ENGLAND GCSE DESIGN AND TECHNOLOGY OCR · FINAL EXAM · 50 QUESTIONS

Final Exam — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A wooden chair is analysed as an existing product. Which feature most affects how good it feels to sit on?**

- A The colour of the varnish on the legs, in some situations
- B The name of the shop that sold it
- C The number of screws used to join it
- D The shape and height of the seat and backrest

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2 **A toaster is repaired with a new heating element instead of being thrown away. Which of the 6 Rs does this show?**

- A Refuse
- B Recycle
- C Reduce
- D Repair

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3 **A model bridge is glued with PVA adhesive. Why is PVA a good choice for joining balsa?**

- A It melts the wood as it dries, in some situations
- B It only works on metal
- C It bonds wood well and dries clear
- D It never sets hard at all

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4 **A mobile phone uses a vibration motor to alert the user. What is the output in this system?**

- A The heat from the battery, in some situations
- B The sound of the ringtone
- C The light from the screen
- D The vibration felt by the user

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5 **A workbench in a school workshop has a vice fitted to one end. What is the vice used for?**

- A To heat material until it softens
- B To measure the length of material
- C To cut material into curved shapes, in some situations
- D To hold material firmly while it is worked on

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6 **A hand saw with a broken handle is given a new handle. Which of the 6 Rs does this show?**

- A Recycle
- B Repair
- C Reduce
- D Refuse

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7 **A cordless drill bit is made from high speed steel. Why is high speed steel used for drill bits?**

- **A** It goes soft as soon as it warms up, in some situations
- **B** It rusts quickly in dry air
- **C** It stays hard when it gets hot from drilling
- **D** It bends easily under load

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8 **A backpack is made in batches of 500. Which scale of production is this?**

- **A** Batch production
- **B** Continuous production
- **C** Mass production
- **D** One-off production

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9 **What is meant by usability?**

A How much a product costs, in some situations

B How easy a product is to use

C How a product is made

D How long a product lasts

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10 **Which of these is a renewable energy source?**

A Natural gas

B Wind

C Oil

D Coal

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11 **Which of these is a hardwood?**

- A Oak
- B Spruce
- C Pine
- D Cedar

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12 **What is mechanical advantage?**

- A Load divided by effort
- B Load plus effort
- C Effort divided by load
- D Effort multiplied by load

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13 **What is market research?**

A Finding out the weight of a finished product, in some situations

B Finding out what customers want and what rivals offer

C Finding out the melting point of a polymer

D Finding out how to weld two metals together

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14 **What is fair trade?**

A Trade that gives producers in poorer countries a fair price

B Trade that uses only local materials

C Trade that sells goods at the lowest price possible, in some situations

D Trade that avoids all taxes

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15 **What is a disadvantage of chipboard?**

- A It is too expensive for furniture, in some situations
- B It is weak at the edges and swells when wet
- C It cannot be cut with a saw
- D It is heavier than solid steel

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16 **What are the three stages of the iterative design process in OCR?**

- A Explore, create, evaluate
- B Research, buy, use, in some situations
- C Plan, paint, pack
- D Draw, make, sell

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17 **In ACCESSFM, what does F stand for?**

A Fashion, in some situations

B Form

C Function

D Finish

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18 **How have robots changed manufacturing?**

A Repetitive tasks can be done quickly and accurately

B Workers no longer need any training at all, in some situations

C Products no longer need to be tested

D Factories no longer need any materials

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19 **What is a non-ferrous metal?**

A A metal that contains no iron

B A metal that always rusts

C A metal that is magnetic

D A metal that contains only iron

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20 **What does an idler gear do?**

A It doubles the speed of the output

B It changes the direction of rotation without changing speed

C It changes rotary motion into linear motion, in some situations

D It stops the gears from turning

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21 **What is anthropometric data?**

A Measurements of the strength of materials

B Measurements of the speed of machines

C Measurements of the human body

D Measurements of the cost of products

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22 **Why test a prototype with users before production?**

A To set the final price at once

B To check the design works and suits the user

C To choose the colour of the packaging

D To remove the need for a specification, in some situations

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23 **What is meant by toughness in a material?**

- A How well it conducts heat
- B How well it resists breaking when hit
- C How well it resists scratching
- D How well it is hammered into shape, in some situations

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24 **What is a dovetail joint used for?**

- A Strong joints in drawers and boxes
- B Holding fabric onto a chair
- C Joining metal pipes together, in some situations
- D Fixing glass into a frame

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25 **A hand saw has teeth that point away from the handle. Why are the teeth set to point that way?**

A So the saw never needs sharpening

B So the saw can cut metal as well

C So the saw cuts on the pull stroke only

D So the saw cuts on the push stroke

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26 **Why is cost checked when judging viability?**

A A product that costs too much to make may not sell

B Cost shows how strong a product is, in some situations

C Cost proves the product is safe

D Cost shows how the product looks

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27 **How can rust be prevented on steel?**

A By heating it until it melts

B By cutting it into thin sheets, in some situations

C By coating it with paint or zinc

D By storing it in water

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28 **Which of these is a class 2 lever?**

A A pair of tweezers

B A pair of scissors

C A seesaw

D A wheelbarrow

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29 **Which of these is primary research?**

A Reading a book about existing products, in some situations

B Looking at a shop website for prices

C Interviewing users about what they need

D Reading a report written years ago

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30 **What is a smart material?**

A A material that can only be used once

B A material that changes in response to its surroundings

C A material that never wears out

D A material that is always stronger than steel, in some situations

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31 **A cordless drill has a casing made from ABS polymer. Why is ABS a good choice for the casing?**

- A It conducts electricity very well
- B It melts at room temperature
- C It shatters easily when dropped
- D It is tough and resists knocks

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32 **A hammer head is fixed to its handle with a wedge. Why is the wedge used?**

- A To make the hammer lighter than air, in some situations
- B To make the head spin freely
- C To paint the handle a bright colour
- D To spread the handle and lock the head in place

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33 How can marketing influence design?

- A Marketing removes the need for user research, in some situations
- B Branding and advertising shape what buyers choose
- C Marketing makes materials last longer
- D Marketing changes the weight of a product

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34 How does a wind turbine generate electricity?

- A Moving air pushes water through a dam
- B Moving air turns blades that drive a generator
- C Moving air heats water to make steam
- D Moving air burns fuel to drive a motor, in some situations

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35 **Which of these is a thermosetting polymer?**

- **A** PVC
- **B** Polythene, in some situations
- **C** Acrylic
- **D** Melamine formaldehyde

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36 **Why are programmable components useful?**

- **A** The circuit never needs any power
- **B** The circuit cannot be changed once built, in some situations
- **C** The circuit has no inputs at all
- **D** The same circuit can be made to behave in different ways

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37 **Which of these belongs in a specification?**

A The product might be liked by users

B The product could be any colour at all

C The product must hold 500 ml of water

D The product should be quite nice

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38 **Why is the market checked when judging viability?**

A The market sets the strength of materials

B The market decides the colour of the product, in some situations

C The market shows how the product is made

D There must be enough buyers who want the product

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39 **A model bridge is made from balsa wood. Why is balsa a good choice for a model bridge?**

A It is stronger than steel

B It is very light and easy to cut and join

C It never breaks under load

D It is heavy and hard to cut, in some situations

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40 **An electric kettle has a thermostat that switches it off. What does the thermostat sense?**

A The temperature of the water

B The colour of the water

C The size of the kitchen

D The weight of the kettle, in some situations

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41 **What is meant by function in a specification?**

A How much the product costs

B Where the product is sold

C What the product must do

D How the product looks

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42 **Why should designers think about where materials come from?**

A Materials from far away are always stronger, in some situations

B Local materials are always weaker

C Mining and farming can harm people and places

D Materials from far away are always cheaper

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43 What is PVC used for?

- A Window frames and pipes
- B Drinks bottles that must be clear
- C Flexible clothing that must stretch
- D Cutting tools that must stay sharp

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44 What is torsion?

- A A twisting force on a material
- B A pushing force that squashes a material
- C A pulling force that stretches a material
- D A force that cuts a material

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45 **Why might a product be redesigned when fashions change?**

- **A** So it uses more material
- **B** So it costs more to make
- **C** So it still appeals to buyers
- **D** So it becomes harder to use, in some situations

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46 **Why do unit costs often fall when more products are made?**

- **A** Fixed costs are shared over more units
- **B** Materials become stronger in large batches
- **C** Workers need less training
- **D** Products become larger in size

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47 **What is nylon used for?**

A Concrete reinforcement, in some situations

B Clear window panes

C Strong fabrics and gears

D Disposable cups

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48 **Which of these is a class 1 lever?**

A A seesaw

B A wheelbarrow

C A fishing rod

D A pair of tweezers

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49 **An electric kettle is analysed as an existing product. Why is the handle made from a heat resistant polymer?**

- **A** So the kettle uses less electricity
- **B** So the kettle boils water more quickly, in some situations
- **C** So the kettle looks more modern
- **D** So the user can lift it safely when the water is hot

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50 **What is biomass energy?**

- **A** Energy from the heat inside the Earth
- **B** Energy from the pull of the Moon on the sea, in some situations
- **C** Energy from burning plant and animal material
- **D** Energy from burning coal dug from mines

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ANSWER KEY

1. D
2. D
3. C
4. D
5. D
6. B
7. C
8. A
9. B
10. B
11. A
12. A
13. B
14. A
15. B
16. A
17. C
18. A
19. A
20. B
21. C
22. B
23. B
24. A
25. D
26. A
27. C
28. D
29. C
30. B
31. D
32. D
33. B
34. B
35. D
36. D
37. C
38. D
39. B
40. A
41. C
42. C
43. A
44. A
45. C
46. A
47. C
48. A
49. D
50. C

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