

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

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. Which tool would you use to hold work securely while cutting or drilling?

- A. Engineers Vice
- B. Tin Snips
- C. Cordless Drill
- D. Magnabend

2. Blow moulding is described as which of the following?

- A. Process for making hollow plastic forms by injecting molten plastic into a die.
- B. Process for making hollow plastic forms by blowing air into heated thermoplastic.
- C. Creates simple hollow shapes by sucking a heated plastic over a mould.
- D. A process for creating large hollow plastic objects.

3. 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

4. Which tool is a sliding square mounted on a steel rule, used to mark a square line, find level, or measure?

- A. Combination Square
- B. Try Square
- C. Chisel
- D. Marking Knife

5. Short grain timber occurs when the grain runs in which direction?

- A. Short grain (timber)
- B. Long grain
- C. End grain
- D. Mixed grain

- 6. Pilot hole is defined as which of the following?**
- A. A small hole drilled as a guide for the insertion of a nail or screw, or for the drilling of a larger hole.
 - B. A hole used to trap moisture.
 - C. A hole that weakens the workpiece.
 - D. A hole with no function.
- 7. Which metal is non-ferrous, ductile, malleable, red-brown in colour and a good electrical conductor used for plumbing pipes and electrical fittings?**
- A. Copper
 - B. Brass
 - C. Aluminium
 - D. Cast iron
- 8. Which of the following is an advantage of manufactured boards?**
- A. Available in large sizes
 - B. Designed with specific properties in mind
 - C. Uniform with few imperfections
 - D. You can buy them ready finished
- 9. Which tool is used to mark out 45°/135° angles on wood?**
- A. Mitre Square
 - B. Hand Router
 - C. Rasp
 - D. Hand Drill
- 10. What is the Forstner bit used for?**
- A. Used to drill flat bottomed holes in wood.
 - B. Used to drill narrow pilot holes
 - C. Used for drilling through metal
 - D. Used for creating threaded holes

Answers

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

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Explanations

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1. Which tool would you use to hold work securely while cutting or drilling?

A. Engineers Vice

B. Tin Snips

C. Cordless Drill

D. Magnabend

The main idea is to keep the workpiece from moving so you can cut or drill accurately and safely. An engineers vice is designed for this job: its adjustable jaws clamp the material firmly onto the bench, holding it steady while you work. This lets you apply precise, controlled pressure and keeps your hands away from the cutting tool. It's also versatile for different sizes and can be mounted securely, sometimes with protective jaws to avoid marking the work. Tin snips cut, not hold. A cordless drill is used to drill holes, not secure the workpiece. Magnabend is a bending machine, not a holding device for cutting or drilling. So the engineers vice best fits the need to hold work securely during these operations.

2. Blow moulding is described as which of the following?

A. Process for making hollow plastic forms by injecting molten plastic into a die.

B. Process for making hollow plastic forms by blowing air into heated thermoplastic.

C. Creates simple hollow shapes by sucking a heated plastic over a mould.

D. A process for creating large hollow plastic objects.

Blow moulding creates hollow plastic forms by inflating heated thermoplastic with air inside a mold. The plastic is softened by heat, placed in a mold, and air pressure expands it to fill the cavity, producing hollow shapes like bottles. This is different from injection moulding, where molten plastic is injected into a die to form the shape, and from vacuum forming, where heated plastic is drawn over a mold to form shallow profiles. The idea of blowing air into the heated plastic inside a mold best matches blow moulding. Variations include extrusion blow moulding and stretch blow moulding, but the core is the inflation of softened plastic to form hollow objects.

3. 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.

4. Which tool is a sliding square mounted on a steel rule, used to mark a square line, find level, or measure?

A. Combination Square

B. Try Square

C. Chisel

D. Marking Knife

A sliding square mounted on a steel rule used to mark a square line, find level, or measure is a combination square. Its key feature is a steel rule with a head that can slide along it and be clamped at any position. The head typically provides 90° and 45° angles, allowing you to lay out square lines and check right angles, while the ruler carries precise measurements. Many versions also include a built-in spirit level, so you can assess level or plumb directly. This combination of adjustable positioning, multiple angles, and measurement makes it a very versatile layout tool for woodworking and metalworking. A try square is a fixed-angle tool used to check or mark a right angle but it doesn't slide along a rule or include a level. A chisel is a cutting tool, and a marking knife is used to scratch lines but doesn't offer the adjustable measurement and level features.

5. Short grain timber occurs when the grain runs in which direction?

A. Short grain (timber)

B. Long grain

C. End grain

D. Mixed grain

Grain direction tells you how the fibres run through the wood. Short grain timber occurs when the grain runs across the width of the piece, i.e., perpendicular to its length. This is different from long grain, where the fibres run along the length of the timber. End grain is the grain seen on the cut ends of the piece, and mixed grain means the grain direction changes across the piece. So, short grain is when the grain runs across the short dimension of the timber.

6. Pilot hole is defined as which of the following?

A. A small hole drilled as a guide for the insertion of a nail or screw, or for the drilling of a larger hole.

B. A hole used to trap moisture.

C. A hole that weakens the workpiece.

D. A hole with no function.

Pilot holes are small holes drilled to guide the insertion of a nail or screw, or to guide the drilling of a larger hole. This helps the screw go in straight and reduces the risk of the workpiece splitting, while also making it easier to drill an accurate larger hole. The other ideas don't fit because a pilot hole isn't about trapping moisture, weakening the piece, or having no function—the point is to provide guidance and precision in fastening or drilling.

7. Which metal is non-ferrous, ductile, malleable, red-brown in colour and a good electrical conductor used for plumbing pipes and electrical fittings?

- A. Copper**
- B. Brass
- C. Aluminium
- D. Cast iron

Copper matches all the clues because it is non-ferrous (contains no iron), very ductile (can be drawn into wires) and malleable (can be hammered into shapes), and its natural color is red-brown. It is also one of the best electrical conductors, which is why it's used for electrical fittings. For plumbing, copper pipes resist corrosion and are easy to join. The other metals don't fit as well: brass is copper-based but tends to be more yellowish and isn't as good a conductor; aluminium is silvery and, while conductive, isn't red-brown and is used differently; cast iron contains iron and is not ductile or malleable like copper.

8. Which of the following is an advantage of manufactured boards?

- A. Available in large sizes
- B. Designed with specific properties in mind
- C. Uniform with few imperfections**
- D. You can buy them ready finished

Manufactured boards provide uniform quality across the whole sheet, achieved through controlled production. By bonding wood fibers or particles with adhesive and pressing them, the material is kept consistent in density and surface finish, so there are few natural defects like knots or irregular grain. This predictability makes machining, joining, and finishing easier and more reliable, since you don't have to deal with unexpected weak spots or surface flaws. Other points—being available in large sizes, having properties designed for specific uses, or being sold ready finished—can be true for some products, but they aren't guaranteed advantages of manufactured boards as a category. The standout benefit is the consistent, uniform quality throughout.

9. Which tool is used to mark out 45°/135° angles on wood?

- A. Mitre Square**
- B. Hand Router
- C. Rasp
- D. Hand Drill

When you need a precise diagonal line on wood for joints, the mitre square is the go-to tool. It is designed to mark a 45° angle and the corresponding 135° angle relative to the edge, which is exactly what you need for making mitre joints. You align the square with the edge and scribe the line to transfer the angle accurately. The other tools aren't used for marking angles: a hand router shapes edges, a rasp files or smooths, and a hand drill makes holes. So the mitre square is the best choice for marking 45°/135° angles.

10. What is the Forstner bit used for?

A. Used to drill flat bottomed holes in wood.

B. Used to drill narrow pilot holes

C. Used for drilling through metal

D. Used for creating threaded holes

The Forstner bit is designed to drill clean, flat-bottomed holes in wood. Its center point helps start and guide the cut, while the flat cutting edges around the rim slice through wood to create a level floor at the bottom of the hole. This makes it ideal for large-diameter holes where a smooth, flat bottom is important, such as holes for hardware like hinges or dowels, and it works well when using a drill press for precision. It's not meant for narrow pilot holes, metal drilling, or producing threaded holes (those require other tools or processes).

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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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