these tissues, linking them together in terms of their physiological functions. Thus, recognizing water's predominant presence in the body highlights its critical importance in maintaining overall health and homeostasis.

7. What is a notable historical aspect of the development of sonography?

- A. The first medical ultrasound was conducted in the early 1950s for obstetric purposes
- B. Ultrasound technology was developed in the 1970s
- C. The technique was first invented for cardiac evaluation
- D. Sonography was created in the 19th century

The development of sonography is particularly noted for its early application in the field of obstetrics during the 1950s. This period marked a significant advancement in medical imaging, as ultrasound technology began to be utilized to visualize the developing fetus, providing valuable information that was previously inaccessible. The use of ultrasound in obstetrics allowed for non-invasive monitoring of pregnancy, helping to assess fetal growth and wellbeing, which informed clinical decisions and improved prenatal care. While other advancements in ultrasound technology did occur later, including developments in the 1970s and various applications such as cardiac evaluation, the pioneering use of ultrasound in obstetrics stands out as a landmark moment. The notion that sonography was created in the 19th century does not accurately reflect the specific technological advancements that led to its use in a medical context, particularly the innovations of the mid-20th century. Thus, the correct answer highlights a crucial historical milestone in the use of ultrasound in medicine.

8. In which area is an ultrasound typically less effective?

- A. In pregnant women
- B. In healthy, lean patients
- C. In obese patients or those with high gastrointestinal gas
- D. In children under five

Ultrasound waves' effectiveness can be significantly hindered in individuals with high levels of body fat or increased gastrointestinal gas. In obese patients, the additional adipose tissue can serve as a barrier, scattering the sound waves and diminishing the quality of the images produced. Similarly, high gastrointestinal gas creates an obstacle for ultrasound penetration as the gas does not transmit ultrasound waves effectively, leading to reduced clarity and detail in the imaging process. In contrast, ultrasound is generally effective in pregnant women because the amniotic fluid offers a good medium for sound wave transmission. Healthy, lean patients are also typically optimal candidates for ultrasound examinations, as their reduced body fat allows waves to traverse through the body more efficiently. Children under five tend to be more manageable in terms of conducting ultrasound, and their smaller size accommodates better image quality compared to adults with obesity or excess gastrointestinal gas.

9. How many legs do spiders have?

- A. 6
- B. 8
- C. 10
- D. 12

Spiders belong to the class Arachnida, which is characterized by having eight legs. This is a distinguishing feature of arachnids, setting them apart from insects, which typically have six legs. The eight legs of spiders are an adaptation that allows them to be highly efficient predators, using their limbs not only for locomotion but also for capturing prey and building webs. The structural composition of a spider's legs also plays a critical role in their ability to sense the environment and aid in their agility. Understanding this foundational aspect of spider anatomy is essential in differentiating them from other arthropods, such as insects or crustaceans, which have different leg counts and body structures.

10. What does the term 'resolution' refer to in sonography?

- A. The time taken to perform the ultrasound
- B. The detail in the images produced**
- C. The number of patients seen in a day
- D. The cost associated with ultrasound imaging

In sonography, the term 'resolution' specifically refers to the detail present in the images produced by the ultrasound. High resolution indicates that the images are clear, with distinct and well-defined structures, allowing for better visualization of anatomical features and pathology. This detail is crucial for accurate diagnosis and assessment of the condition being examined, as it affects the ability to differentiate between different tissues, identify abnormalities, and guide clinical decision-making. Resolution in ultrasound can be influenced by several factors, including the frequency of the ultrasound transducer, the quality of the imaging equipment, and the technique used during the examination. Higher frequency transducers generally provide better resolution images but have limited depth of penetration, while lower frequency transducers may penetrate deeper but at the expense of image detail. Understanding resolution helps sonographers optimize their images for the best diagnostic outcomes.

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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://sonographyentrance.examzify.com>

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

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