NLN NEX SCIENCE PRACTICE TEST (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 term refers to animals without backbones?

A. Invertebrates
B. Vertebrates
C. Pathogens
D. Taxonomy

2. Which term describes a colloidal dispersion of a liquid in another liquid?

A. Emulsion
B. Suspension
C. Solution
D. Colloid

3. Which term is the study of algae?

A. Mycology
B. Bacteriology
C. Ecology
D. Phycology

4. Where are neutrons located?

A. In the nucleus
B. Outside the nucleus
C. In the electron shells
D. In the plasma

5. The nephron is the functional unit of the kidney.

A. True
B. False
C. Not stated
D. Not sure

6. In ecological terms, which group breaks down dead material and recycles nutrients?

A. Producers
B. Herbivores
C. Carnivores
D. Decomposers

7. Which structure is the primary site for gas exchange in the lungs?

A. Bronchi

B. Bronchioles

C. Alveoli

D. Diaphragm

8. Which term best describes groups of ecosystems that share similar climates and organisms across geographic regions?

A. Ecosystems

B. Environments

C. Biomes

D. Habitats

9. Which term describes the degree to which the body is functioning as it should?

A. Mental health

B. Physical health

C. Spiritual health

D. Probiotics

10. What is matter?

A. Anything that has mass and takes up space

B. Energy

C. A force that causes change

D. Time

Answers

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

Explanations

1. Which term refers to animals without backbones?

A. Invertebrates

B. Vertebrates

C. Pathogens

D. Taxonomy

This question tests how we classify animals by whether they have a backbone. Animals without backbones are called invertebrates. This group includes insects, spiders, snails, worms, and jellyfish, and it makes up the vast majority of animal species. Animals with backbones, by contrast, are vertebrates and include fish, birds, mammals, reptiles, and amphibians. Pathogens are disease-causing agents and don't describe a group of animals by backbone status, and taxonomy is the science of naming and classifying organisms, not a type of animal. So the best term for animals without backbones is invertebrates because it directly describes the absence of a backbone.

2. Which term describes a colloidal dispersion of a liquid in another liquid?

A. Emulsion

B. Suspension

C. Solution

D. Colloid

Emulsion describes a colloidal dispersion of a liquid in another immiscible liquid. In these systems, tiny droplets of one liquid are spread throughout the other liquid, such as oil droplets in water (oil-in-water) or water droplets in oil (water-in-oil). Emulsions often need an emulsifier to stay mixed because the liquids don't naturally blend. This is different from a suspension, which has solid particles floating in a liquid and may settle out, and from a solution, where substances are dissolved at the molecular level with no distinct droplets. While colloid is a broader category, it's the specific liquid-in-liquid case that's called an emulsion.

3. Which term is the study of algae?

A. Mycology

B. Bacteriology

C. Ecology

D. Phycology

Phycology is the study of algae. The word uses phykos, an old term for seaweed or algae, plus -logy, meaning the study of. This field covers the biology, classification, physiology, and ecology of algae—from microscopic green algae to large seaweeds. Other terms refer to different organisms or fields: mycology is the study of fungi, bacteriology is the study of bacteria, and ecology focuses on how organisms interact with each other and their environment. Since the question asks for the term specifically about algae, phycology is the best fit.

4. Where are neutrons located?

A. In the nucleus

B. Outside the nucleus

C. In the electron shells

D. In the plasma

Neutrons reside in the atomic nucleus, the dense center of an atom where protons are also found. They're held there by the strong nuclear force, contributing to the nucleus's mass and stability. Electrons occupy surrounding space in electron shells, so neutrons aren't located outside the nucleus or in the electron shells. In the context of a normal atom, neutrons are together with protons in the nucleus; free neutrons can exist outside nuclei in other situations, but not as part of the atom's structure.

5. The nephron is the functional unit of the kidney.

A. True

B. False

C. Not stated

D. Not sure

The main idea here is that the nephron is the kidney's functional unit. The nephron is the smallest structure that carries out the kidney's essential tasks: filtering blood, reabsorbing needed substances, secreting wastes, and forming urine. Each kidney contains about a million nephrons, all working together to process blood and make urine. Because of this, the statement is true. The alternatives suggesting uncertainty or that the fact isn't stated don't fit with how kidneys are understood in physiology, and saying it's false would contradict established anatomy.

6. In ecological terms, which group breaks down dead material and recycles nutrients?

A. Producers

B. Herbivores

C. Carnivores

D. Decomposers

The key idea is nutrient recycling through decomposition. Decomposers, such as bacteria and fungi, break down dead plants, animals, and waste using enzymes, converting complex organic matter into simpler inorganic nutrients like nitrogen and phosphorus. These nutrients return to soil or water and become available again for producers to use in photosynthesis and growth. This recycling closes the loop in ecosystems, supporting continual nutrient availability even as organisms die or produce waste. Producers are the organisms that capture energy and build biomass from inorganic sources. Herbivores and carnivores move energy through the food chain by eating other organisms, but they don't primarily recycle nutrients; they rely on decomposers to release nutrients back into the environment so the cycle can continue.

7. Which structure is the primary site for gas exchange in the lungs?

A. Bronchi

B. Bronchioles

C. Alveoli

D. Diaphragm

Gas exchange happens where air in the lungs meets blood across a very thin barrier. The alveoli are tiny sacs at the ends of the airways and are surrounded by a dense network of capillaries. Their walls are only one cell thick and coated with a thin fluid layer, creating a minimal barrier for gases to cross. The enormous total surface area from millions of alveoli allows rapid diffusion. Oxygen moves from the alveolar air into the blood, while carbon dioxide moves from blood into the alveoli to be exhaled. Bronchi and bronchioles mainly conduct air and have thicker walls, so they're not designed for gas exchange. The diaphragm helps expand and contract the chest to move air but isn't a site of gas exchange. So the primary site for gas exchange is the alveoli.

8. Which term best describes groups of ecosystems that share similar climates and organisms across geographic regions?

A. Ecosystems

B. Environments

C. Biomes

D. Habitats

Biomes are large regions of the Earth where ecosystems share similar climate and dominant life forms. The climate—patterns of temperature and rainfall—determines which plants can thrive, and those plants shape the types of animals that live there. Because similar climates occur in different parts of the world, you can find the same biome type in distant regions, like tropical rainforests or deserts. Within a biome, there are many specific ecosystems, each with its own local conditions, but they all reflect the same broad climate and life patterns. An ecosystem is a particular community and its environment in one place, a habitat is the specific place within an ecosystem where an organism lives, and an environment refers to the surrounding conditions in general.

9. Which term describes the degree to which the body is functioning as it should?

A. Mental health

B. Physical health

C. Spiritual health

D. Probiotics

The degree to which the body is functioning as it should is described as physical health. This focuses on how well the body's systems—like the heart, lungs, muscles, digestion, and nervous system—work together, plus factors like energy, strength, and the ability to perform everyday activities without undue fatigue. Mental health, by contrast, concerns thoughts, emotions, and mood; spiritual health concerns beliefs and meaning; probiotics are live bacteria used for gut health and are not a measure of overall bodily functioning. So the best fit for describing how well the body is functioning is physical health.

10. What is matter?

A. Anything that has mass and takes up space

B. Energy

C. A force that causes change

D. Time

Matter is anything that has mass and takes up space. This includes solids, liquids, and gases—like a rock, water, or air. Mass is the amount of matter, and volume is the space it occupies; even air has mass and occupies space, though its mass is small. Energy is not matter itself; it's the ability to do work or cause change and can exist within matter or as radiation. A force that causes change is a push or pull, not matter. Time is a dimension used to order events, not something that has mass or occupies space. So the description that matter is anything with mass and takes up space best captures the concept.

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://nlnnexscience.examzify.com

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