

# Design & Technology

## A-Level

# Influence of

# Aesthetics

## Multiple Choice

### Materials required for questions

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- Pencil
- Rubber
- Calculator

### Instructions

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- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- Use a cross in the box to mark you answer



### Advice

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- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don't spend too much time on one question

# Good luck!

**Q1.** Which word is used to describe designing products well so they are easy to use? – bitesize

**A** Aesthetics

☐

**B** Function

☐

**C** Usability

☐

**Q2.** Which of these is not influence aesthetic? – bitesize

**A** texture

☐

**B** convenience

☐

**C** colour

☐

**Q3.** Why should a designer be mindful of the colours selected for a product? - bitesize

**A** some colour choices may have cultural barriers

☐

**B** some colour choices may make the product less flexible

☐

**C** some colour choices may stop the product from working correctly

☐

**Q4.** What does aesthetics mean? - bitesize

- A** user-centred design
- B** measurements of the human body
- C** the way a product looks and feels

☐☐☐

**Q5.** What does the colour blue universally represent? - bitesize

- A** cold
- B** warmth
- C** nature

☐☐☐

**Q6.** Aesthetics relates to a product's? – ocr - 2014

- A** Looks
- B** Cost
- C** carbon footprint

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**Q7a.** Explain why surface finishes are applied to material and fabrics for aesthetic reasons

Give examples in your answer **(3 marks)** – aqa 2019

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**Q7b.** Explain why surface finishes are applied to material and fabrics for functional reasons

Give examples in your answer **(3 marks) – aqa 2019**

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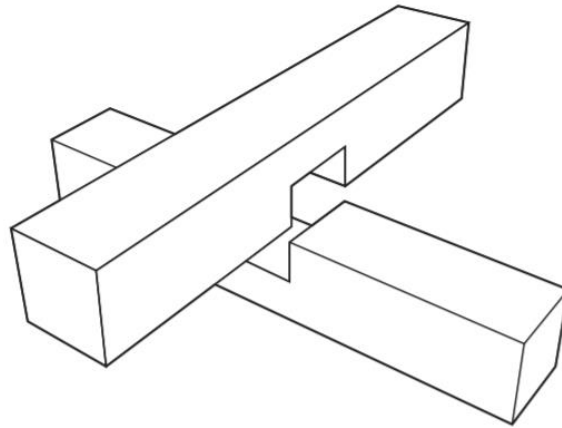
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**Q8.** A cross halving joint is used to join 2 pieces of pine together



**8a.** Name 3 hand tools that would be used to mark out and make the cross halving **(3 marks)** – edexcel 2017

1.

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2.

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3.

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**8b.** Explain 2 advantages of using pine to make the frame rather than MDF **(4 marks)**

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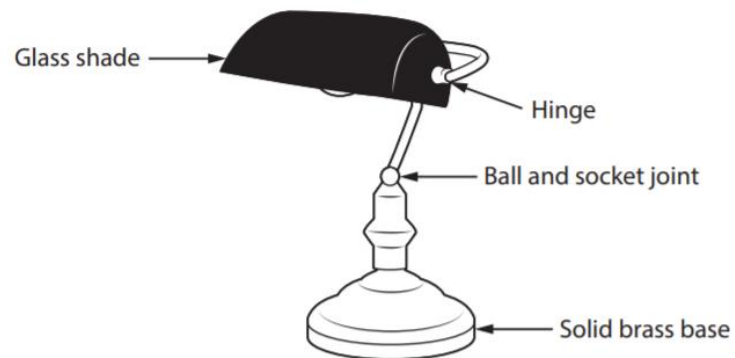
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**Q9.** The image below shows a desk lamp



**9a.** Give 1 reason why brass is a better choice of material than acrylic for the base of the desk lamp **(2 marks)** – edexcel 2017

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**9b.** the electric cable is coated with a thin layer of PVC  
Explain 1 reason why the electric cable is coated with a thin layer of PVC **(2 marks)**

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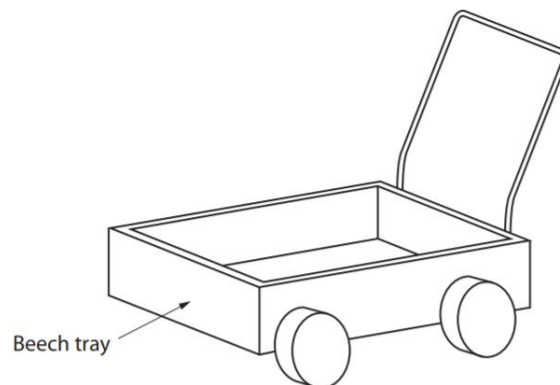
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**Q10.** The drawing below shows a baby-walking aid



Explain 1 reason for applying a finish to the beech tray **(2 marks)** -edexcel 2014

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**Q11.** The figure below shows a coat rack for use in a primary school



Before it was made, a detailed design specification was written for the coat rack. Explain how the finished product has achieved the

following specification points. (One example has been given). **(3 marks)** – WJEC 2016

**Processes**

The coat rack should be designed to be sold in flatpack form:

*Temporary fixings such as bolts and screws have been used to hold the coat rack together so it can be assembled and disassembled easily*

**Aesthetic**

The coat rack should be suitable for a primary school environment:

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**Function**

The coat rack should be portable and suitable for use by children of primary school age (7-11 years old):

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**Safety considerations**

The coat rack must be stable when heavily loaded with coats and bags:

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**Q12.** A task light is shown below



**12a.** Evaluate the task light in terms of its aesthetics and style **(4 marks)** – tech student aqa paper 1

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**12b.** Evaluate the task light in terms of the products functionality **(4 marks)** – tech student aqa paper 1

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## **Answers**

**Q1. C**

**Q2. B**

**Q3. A**

**Q4. C**

**Q5. A**

**Q6. A**

**Q6. A**

**Q6. C**

## **Q7a.**

Indicative content:

Any named aesthetic reason:

- Change the colour of a product
- Improving appearance/make the product look more attractive
- Change the look and feel of a product

- Aesthetic finish examples:
- Painting cars different colours to suit different customer tastes
- Embossing in card to create a decorative 3D effect
- Self-finished surface, eg the injection moulding process can 'build in' a textured surface in contrast to a smooth surface
- Add to decoration and quality of finish, eg enamelling jewellery
- Wood stains to enhance the colour of timber
- Anodising to produce brightly coloured aluminium products, eg bike wheels, Maglites
- Stonewashing jeans (distressing) gives a soft peach skin effect
- Heat setting thermoplastic fibres to give crushed effect, creases and pleating

### **Q7b.**

Indicative content:

- To make more suited to intended use/improve durability
- To inhibit combustion/reduce fire risk (textiles)
- Protect from moisture/water
- Stain resist finish
- To prevent insect/fungal attack (wood)
- To resist corrosion
- Build in a textured finish (polymers)
- Provide a non-slip finish
- Functional finish examples
- Flame retardants to textiles
- Waterproof finish on a jacket
- Laminating a book cover to protect from moisture
- Anodising aluminium to improve durability
- Electro plating to provide a durable finish
- Wood preservative on a garden fence to protect from moisture and insect attack
- Dip/powder coating of metals to inhibit corrosion
- Galvanising (not aesthetic reason) mild steel to resist corrosion
- Self-finished surface, eg injection moulding process can 'build in' a textured surface to provide a non-slip surface/grip on a chair, child's toy etc.

### **Q8a.**

Any three tools listed from:

- Pencil (1)
- Ruler / tape measure (1)
- Marking knife / knife (1)
- Try square/combination square (1)
- Gauge/marking gauge (1)
- Tenon/Dovetail/Back/Coping saw/Gentleman's saw (only accept 1 type of saw but DO NOT ACCEPT saw on its own)(1)
- Chisel (1)
- Mallet (1)
- Bench hook / G clamp (1)
- Vice (1)
- G-Clamp/Cramp

3 x 1

#### 8b.

Two advantages explained from:

- More durable (1) therefore pine will last longer (1)
- Tougher (1) therefore will withstand any knocks and bumps better (1)
- Better resistance to water/moisture (1) whereas MDF will soak up / expand / become useless (1)
- Pine is more aesthetic / looks better (1) whereas MDF is plain and has no grain / structure (1)
- Easier to cut joints in (1) whereas MDF will crumble because it has no grain / made from fibres (1)
- MDF will be significantly weaker than pine (1) when cut into to make the joint (1)
- Pine is less dangerous / safer to use than MDF (1) because MDF contains harmful chemicals / gives off fine dust when cut (1)

2 x 1

2 x 1

#### Q9a.

One reason explained from:

- Brass is heavier (1) therefore the base will be more stable / less likely to fall over (1)
- It is an attractive colour / aesthetic appeal / traditional style lamp (1) whereas acrylic is a more modern material / will not suit style of lamp (1)
- Brass is tougher (1) therefore will withstand knocks and bumps better
- (1)

2 x 1

**9b.**

One reason explained from:

- PVC is an electrical insulator (1) and so will protect the user against any electric shock / electrocution / safe to touch (1)
- There are 3 separate wires in the cable (1) so the PVC sleeve will hold all 3 separate wires together/insulate them from each other (1)
- PVC is quite flexible (1) and so it will not crack/break down/crumble as it is moved around (1)
- PVC can be coloured (1) and increase/match aesthetically / identify the wire inside (live, neutral/earth) (1)

2 x 1

**Q10.**

One reason described from:

- To make it look nicer / improve the aesthetics (1) so that more people will buy it/ marketability (1)
- To protect the surface (1) so that it lasts longer / more durable / will not soak up any water/ delays rotting (1)
- To provide a smooth surface (1) so that children do not get splinters / makes it easier to clean / dust (1)

2 x 1

**Q11.**

**Aesthetic:**

Appropriate explanation but lacking detail AWARD 1 mark

E.g. Finished in primary colours.

Appropriate explanation well detailed AWARD 2 marks

E.g. Finished in primary colours which create a bright, cheery school environment.

Answers related to:

Textures are smooth

**Function:**

Appropriate explanation but lacking detail. AWARD 1 mark

E.g. The coat rack is a suitable size for primary school children.

Appropriate explanation well detailed. AWARD 2 marks

E.g. Anthropometric data has been used to ensure that the coat rack is a suitable size for primary school children.

Answers related to:

There are castors on the coat rack so it can be moved. Colour coated hooks help children to remember location of coats/bags.

**Safety considerations:**

Appropriate explanation but lacking detail AWARD 1 mark

E.g. The coat rack has a wide base.

Appropriate explanation well detailed AWARD 2 marks

E.g. The wide base of coat rack improves its balance so it will not topple over easily.

Answers related to:

No sharp edges. Steel is a durable material so it can hold lots of bags and coats.

Sturdy construction of coat rack. Locks on castors – rack can be held in place, lessen danger of falling over if pushed

**Q12a.**

Marks awarded for:

- Style is modernist with an environmental twist
- The materials are fully recyclable and have been machined to a high standard
- The aluminium base and pine arms complement each other
- Appealing design for any home or office
- Colours of the natural wood and machined aluminium are attractive features

1 mark per reference to style/aesthetic quality

**12b.**

Marks awarded for:

- Light functions well as it can be adjusted into variety of positions
- Wingnut are possibly a weak point as they may allow the joints to move if not fully tightened
- Shade also has limited adjustment, although care must be taken if the light is on as it the shade can heat up