

IGCSE DESIGN & TECHNOLOGY (DT) JIS PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

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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 a Cordless Drill?

- A. Battery Powered Portable Drill
- B. Pneumatic-Powered Drill
- C. Manual Hand Drill
- D. An Electrically Corded Heavy-Duty Drill

2. Composite describes a material that is made by combining two or more materials.

- A. Composite
- B. Veneer
- C. Hardwood
- D. Plywood

3. Name the two ways to season timber.

- A. Kiln drying and Air drying.
- B. Sun drying and Microwave drying.
- C. Boiling and soaking.
- D. Burning and charring.

4. Which tool is specifically designed to smooth wood surfaces by abrasion?

- A. Hand sander
- B. Scroll Saw
- C. Metal work lathe
- D. Machine vice

5. Non-ferrous metals are defined as which of the following?

- A. Metals containing iron.
- B. Metals that do not contain iron.
- C. A mixture of two or more metals.
- D. Non-metals.

- 6. Quality Control (QC) is a program that monitors each phase of a process to make sure that materials used are of acceptable quality and that instruments are working accurately.**
- A. A program that monitors each phase of a process to make sure that materials used are of acceptable quality and that instruments are working accurately.
 - B. A plan to inspect only the final product.
 - C. A method to speed up production.
 - D. A system that ignores measurement results.
- 7. Which instrument is used to check right angles and levels, and can also be used for measuring?**
- A. Engineers square
 - B. Vernier caliper
 - C. Combination square
 - D. Scriber
- 8. Which process fuses two pieces of material using a heat process most commonly used with metal?**
- A. Welding
 - B. Die casting
 - C. Casting
 - D. Moulding
- 9. The tool used for straight line cross cutting and ripping lumber is?**
- A. Tenon saw
 - B. Circular saw
 - C. Coping saw
 - D. Pencil
- 10. Which hardwood is light brown with open grain, tough, resists splitting and is durable outdoors and indoors?**
- A. Elm
 - B. Balsa
 - C. Walnut
 - D. Teak

Answers

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

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Explanations

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1. What is a Cordless Drill?

- A. Battery Powered Portable Drill
- B. Pneumatic-Powered Drill
- C. Manual Hand Drill
- D. An Electrically Corded Heavy-Duty Drill

A cordless drill is a battery-powered portable drill that runs on a rechargeable battery, allowing you to work away from a power outlet. The defining feature is freedom of movement without a cord, which is why it fits best for jobs where a corded drill or other power methods aren't practical. Pneumatic-powered drills run on compressed air, manual hand drills rely on human effort, and corded heavy-duty drills require a mains power supply, so they don't fit the idea of cordless operation.

2. Composite describes a material that is made by combining two or more materials.

- A. Composite
- B. Veneer
- C. Hardwood
- D. Plywood

A material formed by combining two or more different substances is called a composite. This idea is about merging the properties of its parts to achieve something better, like greater strength, stiffness, or durability, often with lighter weight. That straightforward definition fits the description given, making the general term the best fit. Veneer is just a thin surface layer of wood applied to a base material, so it doesn't involve combining materials to create a new property. Hardwood is a type of timber, not a composite material. Plywood is made by bonding thin layers of wood together, which is a composite idea in practice, but the description points to the broad term rather than a specific example.

3. Name the two ways to season timber.

- A. Kiln drying and Air drying.
- B. Sun drying and Microwave drying.
- C. Boiling and soaking.
- D. Burning and charring.

Seasoning timber means reducing its moisture content so the wood becomes stable and less prone to shrinkage, warping, or decay when used. The two main ways to do this are air drying and kiln drying. Air drying, or natural seasoning, stacks boards with spacers to let air flow around them and lets moisture evaporate slowly over many months or years. It's cheap and simple, but the process is slow and depends on the environment; if drying is uneven, the timber can develop twists, bows, or cracks. Kiln drying dries timber in a controlled chamber with heated air and monitored humidity, which speeds up the process and gives a more uniform moisture content, helping timber stay stable and ready for finishing sooner. A typical target moisture content for interior use is around 12%, though this can vary with species and end use. If not managed correctly, kiln drying can cause surface checking or internal stresses. The other options aren't standard seasoning methods: sun or microwave drying aren't reliable or practical for consistent timber drying, and boiling or soaking would make the wood swell and lose strength. Burning or charring changes the surface, not the moisture content, so it isn't seasoning.

4. Which tool is specifically designed to smooth wood surfaces by abrasion?

- A. Hand sander
- B. Scroll Saw
- C. Metal work lathe
- D. Machine vice

Smoothing wood surfaces by abrasion means using an abrasive surface to wear away roughness and create a fine finish. A hand sander is designed for this purpose because it applies sandpaper or abrasive pads to the wood and moves across the surface, removing tiny amounts of material with friction to produce a smooth result. The other tools serve different tasks: a scroll saw is for making cuts with a blade, a metal work lathe shapes material by turning and cutting, and a machine vice simply holds a workpiece in place during machining. So the hand sander is the tool specifically intended for smoothing by abrasion.

5. Non-ferrous metals are defined as which of the following?

- A. Metals containing iron.
- B. Metals that do not contain iron.
- C. A mixture of two or more metals.
- D. Non-metals.

Non-ferrous metals are metals that do not contain iron. This matters because metals with iron (ferrous metals) can rust and are often magnetic, while non-ferrous metals avoid these issues and typically offer other advantages such as lighter weight, better corrosion resistance, or superior electrical and thermal conductivity. Examples include aluminium, copper, zinc, tin, lead, and the precious metals. The definition focuses on excluding iron, not on being alloys or on being non-metals.

6. Quality Control (QC) is a program that monitors each phase of a process to make sure that materials used are of acceptable quality and that instruments are working accurately.

- A. A program that monitors each phase of a process to make sure that materials used are of acceptable quality and that instruments are working accurately.
- B. A plan to inspect only the final product.
- C. A method to speed up production.
- D. A system that ignores measurement results.

Quality control focuses on checking materials and the measuring tools at every stage of production to keep quality consistent. By monitoring each phase, QC detects problems early, ensuring inputs meet required standards and instruments stay calibrated and accurate. This aligns with the described program that oversees the process to verify acceptable materials and functioning instruments. The other ideas miss the ongoing, process-wide nature of QC: inspecting only the final product ignores early issues; trying to speed up production isn't QC; and ignoring measurement results would eliminate the checks that QC relies on.

7. Which instrument is used to check right angles and levels, and can also be used for measuring?

- A. Engineers square
- B. Vernier caliper
- C. Combination square**
- D. Scriber

A combination square is a versatile measuring tool because it blends a straightedge, a 90-degree head, and a bubble level into one instrument. This lets you do three things reliably: check right angles, verify level, and take measurements. To check a right angle, you align the ruler with the edge of your work and use the head to form a perfect 90-degree corner; if the edge sits flush against the blade, the angle is true. For level, the bubble vial in the head shows level whenever the bubble sits centered between the marks, so you can confirm horizontal or vertical orientation. For measuring, you read the scale on the ruler to determine lengths, and the adjustable head lets you transfer measurements, mark depths, or align the tool to set a consistent height for scribing or cutting. Other tools lack one or more of these functions: an engineers square checks only a right angle without a built-in level or depth measurement; a vernier caliper provides precise linear measurements but isn't designed for checking angles or level; a scriber marks lines but doesn't measure or verify angles or levels.

8. Which process fuses two pieces of material using a heat process most commonly used with metal?

- A. Welding**
- B. Die casting
- C. Casting
- D. Moulding

Joining two pieces by heating them until they fuse is welding. This process uses heat (and often a filler material) to melt the edges of the metal parts so they flow together and form a strong, continuous joint. Die casting, casting, and moulding are all forming or shaping methods: they create a single piece from molten material or by injecting it into a mold, rather than bonding two pre-made pieces. So welding is the heat-based method specifically used to fuse two metal pieces.

9. The tool used for straight line cross cutting and ripping lumber is?

- A. Tenon saw
- B. Circular saw**
- C. Coping saw
- D. Pencil

For straight-line cross cutting and ripping lumber, you need a tool that can make long, straight passes efficiently and guide the cut true. A circular saw fits this need because it has a broad blade and can be guided with a fence or guide rail, allowing accurate straight cuts and ripping along the grain. The other tools aren't suited for this: a tenon saw is a small hand saw meant for precise joinery and short cuts; a coping saw is designed for curved, intricate shapes; and a pencil is for marking, not cutting. So the best choice for straight-line cross cutting and ripping is a circular saw.

10. Which hardwood is light brown with open grain, tough, resists splitting and is durable outdoors and indoors?

A. Elm

B. Balsa

C. Walnut

D. Teak

Think about a wood that looks light and shows its grain clearly. A light brown color with an open grain means you can see the pores in the wood, and the wood isn't dense and dark. Elm fits this description well: it's typically pale to light brown and has a noticeable open grain, with visible pores that give it a lively texture. Elm is also known for being tough and elastic, which helps it resist splitting when it's worked or used in construction and furniture. That combination—being strong, not prone to cracking, and usable both outdoors and indoors—makes it a versatile choice. Balsa is too soft and light, not durable enough for regular use. Walnut is usually dark brown with a tighter, less open grain. Teak is very durable outdoors and has a more uniform, golden-brown appearance with a smoother grain, rather than the open-grain look described. So the wood that best matches all those properties is elm.

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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://igcsedtjis.examzify.com>

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

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