

ASVAB GENERAL SCIENCE PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 cellulose primarily known for in plant cells?**
 - A. Main structural component of the cell wall
 - B. Source of energy storage
 - C. Function in cellular respiration
 - D. Role in photosynthesis
- 2. In the classification of living organisms, which is the most general taxonomic category?**
 - A. Species
 - B. Family
 - C. Domain
 - D. Kingdom
- 3. Which field of science deals with the properties, changes, and interactions of matter and energy?**
 - A. Chemistry
 - B. Biology
 - C. Physics
 - D. Geology
- 4. What is unique about the pulmonary artery?**
 - A. It carries oxygenated blood to the lungs.
 - B. It is the only artery that carries deoxygenated blood.
 - C. It connects the heart and the brain directly.
 - D. It is the largest artery in the human body.
- 5. Which process is used to date ancient rocks and fossils using the decay of radioactive isotopes?**
 - A. Geologic dating
 - B. Paleontology
 - C. Radiometric dating
 - D. Carbon dating

6. In order from closest to farthest, which is the correct sequence of planets in our solar system?
- A. Mercury, Venus, Earth, Mars
 - B. Venus, Earth, Mars, Jupiter
 - C. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
 - D. Earth, Mars, Jupiter, Saturn
7. What is the outermost layer of the Earth known as?
- A. Troposphere
 - B. Mesosphere
 - C. Stratosphere
 - D. Thermosphere
8. What is the role of lipase in the digestive system?
- A. Breaks down proteins into amino acids
 - B. Changes fats to glycerol and fatty acids
 - C. Helps digest carbohydrates
 - D. Aids in the absorption of vitamins
9. What pH value represents most basic substances?
- A. 5
 - B. 10
 - C. 14
 - D. 0
10. What is the smallest component of an element?
- A. Molecule
 - B. Atom
 - C. Compound
 - D. Ion

Answers

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

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Explanations

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1. What is cellulose primarily known for in plant cells?

A. Main structural component of the cell wall

B. Source of energy storage

C. Function in cellular respiration

D. Role in photosynthesis

Cellulose is primarily known for being the main structural component of the cell wall in plant cells. It is a complex carbohydrate, specifically a polysaccharide made up of long chains of glucose molecules linked together through glycosidic bonds. This structure provides rigidity and strength to the cell wall, allowing plants to maintain their shape and withstand various physical stresses such as wind and pressure. In addition to its structural role, cellulose helps protect the plant cells and contributes to the overall integrity of the plant itself. Since cellulose is not digestible by most organisms, it also plays a crucial role in forming dietary fiber in human nutrition, providing bulk and aiding in digestion. The other options describe functions that are not the primary role of cellulose. Energy storage typically involves starch or fats, cellular respiration primarily utilizes glucose for energy, and photosynthesis mainly occurs in chloroplasts involving chlorophyll, not cellulose. Thus, the correct answer highlights the essential role cellulose plays in the structural framework of plant cells.

2. In the classification of living organisms, which is the most general taxonomic category?

A. Species

B. Family

C. Domain

D. Kingdom

The most general taxonomic category in the classification of living organisms is the domain. This hierarchical system of classification begins with broader categories and narrows down to more specific ones. The domain is the highest level, encapsulating the greatest diversity of life forms. There are three domains: Archaea, Bacteria, and Eukarya. Each domain serves as a primary grouping based on fundamental genetic and biochemical similarities and differences among organisms. Within each domain, organisms are further classified into kingdoms, which are a more specific categorization but still relatively broad compared to the domain level. Understanding the domain helps to establish a framework for the relationships and characteristics shared among different life forms, making it a crucial starting point in the biological classification system.

3. Which field of science deals with the properties, changes, and interactions of matter and energy?

A. Chemistry

B. Biology

C. Physics

D. Geology

The field of science that deals with the properties, changes, and interactions of matter and energy is physics. Physics focuses on understanding how matter behaves under different conditions and the fundamental forces at play, such as gravity, electromagnetism, and nuclear forces. It encompasses various topics including the motion of objects, the conservation of energy, thermodynamics, waves, and quantum mechanics. While chemistry also deals with matter and its interactions, it specifically focuses on the composition, structure, and reactions of substances, making it distinct from the broader principles explored in physics. Biology, on the other hand, studies living organisms and their interactions with the environment and each other, while geology examines Earth's physical structures and processes. Thus, physics encompasses a wider range of principles regarding the behavior of matter and energy as fundamental aspects of the universe.

4. What is unique about the pulmonary artery?

- A. It carries oxygenated blood to the lungs.
- B. It is the only artery that carries deoxygenated blood.**
- C. It connects the heart and the brain directly.
- D. It is the largest artery in the human body.

The pulmonary artery is unique because it is the only artery in the body that carries deoxygenated blood. Unlike other arteries, which transport oxygen-rich blood away from the heart to the rest of the body, the pulmonary artery transports blood from the right side of the heart to the lungs. In the lungs, this deoxygenated blood picks up oxygen and releases carbon dioxide. This process is crucial for maintaining the body's oxygen supply. The distinction of the pulmonary artery is particularly important in the context of cardiovascular physiology, as it plays a vital role in pulmonary circulation, ensuring that blood is oxygenated before it returns to the heart to be distributed throughout the rest of the body.

5. Which process is used to date ancient rocks and fossils using the decay of radioactive isotopes?

- A. Geologic dating
- B. Paleontology
- C. Radiometric dating**
- D. Carbon dating

The process that is used to date ancient rocks and fossils by relying on the decay of radioactive isotopes is known as radiometric dating. This method takes advantage of the predictable rate of decay of certain radioactive isotopes found in rocks and fossils. As these isotopes decay, they transform into different stable elements at a consistent rate, which allows scientists to measure the ratio of parent isotopes to daughter isotopes. This information can then be used to calculate the age of the rock or fossil. Different isotopes are suitable for dating different types of materials and time periods. For example, uranium-lead dating is often used for very old rocks, while potassium-argon dating can be used to date volcanic rocks. Radiometric dating is widely accepted as a reliable method for establishing the geological timeline of Earth's history. While geologic dating might refer to broader methods of determining the age of geological formations, and paleontology is the study of ancient life through fossils, neither specifically pertains to the decay of isotopes. Carbon dating, on the other hand, is a specific type of radiometric dating that is limited to organic materials and is effective only for relatively recent geological time periods (up to about 50,000 years). Thus, radiometric dating encompasses a wider range of

6. In order from closest to farthest, which is the correct sequence of planets in our solar system?

- A. Mercury, Venus, Earth, Mars
- B. Venus, Earth, Mars, Jupiter
- C. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
- D. Earth, Mars, Jupiter, Saturn

The correct sequence of planets in our solar system, ordered from closest to farthest from the Sun, is Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. This sequence reflects the actual distances of the planets from the Sun and their arrangement in the solar system. Mercury, being the closest planet to the Sun, comes first, followed by Venus, Earth, and Mars, which are the terrestrial planets. After Mars, the sequence continues with the gas giants: Jupiter, Saturn, Uranus, and Neptune, which are positioned further away and are characterized by their larger sizes and differing compositions compared to the terrestrial planets. The other options do not provide the full and correct sequence of all eight recognized planets in their respective distances from the Sun. The first option includes only the inner planets, while the second and fourth options omit several outer planets, failing to depict the complete arrangement accurately. Thus, option C is the only choice that accurately lists all planets in their proper order based on their proximity to the Sun.

7. What is the outermost layer of the Earth known as?

- A. Troposphere
- B. Mesosphere
- C. Stratosphere
- D. Thermosphere

The outermost layer of the Earth, when considering the structure of the atmosphere, is referred to as the thermosphere. This layer is situated above the mesosphere and below the exosphere, extending from about 80 kilometers (50 miles) above the Earth's surface to the edge of space, at around 600 kilometers (370 miles). The thermosphere is characterized by a dramatic increase in temperature with altitude, primarily due to the absorption of solar radiation. This layer is also where the auroras occur, as it contains a small number of particles that can become ionized by solar activity. The thinning atmosphere in the thermosphere means that even though temperatures are extremely high, there are very few air molecules present, making it feel quite cold to a spacecraft or satellite passing through it. Understanding the structure of the Earth's layers is crucial, as it helps distinguish between atmospheric layers and geological layers, such as the Earth's crust, mantle, and core. The other terms mentioned—troposphere, mesosphere, and stratosphere—represent different layers of the atmosphere beneath the thermosphere, with each having distinct characteristics and roles in Earth's climatic and weather systems.

8. What is the role of lipase in the digestive system?

- A. Breaks down proteins into amino acids
- B. Changes fats to glycerol and fatty acids**
- C. Helps digest carbohydrates
- D. Aids in the absorption of vitamins

Lipase plays a crucial role in the digestive system by breaking down fats into simpler components, specifically glycerol and fatty acids. This process is essential because fats, which are too large to be absorbed by the intestines in their whole form, need to be digested into smaller molecules first. Lipase, which is produced by the pancreas and secreted into the small intestine, effectively catalyzes the hydrolysis of triglycerides— the main constituents of body fat in humans and other animals— into free fatty acids and glycerol. This breakdown is vital for the absorption of dietary fats, which are not only a significant source of energy but also necessary for the absorption of fat-soluble vitamins (A, D, E, and K). The other options refer to different processes and do not align with the primary function of lipase. For example, the digestion of proteins into amino acids is primarily the function of proteases, while carbohydrates are broken down by enzymes known as carbohydrases. Both these enzymatic actions occur separately from the role of lipase.

9. What pH value represents most basic substances?

- A. 5
- B. 10
- C. 14**
- D. 0

The pH scale ranges from 0 to 14 and is used to measure how acidic or basic a substance is. A pH of 7 is considered neutral, meaning it is neither acidic nor basic. As the pH value increases above 7, the substance becomes more basic (or alkaline). A pH value of 14 indicates a highly basic solution, with substances such as sodium hydroxide commonly being found in this range. These basic solutions have a greater concentration of hydroxide ions (OH^-) compared to hydrogen ions (H^+), giving them their basic properties. Therefore, a pH value of 14 represents the most basic substances, demonstrating that these solutions can neutralize acids and are often used in various applications, from cleaning products to chemical manufacturing.

10. What is the smallest component of an element?

- A. Molecule
- B. Atom**
- C. Compound
- D. Ion

The smallest component of an element is the atom. Atoms are the basic building blocks of matter and retain the properties of the element they comprise. Each element on the periodic table is made up of unique atoms that have distinct numbers of protons, neutrons, and electrons. In contrast, molecules are formed when two or more atoms bond together, which means they consist of multiple atoms rather than being a single, indivisible unit of an element. Compounds are substances formed from two or more different elements that are chemically bonded, again involving multiple atoms. Ions are charged particles that can be formed when atoms gain or lose electrons, but they are not the fundamental units of elements themselves. Thus, the atom remains the fundamental and smallest component of an element.

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://asvabgenscience.examzify.com>

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

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