

FUNDAMENTALS OF SURVEYING (FS) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

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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. An estate in fee simple absolute is characterized by what?**
 - A. Implying a complete title
 - B. Being the highest type of interest
 - C. Giving the owner the right to dispose of the property in any way
 - D. All of the above
- 2. Which condition does NOT lead to the extinguishment of an easement?**
 - A. Fencing across the easement
 - B. Active use of the easement
 - C. Sale of the servient tenement
 - D. Common ownership of servient and dominant tenements
- 3. What does a Lambert conformal conic projection utilize to create its mapping?**
 - A. Parallel lines of longitude
 - B. Multiple cones
 - C. One cone that slices the earth at two parallels
 - D. A plane surface
- 4. What type of measurements can a surveyor's level assist with?**
 - A. Horizontal angles only
 - B. Vertical distances and elevations
 - C. Only distances
 - D. Both horizontal and vertical distances
- 5. GPS elevations are referenced to which of the following?**
 - A. mean sea level
 - B. geoid
 - C. NAVD88
 - D. ellipsoid
- 6. When dividing accreted land, which principle usually applies?**
 - A. The dividing lines should be extensions of the upland lateral boundaries
 - B. The dividing lines should be normal to the shoreline
 - C. The accreted land's proportioning should be based on the frontage length
 - D. None of the above

- 7. What does the term 'projected' indicate in the state plane coordinate system?**
- A. The survey is inaccurate and needs to be corrected
 - B. Handwritten coordinates are entered into computer software
 - C. Survey points need to undergo a unit conversion
 - D. The Earth's curvature is accounted for in survey calculations
- 8. What do error ellipses in least squares adjustments represent?**
- A. Adjusted coordinates
 - B. Adjusted angles
 - C. Measurements
 - D. Unadjusted coordinates
- 9. What type of deed is considered a title guarantee?**
- A. Possession insurance
 - B. A Torrens title
 - C. A warranty deed
 - D. An agreement between owners to fix a disputed boundary line
- 10. Who generally owns submerged lands under non-navigable, non-tidal water?**
- A. The riparian owner
 - B. The federal government
 - C. The state department of environmental protection
 - D. The public of that state

Answers

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

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Explanations

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1. An estate in fee simple absolute is characterized by what?

- A. Implying a complete title
- B. Being the highest type of interest
- C. Giving the owner the right to dispose of the property in any way
- D. All of the above**

An estate in fee simple absolute is indeed characterized by all the attributes mentioned. It is the most complete form of ownership in real estate and offers several key features. Firstly, it implies a complete title, meaning that the owner has full ownership rights without limitations. This estate is not subject to conditions or restrictions that would typically apply in other types of ownership interests, such as conditional fee estates. Secondly, it is recognized as the highest type of interest in real property. This means the fee simple absolute grants the most extensive rights and privileges possible under property law, surpassing other forms such as life estates or leaseholds. Lastly, the owner possesses the right to dispose of the property in any manner, including selling it, leasing it, giving it away, or bequeathing it. This right provides flexibility to the owner, allowing them to manage and transfer the property as they see fit. Taken together, these aspects illustrate that an estate in fee simple absolute encompasses a broad and powerful interest in real property, making "all of the above" the correct response.

2. Which condition does NOT lead to the extinguishment of an easement?

- A. Fencing across the easement
- B. Active use of the easement**
- C. Sale of the servient tenement
- D. Common ownership of servient and dominant tenements

Active use of an easement does not lead to its extinguishment because easements are established rights that allow for a specific use of someone else's property (the servient tenement) for the benefit of the property benefiting from the easement (the dominant tenement). Active use indicates that the easement is being utilized as intended, thereby affirming its existence and purpose. In contrast, conditions such as fencing across the easement can prevent access and thus may lead to the easement being considered abandoned or extinguished if there is no further use or intention to use it. Similarly, if the servient tenement is sold, the easement typically survives the sale, but changes in ownership do not affect its validity; instead, the new owner takes subject to the easement. Additionally, if the dominant and servient tenements come under common ownership, the easement may be extinguished since one party can no longer dominate themselves, leading to the merger of interests.

3. What does a Lambert conformal conic projection utilize to create its mapping?

- A. Parallel lines of longitude
- B. Multiple cones
- C. One cone that slices the earth at two parallels**
- D. A plane surface

A Lambert conformal conic projection uses a single cone that slices the Earth at two parallels to create its mapping. This projection is specifically designed to maintain angular relationships, making it conformal, which is particularly advantageous for aeronautical charts and other uses where accurate angles are important. In this projection, two lines of latitude, known as standard parallels, are where the cone touches the Earth's surface, resulting in minimal distortion in areas close to these parallels. Between these parallels, the projection offers a fairly accurate representation of shapes and areas. The design is particularly effective for mapping regions that are elongated in an east-west direction, as it allows for a balance between distortion of shape and area. In contrast, other options such as using parallel lines of longitude or utilizing a plane surface would not adequately capture the curvature of the Earth and the relationships necessary for fiducial accuracy in mapping. Multiple cones, while potentially useful in some contexts, are not a characteristic feature of the Lambert conformal conic projection itself.

4. What type of measurements can a surveyor's level assist with?

- A. Horizontal angles only
- B. Vertical distances and elevations**
- C. Only distances
- D. Both horizontal and vertical distances

A surveyor's level is specifically designed to measure vertical distances and establish elevations. The instrument operates on the principle of leveling, which allows surveyors to determine the height of points relative to a reference level or sea level. By sighting through the level's telescope, surveyors can read the graduated staff held at the point of measurement, enabling them to calculate the difference in height between points and ensure accuracy in elevation measurements. The primary function of a level is to ensure a horizontal line of sight that helps in accurately gauging vertical differences, making it indispensable for tasks like establishing foundations, grading, and ensuring proper drainage in construction projects. This capability is fundamental in surveying and distinguishes it from other measurement tools that may focus on horizontal angles or distances. Therefore, when it comes to elevation and vertical measurements, a surveyor's level is the go-to instrument, confirming that the correct answer focuses on vertical distances and elevations.

5. GPS elevations are referenced to which of the following?

- A. mean sea level
- B. geoid
- C. NAVD88
- D. ellipsoid**

GPS elevations are referenced to an ellipsoid, which is a mathematically defined surface that approximates the shape of the Earth. The ellipsoid provides a consistent frame of reference for positioning data acquired through GPS technology. When GPS calculates elevation, it does so in relation to this ellipsoidal model rather than a physical surface such as mean sea level or the geoid. Using the ellipsoid provides several advantages in GPS technology, including allowing for a more uniform approach to measuring positions across diverse geographical areas. The other options, while relevant in the context of elevation reference systems, do not serve as the primary reference for GPS measurements. They may be used in various conversions and applications but the GPS height is fundamentally tied to the ellipsoidal model.

6. When dividing accreted land, which principle usually applies?

- A. The dividing lines should be extensions of the upland lateral boundaries
- B. The dividing lines should be normal to the shoreline
- C. The accreted land's proportioning should be based on the frontage length**
- D. None of the above

The principle that applies when dividing accreted land is that the accretion should be proportioned based on the length of the frontage. This is rooted in the legal doctrine of accretion, which holds that when land is added to a property through natural processes such as water sediment deposition, the owner of the land adjacent to the water has rights to the newly formed land. In practice, when multiple property owners have land adjacent to a body of water, and accretion occurs, the dividing lines of the newly formed land should reflect the existing boundaries in proportion to the lengths of their respective water frontages. This means that if one property has a longer direct access to the shore, it would generally be entitled to a larger share of the accreted land. This principle ensures that the rights and ownership are maintained in a fair and equitable manner, respecting the natural lines of property and the historical access that each owner had prior to the land gain.

7. What does the term 'projected' indicate in the state plane coordinate system?

- A. The survey is inaccurate and needs to be corrected
- B. Handwritten coordinates are entered into computer software
- C. Survey points need to undergo a unit conversion
- D. The Earth's curvature is accounted for in survey calculations**

In the context of the State Plane Coordinate System, the term 'projected' refers to the method by which the curved surface of the Earth is represented on a flat plane. This involves the use of mathematical projections to translate three-dimensional coordinates into two-dimensional coordinates that can be used for surveying and mapping purposes. By accounting for the Earth's curvature, survey calculations become more accurate for specific areas since the State Plane Coordinate System is designed to minimize distortion over particular zones. Each state or region may have its own projection tailored to its specific geographic characteristics, which ensures that the coordinates maintain a high level of accuracy for local surveying work. This projection process is fundamental in surveying because it allows surveyors to work with a coordinate system that is easier to manipulate while still retaining a close relationship to the real-world locations of points on the Earth's surface.

8. What do error ellipses in least squares adjustments represent?

- A. Adjusted coordinates**
- B. Adjusted angles
- C. Measurements
- D. Unadjusted coordinates

Error ellipses in least squares adjustments are graphical representations that illustrate the precision and reliability of adjusted coordinates. In the context of surveying, the least squares method is commonly used to process measurement data, accounting for observational errors and providing the best estimate of the true position. The size and shape of an error ellipse correspond to the degree of uncertainty associated with the adjusted coordinates. A smaller ellipse indicates greater confidence in the adjusted position, while a larger ellipse reflects increased uncertainty. The orientation of the ellipse also conveys information about the correlation between the errors in the coordinate estimates. This understanding of error ellipses is crucial in surveying, as it helps professionals assess the reliability of their data and make informed decisions based on the precision of their coordinate adjustments.

9. What type of deed is considered a title guarantee?

- A. Possession insurance
- B. A Torrens title
- C. A warranty deed**
- D. An agreement between owners to fix a disputed boundary line

A warranty deed is a type of deed that provides a title guarantee, ensuring that the grantor (the person transferring the property) is the rightful owner and has the legal right to transfer the property. This deed guarantees that the property is free from any liens or encumbrances, except those that are specifically stated in the deed. Furthermore, a warranty deed usually includes a promise that the grantor will defend the title against any claims from third parties, thereby providing an additional layer of security for the grantee (the person receiving the property). This guarantee is significant because it protects the interests of the grantee in the event that a previous owner or creditor asserts a claim against the property. The warranty deed is intended to provide peace of mind, as it assures the buyer that the property is clear of issues that could affect ownership. Other types of deeds, such as a Torrens title, operate under a different system where ownership rights are guaranteed by a government authority rather than through the assurances of a grantor. Possession insurance refers to a different concept related to the coverage of loss due to theft or damage and does not pertain to property title guarantees. Agreements between owners to fix a disputed boundary line involve negotiations and resolutions of conflicts but do not inherently provide

10. Who generally owns submerged lands under non-navigable, non-tidal water?

- A. The riparian owner**
- B. The federal government
- C. The state department of environmental protection
- D. The public of that state

The correct answer pertains to property rights concerning submerged lands under non-navigable, non-tidal water. In general, the riparian owner, who is the landowner along the shoreline or bank of a water body, holds rights to the submerged land adjacent to their property, provided that the water body is non-navigable and non-tidal. This ownership typically extends to the land beneath the water up to the center of the water body, depending on specific state laws. Riparian rights can vary by jurisdiction, but the prevailing principle is that the property extends to the ordinary high-water mark, allowing the riparian owner to utilize the submerged land for activities related to their property, such as boating, fishing, or other forms of development. Understanding these ownership rights is essential for landowners and surveyors alike, as they delineate the extent of property boundaries in relation to bodies of water. Other options, while relevant, do not reflect the standard legal principle. The federal government usually governs navigable waters, and the state department of environmental protection may oversee environmental regulations but typically does not own submerged lands in this context. The public's ownership of state lands applies to navigable waters and may not encompass those that are non-navigable and non-tidal

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://fundamentalsofsurveying.examzify.com>

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

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