BICSI OSP DESIGN PRACTICE TEST (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Table of Contents

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. Central tube also known as which term?

A. Single loose tube

B. Core tube

C. Unitube

D. Central tube

2. What is the correct description of a license in real property terms?

A. A long-term ownership right

B. A transferable fee interest

C. Temporary permission to use land

D. A mortgage lien

3. Gel filled RUS cable corresponds to which standard code?

A. PE89

B. PE86

C. PE39

D. PE7

4. The vertical down lead (VDL) of the MGN is an acceptable ground.

A. False

B. True

C. Not Acceptable Ground

D. Unknown

5. GACAN limits use of how many different gauges?

A. one

B. three

C. four

D. two

6. In a tree topology, trunk and branch correspond to which functions?

A. Trunk equals distribution; branch equals feeder

B. Trunk equals feeder; branch equals distribution

C. Trunk equals backbone; branch equals spine

D. Trunk equals core; branch equals access

7. OWB is measured in which unit?

A. milliradians

B. degrees

C. radians

D. arcminutes

8. EMI in tunnels is the result of which phenomenon?

A. Unbalanced electromagnetic fields

B. Coupling

C. Susceptibility of telecom

D. All of the above

9. If available pathways do not allow all cables to be routed to the central network point, which topology is recommended?

A. Ring topology

B. Two-level hierarchical star

C. Bus topology

D. Mesh topology

10. Lead height equals what?

A. Lead height equals height divided by lead

B. Lead height equals the sum of lead and height

C. Lead height equals height minus lead

D. Lead height equals lead divided by height of the attachment

Answers

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

Explanations

1. Central tube also known as which term?

A. Single loose tube

B. Core tube

C. Unitube

D. Central tube

In loose-tube fiber optic cables, the fibers are housed inside tubes that run along the length of the cable, with one tube located at the very center. That central channel is commonly called the core tube because it forms the core housing for the fiber bundles, literally the tube around which the cable's fiber path is organized. The other terms describe different concepts: a single loose tube refers to a design with just one tube containing all fibers, which is a different configuration; unitube isn't a standard designation in this context. So the central tube is best known as the core tube.

2. What is the correct description of a license in real property terms?

A. A long-term ownership right

B. A transferable fee interest

C. Temporary permission to use land

D. A mortgage lien

A license describes a temporary permission to use land without granting ownership or exclusive possession. It is usually revocable and personal to the licensee, meaning the owner can withdraw the permission and it ends once the stated purpose is fulfilled. It does not create an estate in land and, unless explicitly stated, does not run with the land or transfer with ownership. The other options describe ownership interests or a security interest (like a mortgage lien), not just permission to use.

3. Gel filled RUS cable corresponds to which standard code?

A. PE89

B. PE86

C. PE39

D. PE7

In this case, the standard code used for identifying cables is the RUS designation system, where a prefix like PE is followed by a two-digit code that denotes the specific construction and filling of the cable. Gel-filled RUS cables are classified under the PE86 code. That suffix encodes the gel-filled moisture-protection construction defined by RUS for that type of cable, ensuring it's the correct match for gel-filled, moisture-resistant designs used in underground or duct environments. The other codes correspond to different cable constructions or filling methods and don't match the gel-filled category, so they wouldn't be correct for a gel-filled RUS cable.

4. The vertical down lead (VDL) of the MGN is an acceptable ground.

A. False

B. True

C. Not Acceptable Ground

D. Unknown

The main idea here is that a reliable ground comes from a continuous, low-impedance path to earth provided by the bonding of the Main Grounding Network to the grounding electrode system. The vertical down lead is the conductor that takes the MGN down to the earth, terminating at a grounding electrode. When this lead is properly sized, securely connected, and bonded to both the MGN and the electrode, it delivers the required low-impedance path to earth. That makes it an acceptable ground for the MGN. If the lead isn't bonded to an electrode or is undersized or poorly connected, it wouldn't be an acceptable ground, but with correct installation it is.

5. GACAN limits use of how many different gauges?

A. one

B. three

C. four

D. two

Limiting the number of conductor gauges to two keeps the electrical characteristics of a run predictable and manageable. When only two sizes are used, resistance, inductance, and capacitance stay within a narrow range, which makes terminations, splicing, and testing more straightforward and reliable. Introducing a third or fourth gauge would introduce more variability in impedance and other properties, making it harder to certify performance and maintain consistency across the installation. That balance—enough flexibility to accommodate practical needs (such as different gauges for different functions) while avoiding excessive complexity—leads to allowing two gauges. Using only one gauge would be too restrictive for common installations, and three or four gauges would complicate design and testing without real benefit.

6. In a tree topology, trunk and branch correspond to which functions?

A. Trunk equals distribution; branch equals feeder

B. Trunk equals feeder; branch equals distribution

C. Trunk equals backbone; branch equals spine

D. Trunk equals core; branch equals access

In a tree topology, traffic flows from a main line out to several distribution points, then out to individual end connections. The trunk functions as the feeder, carrying aggregated signals from the source toward the distribution points. The branch functions as the distribution, extending service from those distribution points to the end-user connections. So the trunk is the feeder and the branch is the distribution. This aligns with how trunk/feeder and branch/distribution roles are defined in hierarchical network layouts.

7. OWB is measured in which unit?

A. milliradians

B. degrees

C. radians

D. arcminutes

OWB, the width of a beam as it propagates, is a small angular measure. Using milliradians makes sense here because it keeps the numbers compact and directly relateable to how far the beam spreads over distance. The key relation is that the linear spread equals distance times the angle (in radians). So, for example, 5 milliradians at 200 meters gives about 1 meter of spread (0.005 × 200 m = 1 m). If you used degrees or arcminutes, the numbers get harder to relate to physical distances, and radians would be less convenient for quick mental math. Arcminutes would also be more cumbersome for this purpose.

8. EMI in tunnels is the result of which phenomenon?

A. Unbalanced electromagnetic fields

B. Coupling

C. Susceptibility of telecom

D. All of the above

Unbalanced electromagnetic fields are the primary source of EMI in tunnels. In traction power systems and tunnel installations, currents don't always distribute evenly across conductors and return paths, so the resulting time-varying magnetic field around cables and equipment is uneven. This unbalanced field can radiate and couple into nearby telecom cables and devices, creating interference. Coupling describes how those fields transfer to other conductors, and susceptibility refers to how vulnerable the telecom gear is to that interference; both influence the severity, but they are not the root cause. Therefore, the main phenomenon producing EMI in tunnels is the presence of unbalanced electromagnetic fields.

9. If available pathways do not allow all cables to be routed to the central network point, which topology is recommended?

A. Ring topology

B. Two-level hierarchical star

C. Bus topology

D. Mesh topology

When you can't route all cables to a single central network point, use a two-level hierarchical star layout. In this approach, you place local aggregation points or distribution devices in each area and connect edge devices to those local points. Then, the local aggregators connect back to the central backbone. This arrangement keeps most cabling within manageable, area-specific runs and only requires a backbone connection from each area to the core, which fits the constraint of limited pathways. The benefit is clear: it provides scalability and easier fault isolation. If a problem occurs in one area, it's contained within that local star, and you don't have to pull cables from every edge device all the way to the central point. It also simplifies expansion—new devices or entire areas can be added by connecting them to their local distribution point without reworking the entire central wiring. Other topologies don't fit as well in this scenario. A ring creates a continuous loop that can disrupt service if a link fails and isn't optimal for centralized management across multiple areas. A bus relies on a single shared cable path, which becomes a bottleneck and isn't practical with limited pathways. A full mesh offers many redundant paths but is typically unnecessary and cost-prohibitive for a building with restricted routing options, where a hierarchical star provides the right balance of manageability, performance, and scalability.

10. Lead height equals what?

A. Lead height equals height divided by lead

B. Lead height equals the sum of lead and height

C. Lead height equals height minus lead

D. Lead height equals lead divided by height of the attachment

Lead height is defined as the ratio of the horizontal distance (lead) to the vertical distance at the attachment (height of the attachment). This dimensionless value captures how far out the lead sits relative to how high the attachment is, which helps determine the path angle and ensure proper slack and clearance. The other relationships don't describe this path ratio: adding or subtracting distances isn't meaningful for slope, and using height divided by the lead would give the reciprocal of the intended measure. Therefore, lead height equals lead divided by the height of the attachment.

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://bicsiospdesign.examzify.com

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