IGCSE Design & Technology (DT) JIS Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Sample study guide. For the full version with hundreds of questions, visit: https://igcsedtjis.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

SAMPLE

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. Which joint requires a special tool to cut the slot?

A. Dovetail Joint

B. Biscuit Joint

C. Mitre Joint

D. Butt Joint

2. 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

3. Which of the following is NOT a manufactured board?

A. MDF

B. Plywood

C. Chipboard

D. Solid Wood

4. Epoxy resin is described as a two-part adhesive with resin and hardener that must be mixed in equal amounts to form a waterproof, strong joint.

A. A wood glue that dries quickly.

B. Two tubes (resin and hardener) that must be mixed in equal amounts to form a waterproof, strong joint.

C. A spray adhesive for fabrics.

D. A contact adhesive for plastics.

5. Which metal is non-ferrous, golden yellow in colour and commonly decorative for items like candle sticks and musical instruments?

A. Copper

B. Brass

C. Aluminium

D. Stainless steel

SAMPLE

6. Which item forms its own matching thread in wood?

- **A. Wood screw**
- **B. Panel pins**
- **C. Cam bolt**
- **D. Jig**

7. Which of the following is a use for Nylon?

- **A. Bearings**
- **B. Curtain rails**
- **C. Electrical components**
- **D. Food packaging**

8. What is the primary function of an Engineers Vice?

- **A. Used to Hold And Support Work While Cutting, Drilling, Or Filing**
- **B. A Tool For Measuring Angles**
- **C. A Device For Cutting Threads**
- **D. A Device For Bending Sheet Metal**

9. What is a mallet used for?

- **A. Marking parallel lines on the edge of wood**
- **B. Knocking wooden pieces together**
- **C. Cutting straight lines**
- **D. Smoothing wood surfaces**

10. The sign for wearing eye protection indicates which of the following?

- **A. Wear eye protection.**
- **B. Do not wear eye protection.**
- **C. Eye protection optional.**
- **D. Eye protection only for supervisors.**

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which joint requires a special tool to cut the slot?

A. Dovetail Joint

B. Biscuit Joint

C. Mitre Joint

D. Butt Joint

Slots for aligning parts are essential in some joints, and the biscuit joint specifically relies on a machinery-cut slot. A wooden biscuit sits in matching grooves cut into the edges of two pieces, and these slots must be exact in width and depth. That precision is achieved with a biscuit joiner, a special tool designed to cut those slots cleanly and consistently. Once the slots are made, glue and the biscuit help align and strengthen the joint as the biscuit swells slightly to lock everything in place. Other joints achieve alignment or strength in different ways—dovetail uses interlocking tails and pins cut with saws and chisels or jigs, mitre joins with angled end cuts, and butt joins simply glue or fasten flat ends with no groove at all.

2. 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.

3. Which of the following is NOT a manufactured board?

A. MDF

B. Plywood

C. Chipboard

D. Solid Wood

Manufactured boards are engineered wood products made by binding wood fibers, particles, or veneers with adhesives under heat and pressure. Solid wood, on the other hand, is natural timber cut from trees as a single piece, not made by combining layers or particles. That's why solid wood isn't a manufactured board—it's a natural timber material, whereas the other three are produced by bonding materials together to form a flat panel. MDF uses wood fibers, plywood uses veneers layered and glued, and chipboard (particleboard) uses wood particles bound with resin.

SAMPLE

4. Epoxy resin is described as a two-part adhesive with resin and hardener that must be mixed in equal amounts to form a waterproof, strong joint.

A. A wood glue that dries quickly.

B. Two tubes (resin and hardener) that must be mixed in equal amounts to form a waterproof, strong joint.

C. A spray adhesive for fabrics.

D. A contact adhesive for plastics.

Two-part epoxy works by mixing resin and hardener to trigger a chemical cure. When the two parts are combined in the correct ratio, a cross-linking reaction occurs that creates a hard, durable, and waterproof bond. The description given—two tubes containing resin and hardener that must be mixed in equal amounts to form a waterproof, strong joint—matches this behavior exactly, so it best describes epoxy resin. Other options describe different types of adhesives that don't rely on a precise two-part mix to achieve their bond: a fast-drying wood glue is a single-component system, a spray fabric adhesive is typically for lighter, non-waterproof bonds, and a plastic contact adhesive relies on surface contact rather than a controlled two-part cure.

5. Which metal is non-ferrous, golden yellow in colour and commonly decorative for items like candle sticks and musical instruments?

A. Copper

B. Brass

C. Aluminium

D. Stainless steel

Brass is the best fit because it's a non-ferrous alloy, meaning it doesn't contain iron. It's made from copper and zinc, and that combination gives a distinctive golden yellow color that's highly prized for decorative items. Its bright finish takes polish well, and it's easy to cast and work into shapes for candle sticks and the components of many musical instruments. Copper itself looks more reddish and isn't typically described as golden; aluminium is naturally silver, and stainless steel is an iron-containing alloy with a silver-grey appearance. So the golden hue and decorative suitability point to brass.

6. Which item forms its own matching thread in wood?

A. Wood screw

B. Panel pins

C. Cam bolt

D. Jig

The key idea is a fastener that cuts its own thread in wood as it is driven in. A wood screw is designed with a sharp point and coarse, tapered threads that bite into the fibers and create a matching groove, so the screw threads into the wood without needing a pre-tapped hole or a nut. Panel pins have no threads at all, so they don't form a thread as they're hammered in. A cam bolt uses a machine-thread that usually works with a nut or insert and relies on those threaded parts rather than cutting into the wood itself. A jig is simply a guiding tool and has no threading involved.

SAMPLE

7. Which of the following is a use for Nylon?

A. Bearings

B. Curtain rails

C. Electrical components

D. Food packaging

Nylon's main strengths for this context are its good wear resistance and low friction, along with toughness and the ability to run with minimal lubrication. Bearings exist to let parts slide against each other smoothly while carrying loads; nylon's self-lubricating surface and durability make it an excellent material for plain bearings and bushings, reducing wear and maintenance compared with metals. Curtain rails are usually chosen for strength and appearance, typically metal or hard plastics, and while nylon could be used in some sliding components, it isn't the standard or most effective choice for that application. Food packaging can involve barrier layers that include nylon, but that's a different use from providing a low-friction, wear-resistant sliding surface. Electrical components also rely on materials chosen for insulation and other properties, where nylon isn't the primary selection for this simple context. So, the best use among these is for bearings.

8. What is the primary function of an Engineers Vice?

A. Used to Hold And Support Work While Cutting, Drilling, Or Filing

B. A Tool For Measuring Angles

C. A Device For Cutting Threads

D. A Device For Bending Sheet Metal

The main idea is to hold work pieces firmly so you can work on them accurately and safely. An engineer's vise is a bench device with jaws that clamp onto a part, using a screw and handle to tighten. This keeps the material from moving while you cut, drill, or file it, giving you control and precision. It's not a measuring instrument, a tool for cutting threads, or a device for bending metal—those have different primary purposes. The vice simply provides a stable holding station on the bench, sometimes with an adjustable base or an anvil for light hammering.

9. What is a mallet used for?

A. Marking parallel lines on the edge of wood

B. Knocking wooden pieces together

C. Cutting straight lines

D. Smoothing wood surfaces

A mallet is used to assemble wood parts by tapping them together without marring the surface. Its head is soft, usually wood or rubber, so it cushions blows and won't leave dents or scars on the wood or on delicate components. This makes it ideal for driving joinery pieces like dowels or the shoulder of a mortise-and-tenon joint, where a precise amount of force is needed without damaging the components. In contrast, marking lines requires a marking knife, pencil, or marking gauge; a mallet won't create marks. Cutting straight lines is the job of saws and guides, not a mallet. Smoothing surfaces is done with planes or sandpaper, not by tapping. So the mallet's purpose is to knock wooden pieces together safely and effectively.

SAMPLE

10. The sign for wearing eye protection indicates which of the following?

A. Wear eye protection.

B. Do not wear eye protection.

C. Eye protection optional.

D. Eye protection only for supervisors.

When you see a sign indicating eye protection, it means wearing eye protection is required in that area. This is a blue, mandatory-type sign in many safety systems, signaling you must put on protective eyewear before proceeding. It isn't asking you to avoid eye protection, nor making it optional, nor restricting it to supervisors—the message is a clear instruction to wear eye protection to stay safe.

SAMPLE

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!

SAMPLE