GMAS PHYSICAL SCIENCE PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Table of Contents

Copyright 1
Table of Contents 2
Introduction 3
How to Use This Guide 4
Questions 5
Answers 8
Explanations 10
Next Steps 15

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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. What term describes a substance that slows down a chemical reaction or prevents it from occurring?

A. Catalyst

B. Acid

C. Inhibitor

D. Base

2. Which term describes two nuclei combining to form a nucleus with a larger mass, such as in the sun?

A. Nuclear fusion

B. Nuclear fission

C. Fusion

D. Transmutation

3. $t - t$ is the symbol for what?

A. Q

B. Δt

C. Cp

D. m

4. Suspends light like fog.

A. Colloid

B. Solution

C. Pure substance

D. Heterogeneous mixture

5. What term describes a sloping surface that reduces the amount of force needed to do work?

A. Inclined Plane

B. Wedge

C. Screw

D. Compound Machine

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6. According to Newton's Second Law, what happens to the force if mass doubles while acceleration stays the same?

A. It quadruples

B. It stays the same

C. It doubles

D. It halves

7. What term describes a mixture in which the components remain distinct and can be separated by physical means?

A. Solution

B. Colloid

C. Heterogeneous mixture

D. Pure substance

8. What term describes something that is either an element or a compound?

A. Pure substance

B. Mixture

C. Colloid

D. Solution

9. The force that opposes motion between two surfaces that are in contact is called?

A. Gravity

B. Mass

C. Friction

D. Inertia

10. Which term is the quantity of matter in an object?

A. Weight

B. Force

C. Inertia

D. Mass

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Answers

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

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Explanations

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1. What term describes a substance that slows down a chemical reaction or prevents it from occurring?

A. Catalyst

B. Acid

C. Inhibitor

D. Base

A substance that slows down or stops a chemical reaction is an inhibitor. It works by interfering with the reaction steps—such as blocking active sites on a catalyst or enzyme, or neutralizing reactive intermediates—so collisions between reactant molecules are less likely to lead to products. This reduces the reaction rate or can halt the reaction entirely. In contrast, a catalyst speeds up a reaction by providing an alternative pathway with lower activation energy. Acids and bases can influence reaction rates through changes in mechanism or proton transfer, but they are not defined by the action of slowing or stopping the reaction. So the best-fit term is inhibitor.

2. Which term describes two nuclei combining to form a nucleus with a larger mass, such as in the sun?

A. Nuclear fusion

B. Nuclear fission

C. Fusion

D. Transmutation

Fusion describes two light atomic nuclei merging to form a heavier nucleus, releasing energy in the process. In the sun, extremely high temperatures and pressures allow hydrogen nuclei to come close enough to fuse into helium, and the resulting mass difference is released as energy that powers the star. This is different from fission, which is the splitting of a heavy nucleus into lighter pieces, and from transmutation, which is changing one element into another through nuclear reactions. The concise term for the process of combining nuclei is fusion.

3. $t - t$ is the symbol for what?

A. Q

B. Δt

C. Cp

D. m

$t - t$ represents the amount of time that passes from time t to time t. In physics, this duration is called the time interval and is written with the Greek letter Δt. It tells you how long something lasts or how much time elapses between two moments, with units of seconds. If t comes after t, Δt is positive; if the moments were swapped, it would be negative, but we usually think of the magnitude as the elapsed time. The other quantities refer to different ideas: Q is heat energy transferred, Cp is the specific heat capacity at constant pressure, and m is mass.

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4. Suspends light like fog.

A. Colloid

B. Solution

C. Pure substance

D. Heterogeneous mixture

Suspending light through a medium is a hallmark of a colloid, due to the Tyndall effect where particles scatter visible light. Fog is a colloidal dispersion: tiny droplets of liquid water scattered throughout air. These droplets are large enough to scatter light so you can see a beam through fog, yet small enough to stay suspended rather than settle out. A true solution has solute particles that are too small to scatter light and form a fully uniform mixture, so you don't see the beam. A pure substance is a single component, not a mixture. A heterogeneous mixture can contain different parts, but the key feature described here—the light-scattering behavior that makes the beam visible—is specifically characteristic of colloids.

5. What term describes a sloping surface that reduces the amount of force needed to do work?

A. Inclined Plane

B. Wedge

C. Screw

D. Compound Machine

An inclined plane is a sloping surface that lets you do the same amount of work with less force by spreading the effort over a longer distance. By pushing or pulling along the slope, you apply less instantaneous force, though you move the load a greater distance. The trade-off is captured by the mechanical advantage, which roughly equals the length of the slope divided by the height it rises. Real ramps have friction, so you'll still feel some resistance, but the principle holds: the incline plane lowers the required force to lift or move a load. The other terms describe different devices: a wedge is two inclined planes used to split material; a screw is an inclined plane wrapped around a cylinder that converts rotational to linear motion; a compound machine combines two or more simple machines.

6. According to Newton's Second Law, what happens to the force if mass doubles while acceleration stays the same?

A. It quadruples

B. It stays the same

C. It doubles

D. It halves

When acceleration is kept constant, force is directly proportional to mass because F = m a. If mass doubles while a stays the same, the product m a doubles, so the force must double. Think of pushing a cart: with the same speed of acceleration, a heavier cart requires a stronger push, exactly doubling the force if the mass doubles. A quadruple force would require something else to change (like acceleration or mass changing by more than a simple doubling); the force staying the same would mean mass or acceleration didn't change; halving the force would require mass to halve or acceleration to drop. So the force doubles.

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7. What term describes a mixture in which the components remain distinct and can be separated by physical means?

A. Solution

B. Colloid

C. Heterogeneous mixture

D. Pure substance

A heterogeneous mixture is a mixture where the different parts keep their own identities and can be separated by physical means. You can often see the different components or can separate them with simple methods like picking them apart, filtering, or decanting. For example, a mixture of sand and pebbles or a salad shows distinct parts that can be physically separated. In contrast, a solution is uniform at the microscopic level, so the components aren't visibly distinct and require more involved methods to separate. A colloid has particles dispersed in a way that appears uniform but can't be separated by ordinary filtration, and a pure substance is a single, uniform material, not a mix. So the description fits the term describing a mixture whose components remain distinct and separable by physical means.

8. What term describes something that is either an element or a compound?

A. Pure substance

B. Mixture

C. Colloid

D. Solution

A pure substance has a definite composition and can be either an element or a compound. Elements are made of a single type of atom, like oxygen or carbon. Compounds are chemical combinations of two or more elements bonded together, like water or sodium chloride. This fixed, specific composition is what defines a pure substance, exactly matching the idea of something that is either an element or a compound. Mixtures are made from two or more substances physically combined, so their proportions can vary. Colloids are a type of mixture with larger particles dispersed throughout another substance, like milk. Solutions are homogeneous mixtures where substances are uniformly distributed at the molecular level, such as salt water. These are not pure substances because they involve more than one substance in the mixture.

9. The force that opposes motion between two surfaces that are in contact is called?

A. Gravity

B. Mass

C. Friction

D. Inertia

The main idea is understanding the force that resists motion when two surfaces touch. That force is friction. Friction acts parallel to the contact surface and points opposite to the direction of movement. It happens because surface roughness and microscopic interactions between the contacting molecules grab and slide past each other, and it can be static (when there's no motion yet) or kinetic (when the surfaces are sliding). The amount of friction depends on how hard the surfaces are pressed together (the normal force) and how rough or smooth the materials are (the coefficient of friction). This is why pushing harder or using rougher surfaces generally increases friction, making it harder to start or continue moving. Gravity is the pull toward the center of the Earth, mass is the amount of matter in an object, and inertia is the resistance to changes in motion. None of these describe the specific resistance between two surfaces in contact like friction does.

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10. Which term is the quantity of matter in an object?

A. Weight

B. Force

C. Inertia

D. Mass

Mass is the amount of matter in an object. It tells you how much stuff there is and is measured in kilograms. Mass stays the same regardless of location, while weight changes with gravity. Inertia—the resistance to changes in motion—depends on mass, so more mass means more inertia, but that doesn't describe how much matter, just how hard it is to change motion. Force is the push or pull acting on an object, not a measure of how much matter there is. So the term that describes the quantity of matter is mass.

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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://gmasphysicalscience.examzify.com

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

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