DTBase©

Design & Technology
AQA GCSE

Stock forms, types and sizes

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

Advice

- 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. Choose one commercial process from the table below

Paper and board die cutting	Wood turning	Metal casting	Polymer extrusion	Textile weaving	Electronic pick and place assembly

Q1a. Name a specific main material used with your chosen process **(1 mark)**

Q1b. Name a stock form of the material used in your chosen process **(1 mark)**

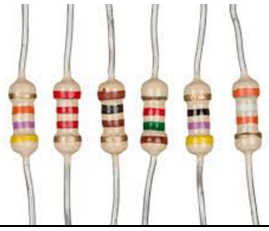
Q2. The products/components in the table are manufactured from different materials

Metal can opener	Card shoe box	Textile shopping bag	Wooden toy train	Polymer gears

Q2a. Name the specific main material of your chosen product/component **(1 mark)**

Q2b. Name the stock form used in manufacture of your chosen product/component **(1 mark)**

Q3. The table below shows a variety of standard components. Choose **one** component and complete **one** row in the table **(3 marks)**

Component	Component name	Component function
		
		
		
		
		

Answers

Q1a.

Paper and board die cutting	Wood turning	Metal casting	Polymer extrusion	Textile weaving	Electronic pick and place assembly
Any specific named paper e.g., cartridge paper, layout paper Any specific paper-based board e.g., cardboard, corrugated cardboard, solid white board	Any specific named wood e.g., beech, ash	Any specific named metal e.g., aluminium, pewter	Any specific named polymer e.g., acrylic, nylon	Any specific named textile fibre e.g., cotton, polyester	Any specific named material e.g., PCB board, solder

Q1b.

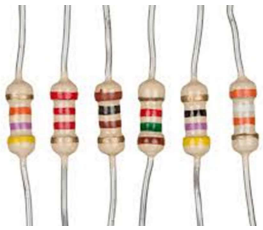
Paper and board die cutting	Wood turning	Metal casting	Polymer extrusion	Textile weaving	Electronic pick and place assembly
Sheet, roll	Plank, board, log, (bowl) blank	Ingot, bar	Powder, granules, pellets	Yarn, thread, hank	Board, PCB board, reel of solder

Q2.

Q2	Metal can opener	Card shoe box	Textile shopping bag	Wooden toy train	Polymer gears
Q2a	Steel Stainless steel	Solid white board Corrugated cardboard	Cotton drill Denim Hessian Calico	Beech Pine MDF Plywood	Most gears are made from Nylon and Polyacetal Also accept: Polyphenylene sulfide (PPS) Thermoplastic polyester, long fibre reinforced plastic and liquid crystal polymers (LCP).
Q2b	Sheet Strip Bar	Sheet	Roll	Plank Board	Granules Also accept named gear stock forms eg spur, bevel, helical, worm, bevel, hypoid, crown gear

Q3.

Component	Component name	Component function
	• Split pin • Bifurcated rivet • Paper fastener	• Used to fasten multiple layers of paper and card together. • Create a hinged joint in paper or card.

	• Press stud • Snap fastener	• Fasten two pieces of fabric together. • Create a closure device
	• Resistor	• To limit current flow in circuits. • To limit current flow in different parts of circuits. • To limit current flow to components damaged by excessive current.
	• Hinge	• Used to hinge a door in a door frame so it opens and closes. • Used to provide and opening a lid on a box
	• Nut and bolt • Set screw and nut	• Fasten two or more components together. • Fasten two or more pieces of sheet material together. • Used where a non-permanent joint or a serviceable joint is required.