ASVAB General Science Practice Test (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

1. Which of the following substances releases positively charged hydrogen ions (H+) into water?

A. Base

B. Salt

C. Acid

D. Alkali

2. Which kingdom does a living thing, capable of photosynthesis and possibly a moss, belong to?

A. A Plantae

B. B Animalia

C. C Fungi

D. D Monera

3. Which group includes organisms that decompose organic material?

A. Carnivores

B. Herbivores

C. Omnivores

D. Decomposers

4. Which type of substance would have a pH close to 7?

A. An acid

B. A base

C. A neutral substance

D. A toxic chemical

5. Which group includes soft-bodied animals typically protected by a hard covering?

A. Phylum Porifera

B. Phylum Mollusca

C. Phylum Nematoda

D. Phylum Annelida

6. Which of the following best describes a biome?

A. A large area characterized by its climate and vegetation

B. A small ecosystem that supports limited species diversity

C. A controlled ecological community

D. An artificial environment for species conservation

7. Which of the following is NOT a role of digestion?

A. Chemical energy is extracted from food in the form of sugars and fat.

B. Raw material for the building of tissue, like proteins, is removed from food.

C. Built-up carbon dioxide is removed from tissues and excreted in urine.

D. Trace minerals are collected from food for specific body processes.

8. What are the fast-flowing, narrow air currents located between the troposphere and stratosphere called?

A. Trade winds

B. Jet streams

C. Monsoons

D. Breezes

9. In which part of the digestive system are most nutrients absorbed into the bloodstream?

A. Large intestine

B. Stomach

C. Small intestine

D. Esophagus

10. What part of the brain controls all voluntary activities and receives sensory input?

A. Cerebellum

B. Cerebrum

C. Hypothalamus

D. Medulla

Answers

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

Explanations

1. Which of the following substances releases positively charged hydrogen ions (H+) into water?

A. Base

B. Salt

C. Acid

D. Alkali

The correct answer is that an acid releases positively charged hydrogen ions (H+) into water. When an acid is dissolved in water, it ionizes and produces hydrogen ions, which are responsible for the acidic properties of the solution. This process affects the pH level of the solution, making it lower because higher concentrations of hydrogen ions correlate to a more acidic environment. In contrast, bases typically accept hydrogen ions or release hydroxide ions (OH-) when dissolved in water, which is not the behavior associated with acids. Salts are the result of the neutralization reaction between acids and bases, and they can dissociate into cations and anions in a solution but do not specifically release hydrogen ions. Alkalis, a subset of bases that dissolve in water, also do not release hydrogen ions but instead contribute to the formation of hydroxide ions. Therefore, the characteristic behavior of acids in releasing hydrogen ions clearly distinguishes them from other substances.

2. Which kingdom does a living thing, capable of photosynthesis and possibly a moss, belong to?

A. A Plantae

B. B Animalia

C. C Fungi

D. D Monera

The living thing described in the question, capable of photosynthesis and possibly a moss, belongs to the Plantae kingdom. This kingdom includes all plants, which are primarily characterized by their ability to perform photosynthesis—a process that uses sunlight to convert carbon dioxide and water into glucose and oxygen. Mosses are non-vascular plants that also fit within this category, as they absorb water and nutrients directly through their surfaces and thrive in moist environments. In contrast, organisms in the Animalia kingdom are primarily heterotrophic, meaning they cannot perform photosynthesis but instead obtain their food by consuming other organisms. Fungi, including mushrooms and molds, are also distinct from plants as they absorb nutrients through decomposition rather than through photosynthesis. The Monera kingdom, which includes bacteria and archaea, consists of single-celled organisms that do not engage in photosynthesis in the manner that plants do. Overall, the unique ability to perform photosynthesis and the characteristics of moss clearly indicate that the living thing in question is classified in the Plantae kingdom.

3. Which group includes organisms that decompose organic material?

A. Carnivores

B. Herbivores

C. Omnivores

D. Decomposers

The correct answer is Decomposers because this group of organisms plays a critical role in ecosystems by breaking down dead organic material and recycling nutrients back into the environment. Decomposers, which include fungi, bacteria, and certain insects, utilize dead plants and animals as their food source, breaking down complex organic compounds into simpler substances. This process not only helps in nutrient cycling but also maintains the health of ecosystems by ensuring that organic waste is processed efficiently. In contrast, carnivores, herbivores, and omnivores are different categories of consumers that obtain their energy from living organisms. Carnivores eat other animals, herbivores consume plants, and omnivores eat both plants and animals. While they are all essential for the food web, they do not perform the decomposition process that is vital for nutrient recycling. Therefore, Decomposers are the only group specifically identified for their role in decomposition.

4. Which type of substance would have a pH close to 7?

A. An acid

B. A base

C. A neutral substance

D. A toxic chemical

Substances that have a pH close to 7 are generally considered neutral. The pH scale ranges from 0 to 14, where a pH of 7 is the midpoint, indicating a neutral solution. Pure water is the classic example of a neutral substance, as it neither donates protons (H^+ ions) like an acid nor accepts them like a base. Acids typically have pH values below 7 due to the presence of excess hydrogen ions, while bases have pH values above 7 because they either produce hydroxide ions (OH^-) or decrease the concentration of hydrogen ions in a solution. Toxic chemicals can vary widely in their pH but are not specifically tied to a pH value of 7. Understanding this balance in pH is crucial in many scientific applications, from determining the acidity or alkalinity of solutions in chemistry to assessing the health of ecosystems in environmental science. Therefore, recognizing that neutral substances are characterized by a pH around 7 is fundamental in the study of chemistry and its practical applications.

5. Which group includes soft-bodied animals typically protected by a hard covering?

A. Phylum Porifera

B. Phylum Mollusca

C. Phylum Nematoda

D. Phylum Annelida

The group that includes soft-bodied animals typically protected by a hard covering is the Phylum Mollusca. This phylum encompasses a diverse range of organisms, including snails, clams, and octopuses. Mollusks are characterized by their soft bodies, which are often supported by a hard external shell made of calcium carbonate. This shell provides protection against predators and environmental stresses. Mollusks also exhibit various adaptations, such as a muscular foot for movement and a mantle that secretes the shell. The presence of a hard shell is a defining feature of many mollusks, distinguishing them from other phyla. This protective covering allows mollusks to thrive in a variety of habitats, from marine and freshwater environments to terrestrial ecosystems. In contrast, the other phyla listed do not share this characteristic. Phylum Porifera, for example, includes sponges that lack true tissues and organs and have a porous body structure. Phylum Nematoda encompasses roundworms, which have a tough outer cuticle but lack a hard shell. Phylum Annelida contains segmented worms, such as earthworms and leeches, that also do not possess a hard protective covering.

6. Which of the following best describes a biome?

A. A large area characterized by its climate and vegetation

B. A small ecosystem that supports limited species diversity

C. A controlled ecological community

D. An artificial environment for species conservation

A biome is best described as a large area characterized by its climate and vegetation. This definition encompasses the vast regions of the Earth that share similar weather patterns, temperature ranges, and types of flora and fauna. Each biome is shaped by environmental factors, including geography, climate, and soil type, which determine the types of plants and animals that can thrive in that particular area. The concept of biomes is essential in understanding ecological relationships, as different biomes support distinct ecosystems. For example, tropical rainforests are rich in biodiversity due to their warm temperatures and abundant rainfall, while deserts have very few plant and animal species adapted to their harsh, dry conditions. Recognizing biomes helps scientists and researchers categorize and study ecological communities across the globe.

7. Which of the following is NOT a role of digestion?

A. Chemical energy is extracted from food in the form of sugars and fat.

B. Raw material for the building of tissue, like proteins, is removed from food.

C. Built-up carbon dioxide is removed from tissues and excreted in urine.

D. Trace minerals are collected from food for specific body processes.

The correct answer indicates that the removal of built-up carbon dioxide from tissues and its excretion in urine is not a role of digestion. Digestion primarily focuses on breaking down food into usable nutrients such as carbohydrates, proteins, fats, vitamins, and minerals. In the context of digestive roles, the extraction of chemical energy from food (such as converting carbohydrates into sugars and fats) allows the body to utilize that energy for various functions. Similarly, the process of obtaining raw materials from food is essential for building and repairing body tissues, particularly proteins, which are vital for cellular structure and function. Additionally, the collection of trace minerals from food serves important purposes, such as enzyme function, hormone production, and maintaining fluid balance within the body. While the removal of carbon dioxide is a crucial physiological process, it primarily relates to cellular respiration and the respiratory system rather than digestion. Carbon dioxide is produced as a byproduct of energy production in cells and is expelled through the lungs, signifying that it is not directly involved in the digestive process itself. Thus, recognizing this distinction clarifies why carbon dioxide removal is not a role of digestion.

8. What are the fast-flowing, narrow air currents located between the troposphere and stratosphere called?

A. Trade winds

B. Jet streams

C. Monsoons

D. Breezes

Jet streams are fast-flowing, narrow air currents found in the atmosphere, primarily located between the troposphere and stratosphere. These currents are significant because they influence weather patterns and can affect air travel. The existence of jet streams stems from the temperature differences between the equator and the poles, which creates a variation in air pressure. Jet streams typically flow from west to east and can be found at altitudes of around 30,000 to 39,000 feet. They are strongest in the winter months and can vary in strength and position, which is why they can have a notable impact on weather systems, including storm paths and patterns. Understanding jet streams is essential for meteorologists in predicting weather changes and for pilots in planning flight routes to optimize fuel efficiency and time.

9. In which part of the digestive system are most nutrients absorbed into the bloodstream?

A. Large intestine

B. Stomach

C. Small intestine

D. Esophagus

The small intestine is the primary site for nutrient absorption in the digestive system. Its inner lining is covered with tiny, finger-like projections called villi, which significantly increase its surface area and enhance its ability to absorb nutrients. As digested food passes through the small intestine, essential nutrients such as carbohydrates, proteins, fats, vitamins, and minerals are absorbed into the bloodstream through the walls of the small intestine. This efficient absorption mechanism allows the body to utilize the nutrients needed for energy, growth, and cellular repair. While the large intestine plays a role in absorbing water and some electrolytes, it is not the main area for nutrient absorption. The stomach primarily serves to break down food chemically and mechanically but does not absorb significant amounts of nutrients. The esophagus's role is to transport food from the mouth to the stomach, and it does not engage in nutrient absorption. Thus, the small intestine is clearly the correct answer as the optimal location for the absorption of most nutrients.

10. What part of the brain controls all voluntary activities and receives sensory input?

A. Cerebellum

B. Cerebrum

C. Hypothalamus

D. Medulla

The cerebrum is the part of the brain that is responsible for controlling all voluntary activities and processing sensory information. It is the largest region of the brain and is divided into two hemispheres, which are further divided into lobes that are specialized for different functions. The cerebrum enables complex functions such as reasoning, problem-solving, and emotional responses, in addition to managing voluntary motor control. It receives sensory input from various parts of the body and integrates this information, allowing individuals to respond appropriately to their environment. This integration is crucial for actions like moving limbs or interpreting sensory data, such as sight and sound. The other parts mentioned have different roles. The cerebellum primarily coordinates balance and fine motor skills but does not control voluntary activities directly. The hypothalamus regulates automatic body processes such as temperature and hormonal balance, while the medulla controls autonomic functions like heart rate and breathing but does not handle voluntary movements or sensory input.

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!