PYQ-NEET Practice Exam (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. A liquid does not wet a solid surface if the angle of contact is:

A. Less than 30 degrees

B. Equal to 90 degrees

C. Greater than 90 degrees

D. Equal to 180 degrees

2. Which type of plant relies on animal vectors for pollination?

A. Cucumber

B. Wheat

C. Rice

D. Barley

3. What did Schleiden propose about plants?

A. All plants are made of different kinds of cells

B. Plants have a unique metabolic pathway

C. Plants can produce energy through photosynthesis

D. Plants exhibit muscular movement

4. What is the SI unit of the gravitational constant G?

A. Joule

B. Nm^2/kg^2

C. Newton

D. kg*m/s^2

5. What did the Air Act amend in 1987 to include?

A. Water as a pollutant

B. Noise as pollutants

C. Soil as a pollutant

D. Light as a pollutant

6. What is the primary source of energy for cellular processes?

A. ATP (adenosine triphosphate)

B. Glucose

C. ADP (adenosine diphosphate)

D. NADH

7. How many ovules are found in each ovary of wind-pollinated flowers?

A. 1 ovule

B. 2 ovules

C. 3 ovules

D. No ovules

8. Which transition metal is known for having a low density?

A. Nickel

B. Scandium

C. Titanium

D. Zirconium

9. What is the primary function of gas vacuoles in bacteria?

A. Storage of nutrients

B. Regulation of buoyancy

C. Photosynthesis

D. Cellular respiration

10. Which class of enzymes catalyzes hydrolysis reactions?

A. Ligases

B. Hydrolases

C. Isomerases

D. Transferases

Answers

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

Explanations

1. A liquid does not wet a solid surface if the angle of contact is:

A. Less than 30 degrees

B. Equal to 90 degrees

C. Greater than 90 degrees

D. Equal to 180 degrees

A liquid does not wet a solid surface when the angle of contact is greater than 90 degrees. This concept is tied to the interactions between the molecules of the liquid and solid surface. When the contact angle is greater than 90 degrees, it indicates that the cohesive forces within the liquid are stronger than the adhesive forces between the liquid and the solid. Consequently, instead of spreading out over the surface, the liquid beads up, showing that it does not have a tendency to wet the solid. For instance, think of mercury on glass. Mercury has a contact angle far greater than 90 degrees, meaning it does not wet the surface of glass and instead forms droplets. This behavior is critical in applications where wettability is essential, such as in inkjet printing or painting, where good wetting ensures even coverage. Other angles, such as less than 30 degrees, equal to 90 degrees, or even equal to 180 degrees, indicate different wetting behaviors. Angles less than 90 degrees suggest the liquid spreads over the surface (wetting), while a 90-degree angle indicates a neutral wetting situation. An angle of 180 degrees implies the liquid is not in contact with the solid at all, which is a special case of

2. Which type of plant relies on animal vectors for pollination?

A. Cucumber

B. Wheat

C. Rice

D. Barley

Cucumbers are a prime example of plants that rely on animal vectors, particularly insects like bees, for pollination. These animals are attracted to the flowers by nectar and pollen, facilitating the transfer of pollen from the male parts of the flower (anthers) to the female parts (stigma). This interaction is crucial for sexual reproduction in cucumbers, leading to fruit development. In contrast, wheat, rice, and barley are primarily pollinated by the wind, making them examples of anemophilous plants. These grasses have evolved features that allow for efficient pollen dispersal through the air, such as lightweight pollen and flowers that are not visually attractive to pollinators. Consequently, they do not rely on animals to complete their reproductive processes, highlighting the distinct pollination strategies among different plant species.

3. What did Schleiden propose about plants?

A. All plants are made of different kinds of cells

B. Plants have a unique metabolic pathway

C. Plants can produce energy through photosynthesis

D. Plants exhibit muscular movement

Schleiden proposed that all plants are made of different kinds of cells, which is a foundational concept in the field of biology. He was one of the key figures in the development of cell theory, stating that the plant body is composed of various cell types that perform different functions. This idea helped to establish the understanding that cells are the basic unit of life in all living organisms, including plants. Schleiden emphasized that these cells are organized into tissues, which in turn form the organs of the plant. The other options mention aspects that either do not primarily relate to Schleiden's contributions or inaccurately represent plant biology. For example, while it is true that plants utilize photosynthesis to produce energy, this was not Schleiden's specific focus. Additionally, describing plants as having unique metabolic pathways does not align with his main proposition. Similarly, the suggestion that plants exhibit muscular movement does not fit within Schleiden's theories, as plants do not have muscles or the capacity for movement in the way that animals do. This underscores the importance of understanding the central role that cells play in the structure and function of plant life as articulated by Schleiden.

4. What is the SI unit of the gravitational constant G?

A. Joule

B. Nm^2/kg^2

C. Newton

D. kg*m/s^2

The gravitational constant, denoted as G, is a fundamental physical constant that appears in Newton's law of universal gravitation and Einstein's theory of general relativity. It quantifies the strength of the gravitational force between two masses. The SI unit of G is indeed Nm^2/kg^2, which is derived from the formula that describes the gravitational force, $F = G(m_1m_2)/r^2$. In this formula, F is the gravitational force measured in Newtons, m_1 and m_2 are the masses measured in kilograms, and r is the distance between the centers of the two masses measured in meters. The unit Nm^2/kg^2 can be broken down as follows: - Newton (N) is defined as $kg*m/s^2$, which represents force. - Therefore, G's units can be expressed as $(kg*m/s^2) * (m^2/kg^2)$, which simplifies to Nm^2/kg^2. This clarification shows that the gravitational constant relates to the interaction of mass and distance, solidifying why Nm^2/kg^2 is the appropriate SI unit. The other listed choices do not accurately represent the gravitational constant's unit as they either measure different physical quantities or do not match the derived units connected with gravitational force.

5. What did the Air Act amend in 1987 to include?

A. Water as a pollutant

B. Noise as pollutants

C. Soil as a pollutant

D. Light as a pollutant

The Air Act of 1987 was a significant amendment to the original Air (Prevention and Control of Pollution) Act of 1981. The principal focus of the amendment was to broaden the definition of pollution, leading to the inclusion of noise as a pollutant. Noise pollution had increasingly become a concern due to its adverse effects on human health and environmental quality. By incorporating noise into the definition of pollutants, the Act recognized the necessity of regulating sound levels, which can affect both physical and mental well-being. This inclusion reflects a growing awareness of the various forms of pollution and their impacts beyond just the chemical and particulate contaminants that were initially the focus of air quality legislation. By addressing noise pollution through legal frameworks, the amendment allowed for more comprehensive strategies to mitigate its effects, thus safeguarding public health and enhancing the quality of the environment. In contrast, while water, soil, and light pollution are significant environmental issues, they were not specifically included under the purview of this particular amendment to the Air Act. The focus on noise indicates a targeted approach to addressing a burgeoning issue in urbanized and industrialized settings.

6. What is the primary source of energy for cellular processes?

A. ATP (adenosine triphosphate)

B. Glucose

C. ADP (adenosine diphosphate)

D. NADH

ATP, or adenosine triphosphate, is the primary source of energy for cellular processes. It serves as the energy currency of the cell, facilitating a wide variety of biochemical reactions. When ATP is hydrolyzed, it releases energy that can be harnessed for processes such as muscle contraction, active transport of molecules across cell membranes, and biochemical synthesis. Inside cells, ATP is generated from nutrients, particularly glucose, during cellular respiration. Glucose undergoes glycolysis, the citric acid cycle, and oxidative phosphorylation, ultimately leading to the production of ATP. However, while glucose is a significant energy source, it is the ATP molecules that directly power cellular activities. Other options, such as ADP, are involved in the energy transfer process but do not serve as the primary energy source. ADP can be converted back into ATP through phosphorylation, but it is not the energy-utilizing form. Similarly, NADH plays a critical role in cellular respiration by acting as an electron carrier in redox reactions, but it does not provide energy in the same direct manner as ATP. In summary, while glucose is crucial for the energy supply, ATP is the molecule that cells actively use to conduct energy-requiring functions, making it the definitive primary

7. How many ovules are found in each ovary of wind-pollinated flowers?

A. 1 ovule

B. 2 ovules

C. 3 ovules

D. No ovules

In wind-pollinated flowers, it is common for each ovary to typically contain one ovule. This adaptation is closely related to their mode of pollination and reproductive strategies. Wind-pollination leads to the production of pollen grains that are lightweight and easily carried by air currents, which allows for fertilization to occur without relying on specific pollinators. Having a single ovule per ovary reduces the energy expenditure of the plant in producing seeds, as it must ensure that just one ovule is fertilized per flower, rather than producing multiple ovules where many may not successfully lead to fertilization. This can be seen as an evolutionary advantage in certain environments where survival and reproductive efficiency are critical. Plants that rely on attracting animal pollinators, on the other hand, often produce multiple ovules to increase their chances of successful fertilization through a more targeted pollen transfer mechanism.

8. Which transition metal is known for having a low density?

A. Nickel

B. Scandium

C. Titanium

D. Zirconium

Scandium is known for possessing a relatively low density among transition metals. It has an atomic number of 21 and is often characterized by its lightweight properties. The density of scandium is about 2.985 g/cm³, which is significantly lower than many other transition metals. This low density makes scandium useful in various applications, including aerospace industries, where lightweight materials are essential. Nickel, titanium, and zirconium, on the other hand, have higher densities, with nickel around 8.9 g/cm³, titanium approximately 4.54 g/cm³, and zirconium about 6.52 g/cm³. These densities are considerably greater than that of scandium, which is why scandium is prominently recognized for its low density among transition metals.

9. What is the primary function of gas vacuoles in bacteria?

A. Storage of nutrients

B. Regulation of buoyancy

C. Photosynthesis

D. Cellular respiration

Gas vacuoles are specialized structures found in certain bacterial cells that play a crucial role in regulating buoyancy. These vacuoles are composed of protein shells that enclose gas-filled spaces. By adjusting the amount of gas within these vacuoles, bacteria can control their density, allowing them to float or sink in aquatic environments to reach optimal light conditions or nutrient levels. This capability is especially beneficial for photosynthetic bacteria, as it helps them position themselves in areas where they can maximize light absorption for photosynthesis. The function of gas vacuoles is not related to nutrient storage, photosynthesis in a direct structural sense, or cellular respiration processes. Instead, their primary role is centered on the buoyancy regulation, which is fundamental for survival in varying aquatic ecosystems.

10. Which class of enzymes catalyzes hydrolysis reactions?

A. Ligases

B. Hydrolases

C. Isomerases

D. Transferases

Hydrolases are the class of enzymes specifically responsible for catalyzing hydrolysis reactions, a process where water is used to break down a compound. In these reactions, a substrate is cleaved into two parts, with the addition of water leading to the formation of two new molecules. This is a crucial biochemical process involved in various metabolic pathways, including the digestion of food and the breakdown of biomolecules such as proteins, nucleic acids, carbohydrates, and lipids. The specificity of hydrolases lies in their ability to recognize certain bonds within larger molecules and facilitate their cleavage using water, which differentiates them from other classes of enzymes. For instance, ligases join two molecules together rather than breaking them apart, isomerases rearrange the components within a molecule without adding or removing water, and transferases transfer a functional group from one molecule to another rather than catalyzing the hydrolysis of a substrate. Therefore, the defining characteristic of hydrolases is their role in hydrolysis, making them the correct answer in this context.

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://pyqneet.examzify.com

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