

12N TAMMS - Earthworks/Surveying 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

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- 1. What is the role of a land surveyor?**
 - A. To design building structures**
 - B. To measure and map land boundaries and features**
 - C. To create landscaping plans**
 - D. To analyze soil drainage**

- 2. Which of the following types of drawings is important for mechanical systems?**
 - A. Detail drawings**
 - B. Architectural drawings**
 - C. Electrical drawings**
 - D. Working drawings**

- 3. What type of drawing contains perspective views with color and shading?**
 - A. Shop drawings**
 - B. Working drawings**
 - C. Master Plan drawings**
 - D. Presentation drawings**

- 4. How can groundwater affect earthworks?**
 - A. It improves soil quality**
 - B. It enhances the speed of construction**
 - C. It can impact soil stability and excavation**
 - D. It increases land value**

- 5. What does mobile mapping refer to in surveying?**
 - A. Capturing geospatial data using fixed sensors**
 - B. Conducting surveys on foot**
 - C. Capturing geospatial data using vehicles equipped with sensors and cameras**
 - D. A type of aerial mapping using drones**

6. What aspect do grading plans primarily address?

- A. Soil contamination levels**
- B. The legal zoning of land**
- C. Land modification, including cut and fill locations**
- D. Plant growth strategies**

7. What is a footing in the context of surveying?

- A. A structural element that transfers load from a building to the foundation soil**
- B. A type of survey measurement**
- C. A method of soil testing**
- D. A type of drainage system**

8. What equipment is commonly used for leveling in surveying?

- A. A GPS receiver**
- B. A dumpy level or an automatic level**
- C. A theodolite**
- D. A tape measure**

9. What is the purpose of a survey monument?

- A. To mark boundaries for excavation**
- B. To serve as a reference point in surveying**
- C. To indicate areas of soil erosion**
- D. To assist in grading calculations**

10. Which tool is typically used for checking rough grade over a distance of up to 50 feet?

- A. Hand level**
- B. Dumpy level**
- C. Laser level**
- D. Clinometer**

Answers

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

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Explanations

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1. What is the role of a land surveyor?

- A. To design building structures
- B. To measure and map land boundaries and features**
- C. To create landscaping plans
- D. To analyze soil drainage

A land surveyor's primary role is to measure and map land boundaries and features, which is essential for establishing property lines, determining land area, and providing precise data for various construction and development projects. This process involves using advanced tools and technology to collect data about the physical layout of the land, including topography, elevation, and existing infrastructure. Land surveyors play a crucial part in real estate transactions by providing clear definitions of property boundaries that help avoid disputes. They also contribute to planning and zoning processes by supplying key information needed for land-use regulations. Their work lays the foundation for architects, engineers, and developers, who rely on accurate survey data to design buildings, roads, and other structures. While designing building structures, creating landscaping plans, and analyzing soil drainage are important tasks within the construction and landscaping industries, they fall under different professional specialties. The unique skill set and focus of land surveyors ensure that they provide an integral service that establishes a basis for all other land-related activities.

2. Which of the following types of drawings is important for mechanical systems?

- A. Detail drawings
- B. Architectural drawings
- C. Electrical drawings**
- D. Working drawings

The significance of electrical drawings in the context of mechanical systems lies in their role in illustrating the integration and interaction between electrical and mechanical components. Mechanical systems often rely on electrical systems for operation, control, and functionality. Electrical drawings provide crucial information such as wiring layouts, circuit designs, and the positioning of electrical components that are necessary for the correct operation of mechanical systems. These drawings help engineers and technicians ensure that mechanical devices are properly powered and controlled, which is essential for the system's overall performance and safety. For instance, in the case of automated machinery, the correspondence between the mechanical elements and their electrical counterparts is vital for successful operation. Other types of drawings, such as detail drawings, architectural drawings, and working drawings, serve different purposes. Detail drawings focus on specific components and their specifications, architectural drawings pertain to building layouts and aesthetics, and working drawings generally include all necessary details for construction but may not detail electrical elements as specifically as electrical drawings. Thus, electrical drawings play a unique and critical role in the overall function of mechanical systems.

3. What type of drawing contains perspective views with color and shading?

- A. Shop drawings**
- B. Working drawings**
- C. Master Plan drawings**
- D. Presentation drawings**

Presentation drawings are specifically designed to convey ideas visually while enhancing understanding through aesthetic elements. They often include perspective views, color, and shading, which help to create a more realistic representation of what a completed project will look like. These drawings are mainly used for communicating designs to clients, stakeholders, or the public, making them engaging and informative. In contrast, shop drawings focus on the specifics of construction details and are usually more technical, often lacking the artistic flair of presentation drawings. Working drawings serve as a set of instructions for construction, detailing dimensions and materials but not typically incorporating the visual enhancements found in presentation drawings. Master Plan drawings outline a larger vision or a comprehensive plan for a project, but they are generally not as detailed in terms of color and shading as presentation drawings.

4. How can groundwater affect earthworks?

- A. It improves soil quality**
- B. It enhances the speed of construction**
- C. It can impact soil stability and excavation**
- D. It increases land value**

Groundwater plays a significant role in earthworks, particularly impacting soil stability and excavation processes. When groundwater levels are high, the presence of water can lead to increased pore pressure in the soil. This can reduce effective stress, which is the stress carried by the soil skeleton and significantly affects the overall stability of the ground. If an excavation is made in saturated soil conditions without proper dewatering measures, the risk of soil collapse or instability increases. Moreover, groundwater can influence the soil's cohesion and friction angles, altering its load-bearing abilities. This necessitates careful assessment and management during earthwork operations to ensure safety and structural integrity. Understanding groundwater's effects is crucial for engineers and contractors to avoid potential hazards and project delays associated with unstable soils or in-depth excavation issues.

5. What does mobile mapping refer to in surveying?

- A. Capturing geospatial data using fixed sensors
- B. Conducting surveys on foot
- C. Capturing geospatial data using vehicles equipped with sensors and cameras**
- D. A type of aerial mapping using drones

Mobile mapping in surveying refers to the process of capturing geospatial data using vehicles that are equipped with advanced sensors and cameras. This technique allows for efficient and comprehensive data collection over large areas, making it particularly useful for mapping transportation infrastructure, urban environments, and other extensive landscapes. The use of vehicles for data collection enables surveyors to gather information rapidly while covering a wider scope than would be feasible on foot. The sensors and cameras mounted on these vehicles are often capable of capturing high precision data, including images, LiDAR scans, and GPS coordinates, all of which can then be processed to create detailed 3D models and maps. Understanding this definition highlights the efficiency and technological advances that mobile mapping brings to the surveying field, distinguishing it from other methods that may be less versatile or slower in data acquisition.

6. What aspect do grading plans primarily address?

- A. Soil contamination levels
- B. The legal zoning of land
- C. Land modification, including cut and fill locations**
- D. Plant growth strategies

Grading plans are crucial documents in land development and construction projects, primarily focused on land modification. They outline how to reshape and prepare land surfaces to ensure proper drainage, provide stable foundation conditions, and create suitable grades for intended uses such as roads, foundations, and landscaping. Specifically, grading plans include detailed information about cut and fill locations, indicating where soil will be removed (cut) and where it will be added (fill) to achieve the desired topography and elevations. Understanding grading plans is essential for civil engineers, landscape architects, and contractors, as these plans play a vital role in meeting regulatory requirements, managing stormwater runoff, and promoting sustainable land use practices. By focusing on the specifics of where cuts and fills will occur, grading plans help to maintain the environmental integrity of the site while facilitating construction and development.

7. What is a footing in the context of surveying?

A. A structural element that transfers load from a building to the foundation soil

B. A type of survey measurement

C. A method of soil testing

D. A type of drainage system

In the context of surveying, a footing refers to a structural element that serves a critical function in building construction. It is designed to transfer the load of a structure, such as a building or bridge, to the foundation soil underneath. Properly designed footings help ensure that the weight of the structure is distributed evenly, preventing settling or shifting that could compromise the integrity of the structure. Understanding the role of footings is essential in surveying because surveyors must assess soil conditions, topography, and other environmental factors to determine the appropriate type and size of footings needed for a particular project. They are a foundational aspect of construction practices, ensuring stability and strength as well as compliance with local building codes and requirements. While other choices may involve surveying or construction concepts, they do not specifically define what a footing is in the same structural context. A type of survey measurement and a method of soil testing relate to different aspects of surveying. A type of drainage system is also distinct and serves specialized purposes in managing water and preventing moisture-related issues in construction, but it does not pertain directly to the structural load-bearing function of footings.

8. What equipment is commonly used for leveling in surveying?

A. A GPS receiver

B. A dumpy level or an automatic level

C. A theodolite

D. A tape measure

The equipment commonly used for leveling in surveying is a dumpy level or an automatic level. These instruments are specifically designed to establish a horizontal line of sight, which is critical when determining land elevations and creating a level reference plane across a site. A dumpy level consists of a telescope mounted on a horizontal arm, which allows the surveyor to view the level line and measure differences in height relative to that line. An automatic level functions similarly but features a compensator that automatically adjusts for minor tilts, ensuring greater accuracy and ease of use. This makes them ideal for tasks such as grading, laying foundations, and other applications where precise level readings are necessary. While GPS receivers, theodolites, and tape measures have their roles in surveying, they are not primarily used for leveling. GPS is more suited for accurately determining positions and coordinates over larger areas. A theodolite is primarily used for measuring angles in horizontal and vertical planes, which is essential for various tasks but not specifically dedicated to leveling. A tape measure serves basic measurements of distance rather than providing the level line required for elevation work. Therefore, the dumpy or automatic level stands out as the most effective and commonly used equipment for leveling tasks in surveying.

9. What is the purpose of a survey monument?

- A. To mark boundaries for excavation
- B. To serve as a reference point in surveying**
- C. To indicate areas of soil erosion
- D. To assist in grading calculations

A survey monument is crucial in the field of surveying because it serves as a reliable reference point that surveyors and engineers can use for measurements and establishing boundaries. These monuments are often permanent markers placed at specific geographical locations and are used to create accurate maps and plots. The significance of survey monuments lies in their ability to provide fixed points that can be easily identified and described, ensuring consistency and precision in surveying activities. This can include real estate development, road construction, and various other land-related projects where reliable positioning is essential. While marking boundaries for excavation, indicating areas of soil erosion, and assisting in grading calculations are important activities within earthworks and surveying, they do not capture the primary role of survey monuments. The foundational aspect of a survey monument is to serve as a reference point, which is critical for any accurate land surveying or mapping effort.

10. Which tool is typically used for checking rough grade over a distance of up to 50 feet?

- A. Hand level**
- B. Dumpy level
- C. Laser level
- D. Clinometer

The hand level is a simple and effective tool designed for checking rough grades over relatively short distances, typically up to about 50 feet. It consists of a small level vial mounted on a straightedge or a similar frame, allowing the user to determine if a surface is level by looking through the level vial. This tool is particularly useful for basic grading tasks, where the precision of more advanced equipment is not necessary. In contrast, the dumpy level and laser level are better suited for more precise leveling over longer distances and require setups that may not be practical for quick rough checks in tight spaces. A dumpy level, for example, is a more complex instrument that involves leveling using a tripod and is designed for surveying tasks where accuracy is critical over larger areas. The laser level provides a continuous beam of light to determine level and is excellent for long distances but may be overkill for a quick rough grade check. The clinometer is primarily used to measure angles of elevation or depression and is not designed for leveling surfaces, making it unsuitable for checking rough grades. Using a hand level makes it an efficient choice for straightforward tasks where the goal is to quickly determine a general level rather than achieve precise measurements.

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://12ntammsearchworkssurveying.examzify.com>

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

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