AQA A-level Design and Technology (DT) Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. Which description best defines quality control?

A. Final product inspection only

B. Monitoring, measuring and checking of materials components and equipment throughout the production process

C. Designing products to meet customer desires

D. Marketing campaigns to improve brand image

2. Which of the following is NOT listed as a main design influence?

A. Technology at the time

B. Cultural and social influences of the time

C. The use of sustainable materials

D. Influences on design today

3. UF resin is typically described as which combination of properties?

A. Soft and clear

B. Hard, opaque, tough, chemical resistant

C. Transparent and flexible

D. Biodegradable

4. What is a primary carbon footprint?

A. Measures indirect CO2 from products

B. Measures emissions from agriculture

C. Measures direct emissions of CO2 from the burning of fossil fuels, including transport and domestic energy consumption

D. Measures carbon sequestration

5. Which description best captures the shift in design from the 1940s to the 1960s?

A. The war machine pushed mass production and modern materials; polymers leading to innovative design; Scandinavian influence; knock-down fittings and plywood flat packing becoming common.

B. Ornament and decorative styling dominated the era.

C. Designers moved toward handcrafted, bespoke pieces with minimal production.

D. Technology had little impact on materials used in design during this period.

6. What are the two main elements typically represented in product packaging?

A. Price and warranty

B. Corporate identity and informative data

C. Manufacturer location and date

D. Color and font style

7. What are SPI codes?

A. Codes found on polymers often inside a Mobius Loop allowing the polymer to be identified and recycled accordingly

B. Codes for metal alloys used in fasteners

C. Codes indicating polymer color

D. A labeling system for glass types

8. What are the advantages of KeepCup?

A. Lightweight and stackable

B. Fully recyclable at the end of life (PP)

C. Low energy injection moulding manufacture

D. All of the above

9. Which polymer becomes soft and moldable when heated and can be reshaped?

A. Elastomer

B. Thermoplastic

C. Thermosetting plastic

D. Composite

10. Which is a QC check to ensure prototype accuracy?

A. Visual aesthetic checks

B. Regular measurement using flexible devices

C. Machining alignment checks

D. Assembly checks of multiple components

Answers

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

Explanations

1. Which description best defines quality control?

A. Final product inspection only

B. Monitoring, measuring and checking of materials components and equipment throughout the production process

C. Designing products to meet customer desires

D. Marketing campaigns to improve brand image

Quality control is about keeping a close eye on the production process to make sure every output meets the required standards. It involves monitoring, measuring and checking materials, components and equipment at different stages of production, not just inspecting the finished product. This ongoing checking helps catch defects early and keeps variation under control, so products conform to specifications before they reach customers. Other options focus on final inspection alone, designing a product to fit customer desires, or marketing—areas that aren't about the ongoing process of ensuring quality during manufacture.

2. Which of the following is NOT listed as a main design influence?

A. Technology at the time

B. Cultural and social influences of the time

C. The use of sustainable materials

D. Influences on design today

Understanding what shapes design across different periods involves looking at the technology available at the time, the cultural and social context, and the influences coming from design today. Those are broad drivers that push what designers create. The use of sustainable materials, while crucial in modern design and a key consideration in DT, is a material choice and sustainability constraint rather than a broad influence category in this context. It affects decisions, but it doesn't belong to the main influence group described here. So, that option is not listed as a main influence.

3. UF resin is typically described as which combination of properties?

A. Soft and clear

B. Hard, opaque, tough, chemical resistant

C. Transparent and flexible

D. Biodegradable

UF resin is a urea-formaldehyde thermosetting adhesive that cures into a rigid, crosslinked network. That structure makes it hard and opaque, not soft or clear, and gives it good chemical resistance. The combination of a hard, opaque, chemically resistant material describes UF resin well, rather than something soft, transparent, biodegradable, or flexible.

4. What is a primary carbon footprint?

A. Measures indirect CO_2 from products

B. Measures emissions from agriculture

C. Measures direct emissions of CO_2 from the burning of fossil fuels, including transport and domestic energy consumption

D. Measures carbon sequestration

A primary carbon footprint focuses on the direct CO_2 emissions you cause by burning fossil fuels in activities you directly control. This includes the fuel your vehicle uses and the energy you burn for heating or powering things at home. That's why describing direct emissions from transport and domestic energy use best fits the idea of a primary footprint—you're counting the emissions you produce directly through burning fuels. Emissions tied to the production or lifecycle of goods (indirect) fall under a secondary footprint, carbon sequestration is about removing CO_2 from the atmosphere, and agriculture emissions refer to a specific sector rather than the direct fuels you burn in daily life.

5. Which description best captures the shift in design from the 1940s to the 1960s?

A. The war machine pushed mass production and modern materials; polymers leading to innovative design; Scandinavian influence; knock-down fittings and plywood flat packing becoming common.

B. Ornament and decorative styling dominated the era.

C. Designers moved toward handcrafted, bespoke pieces with minimal production.

D. Technology had little impact on materials used in design during this period.

Shifts in design from the 1940s to the 1960s were driven by mass production, new materials, and a move toward functional, affordable design. The wartime mindset of standardised production carried into peacetime, expanding how things could be made quickly and cheaply. Polymers and other modern materials opened up new possibilities for forms and finishes that weren't practical with traditional timber or metal. Scandinavian design influenced the look worldwide with its emphasis on clean lines, simplicity, and practicality, shaping the mid-century modern aesthetic. At the same time, knock-down fittings and flat-packed plywood furniture made shipping, storage, and consumer assembly easier, which supported a growing market for affordable, ready-to-assemble pieces. Together, these trends mark a move away from ornate, handcrafted items toward streamlined, mass-produced design.

6. What are the two main elements typically represented in product packaging?

A. Price and warranty

B. Corporate identity and informative data

C. Manufacturer location and date

D. Color and font style

Packaging mainly communicates who made the product and provides essential information about it. The two main elements represented are corporate identity and informative data. Corporate identity covers the brand look—logo, colors, typography, and overall design—so the product is recognizable and trusted on the shelf. Informative data delivers what the consumer needs to know: product name, contents or ingredients, instructions for use, safety or allergy information, weight or volume, and sometimes contact or warranty details. Together, these elements help the shopper identify the brand and understand the product, which is why this pairing is the best answer. Price and warranty can appear on packaging but are not the fundamental dual focus, and other details like manufacturer location or date aren't central to the primary purpose of packaging.

7. What are SPI codes?

A. Codes found on polymers often inside a Mobius Loop allowing the polymer to be identified and recycled accordingly

B. Codes for metal alloys used in fasteners

C. Codes indicating polymer color

D. A labeling system for glass types

SPI codes are resin identification codes used on plastic packaging to identify the type of plastic resin. They're usually found inside the Möbius recycling symbol and consist of a number from 1 to 7 that stands for a specific polymer (for example, PET, HDPE, PVC, LDPE, PP, PS, or other). This labeling helps recycling facilities sort plastics correctly and choose the appropriate processing stream, improving recycling efficiency. They aren't about metal alloys, polymer color, or glass types.

8. What are the advantages of KeepCup?

A. Lightweight and stackable

B. Fully recyclable at the end of life (PP)

C. Low energy injection moulding manufacture

D. All of the above

KeepCup shows how a product can support reuse through design, materials and production choices. Being lightweight and stackable makes it easy to carry, store, and use instead of disposable cups, which encourages people to reuse it regularly. It's made from polypropylene, a material that can be recycled at end of life in many recycling systems, helping to reduce waste when the cup is finally retired. The manufacture uses energy-efficient injection moulding, which lowers the energy use during production. Put together, these factors give practical everyday benefits and better lifecycle sustainability, so all of these advantages apply.

9. Which polymer becomes soft and moldable when heated and can be reshaped?

A. Elastomer

B. Thermoplastic

C. Thermosetting plastic

D. Composite

When a polymer becomes soft and moldable with heat and can be reshaped, you're looking at a thermoplastic. The key idea is how its molecular structure responds to heat. Thermoplastics have long, relatively un-crosslinked chains. When heated, these chains gain mobility and can slide past each other, so the material flows and can be shaped. Once it cools, the chains lock back in place, holding the new shape. This reshaping can be done repeatedly, which is why thermoplastics are recyclable and easy to process. By contrast, thermosetting plastics form a network of strong cross-links during curing. Heat doesn't soften or melt them; they tend to char or burn instead and are not re-moldable. Elastomers are highly elastic polymers and can be either thermoplastic or thermosetting, but the defining feature in the question is the ability to soften and be reshaped with heat, which points to thermoplastics. Composites are not a polymer type themselves; they're materials made from a reinforcing phase in a matrix, which can be a thermoplastic or thermoset, so they don't describe the behavior by itself.

10. Which is a QC check to ensure prototype accuracy?

A. Visual aesthetic checks

B. Regular measurement using flexible devices

C. Machining alignment checks

D. Assembly checks of multiple components

Ensuring prototype accuracy relies on obtaining objective dimensional data by comparing the part against the design specifications. This means measuring key dimensions and features regularly so you can see how closely the prototype matches the intended size, shape and tolerances. Using regular measurements with flexible measuring devices provides the necessary quantitative data. These tools can adapt to different shapes and surfaces, allowing you to accurately capture critical dimensions even on irregular features. By recording measurements and comparing them to the CAD-drawn tolerances, you can quickly identify any deviations and decide if the prototype needs adjustment. Visual aesthetic checks look at appearance, which doesn't reveal dimensional errors. Machining alignment checks focus on whether the manufacturing setup is correct, not on verifying that the finished part's dimensions meet the design. Assembly checks test fit between parts but don't quantify how close individual features are to their specified sizes. The quantitative, ongoing measurement approach is what truly confirms accuracy in a prototype.

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://aqaaleveldt.examzify.com

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