



EDEXCEL GCSE
RESISTANT MATERIALS
PAST PAPERS 2010 – 2013

QUESTION 11
TOOLS AND COMPONENTS

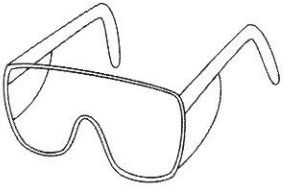
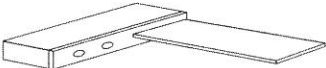
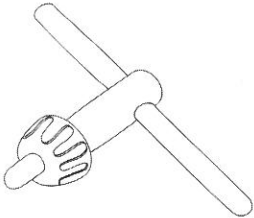
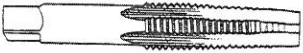
THE EXAM

- It is 90 minutes long.
- You will need a BLACK ball point pen for the exam.
- Do NOT use coloured pens, coloured pencils, or highlighters.
- Answer ALL the questions.
- There are 80 marks for the paper.
- Read each question carefully and think “What does the examiner want to read in my answer”, not “I’ll put some information down which may not be relevant”.
- If you find a question hard, leave it and come back to it later.
- Answer the questions you find easiest first (this will be your personal choice).
- Study the way each question is written. There are common themes and the way they are set out is the same each year. Therefore you can work out what the question is going to ask you. Obviously the content will be different (IE a different picture, but the questions will be very similar!)
- If you have time, check your answers and re-read them several times.

Questions 1-10	10 marks (12.5%)	Suggested timings 11 minutes
Question 11	19 marks (23.75%)	Suggested timings 21 minutes
Question 12	16 marks (20%)	Suggested timings 18 minutes
Question 13	16 marks (20%)	Suggested timings 18 minutes
Question 14	19 marks (23.75%)	Suggested timings 21 minutes

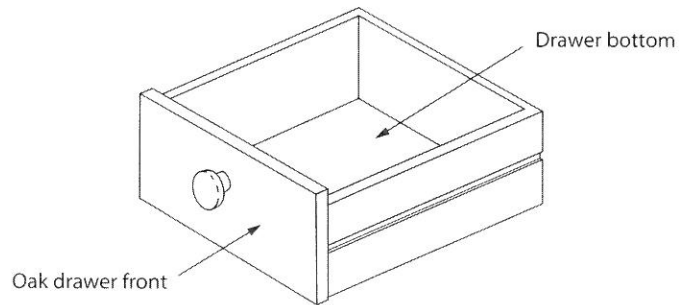
11 (a) The table below shows some tools and equipment.

Complete the table below by giving the missing names and uses.

Tools / Equipment	Name	Use
	Safety goggles	(1)
	Try square	(1)
	(1)	Tightening up a drill bit into a pillar drilling machine
	(1)	Cutting an internal screw thread

(b) The drawing below shows a drawer from a desk.

The drawer front is made from oak.

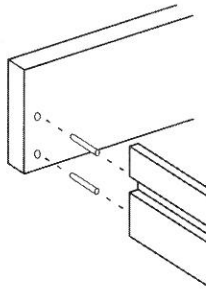


Give **two** properties of oak.

(2)

- 1
- 2

(c) The oak drawer front is joined to the side panel as shown below.



Name the type of joint used to join the drawer front to the side panel.

(1)



(d) Name **two** finishes that could be applied to the oak drawer front.

(2)

1

2

(e) The drawer bottom is made from plywood.

Explain **two** advantages of making drawer bottoms from plywood rather than oak.

(4)

1

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.....

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2

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.....

.....

(f) The manufacturer of the drawers uses an EPOS system.

Give **two** pieces of information the manufacturer can store using an EPOS system.

(2)

1

2



(g) Describe **two** advantages, to the manufacturer of the desks, of using the internet to market its business.

(4)

- 1
- 2

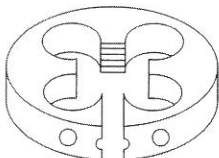
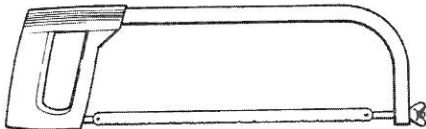
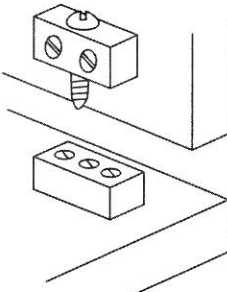
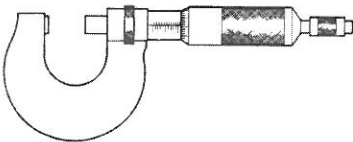
(Total for Question 11 = 19 marks)



H 3 7 0 7 0 A 0 9 2 0

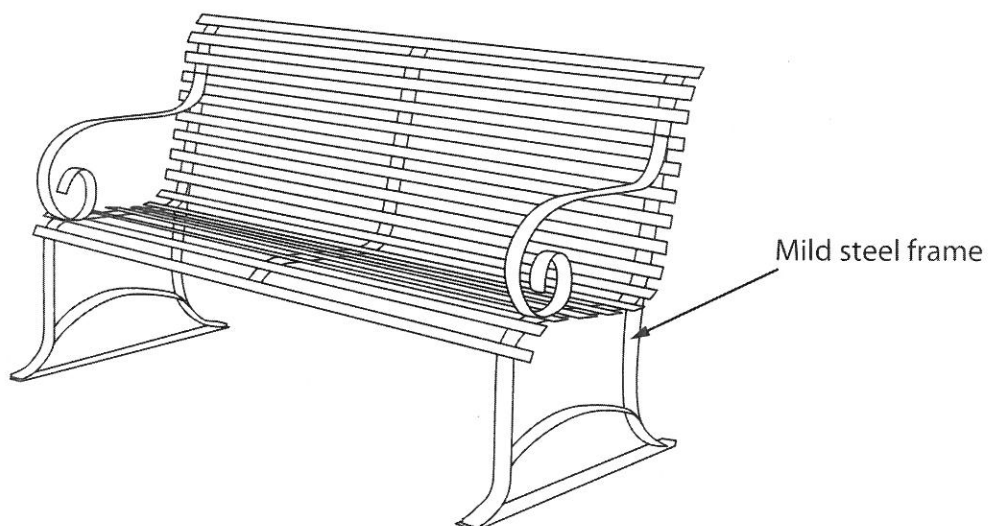
11 (a) The table below shows some tools and components.

Complete the table below by giving the missing names and uses.

Tool/Component	Name	Use
	Die	(1)
	Hacksaw	(1)
		Joining flat sheets of material together to make furniture (1)
		Making very accurate measurements (1)



(b) The drawing below shows a garden bench.



(i) Give **two** properties of mild steel that make it suitable for the frame.

(2)

1

2

(ii) Give **two** reasons for applying a surface finish to the mild steel frame.

(2)

1

2

(iii) Name **three** finishes that could be applied to the mild steel frame.

(3)

1

2

3



(iv) The frame could be manufactured from aluminium.

Explain **two** advantages of making the frame from mild steel rather than aluminium.

(4)

1

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2

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(v) Describe **two** effects on the environment of being able to recycle mild steel.

(4)

1

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2

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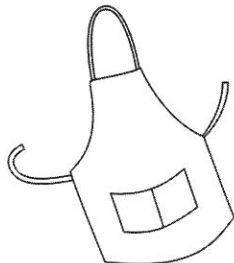
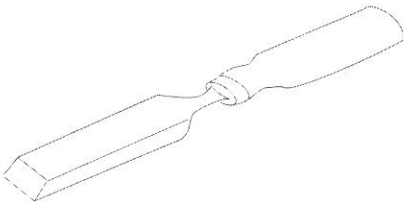
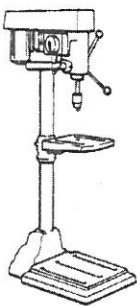
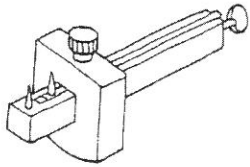
(Total for Question 11 = 19 marks)



P 3 8 3 9 0 A 0 7 1 6

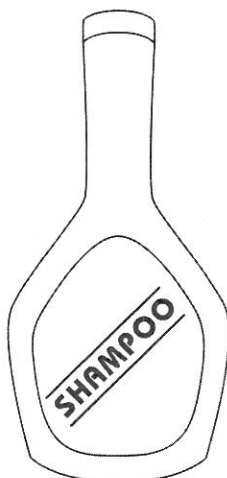
11 (a) The table below shows some tools and equipment.

Complete the table below by giving the missing names and uses.

Tools/Equipment	Name	Use
	Apron	(1)
	Chisel	(1)
		For drilling holes (1)
		For marking lines parallel to an edge (1)



(b) The drawing below shows a shampoo bottle.



The shampoo bottle is made from polyvinyl chloride (PVC) and is blow moulded.

(i) Give **three** properties of polyvinyl chloride.

(3)

1

2

3

(ii) Give **one** disadvantage of using polyvinyl chloride for the shampoo bottle.

(1)

.....

(iii) Describe **two** advantages of manufacturing the bottle by blow moulding rather than by injection moulding.

(4)

1

.....

2

.....



(c) Minimising waste during production of the shampoo bottles is important.

Give **three** ways in which waste can be minimised during the production of the shampoo bottles.

(3)

1

2

3

(d) Describe **two** ways in which the manufacturer of the shampoo bottles can use renewable sources of energy.

(4)

1

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2

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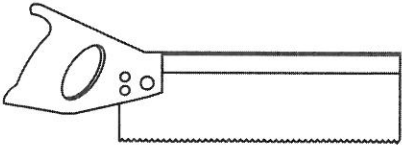
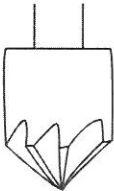
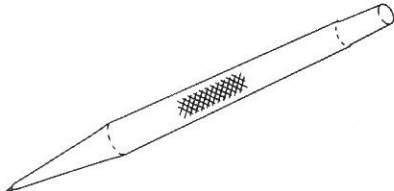
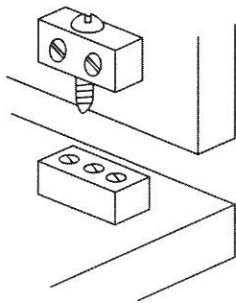
(Total for Question 11 = 19 marks)



P 3 9 4 2 1 A 0 7 1 6

11 (a) The table below shows some tools and equipment.

Complete the table below by giving the missing names and uses.

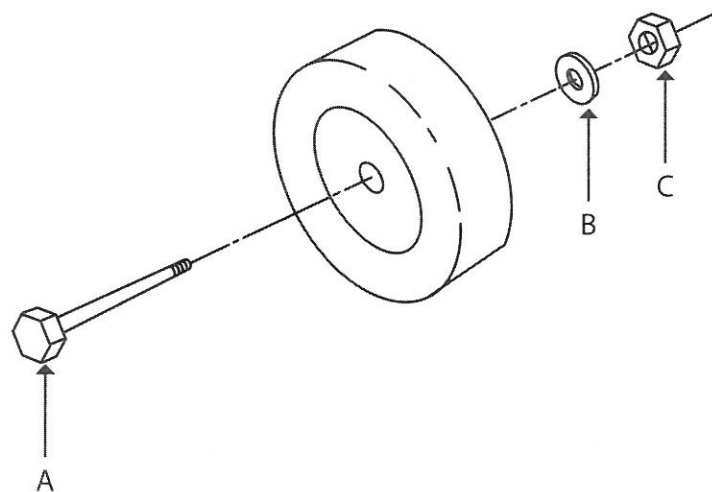
Tools/Equipment	Name	Use
	Tenon saw	(1)
	(1)	Creates a shape for a screw head to sit in
	Scriber	(1)
	Knock down fitting	(1)



(b) The diagram below shows a wheelbarrow.



The drawing below shows an exploded view of the front axle for the wheelbarrow.



(i) Name the parts labelled A, B and C.

(3)

A

B

C

(ii) State whether the joining method shown above is a temporary or permanent joining method.

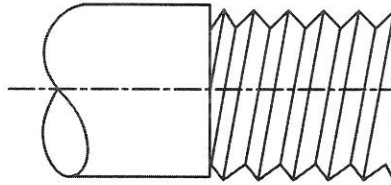
(1)

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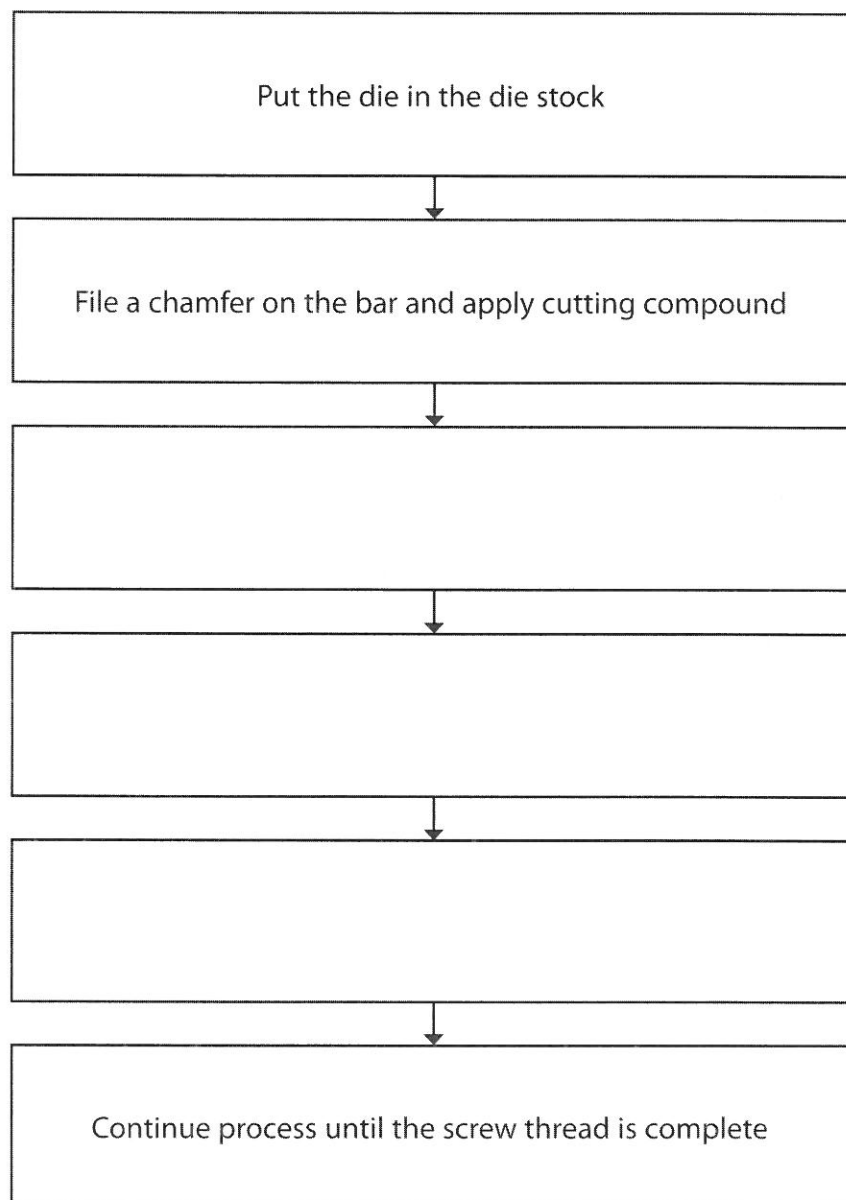
P 4 1 1 6 1 A 0 7 2 0

- (c) The external screw thread shown below can be made using hand tools in a school workshop.



Complete the flow chart to show the correct sequence for cutting a screw thread. Some stages have been completed for you.

(3)



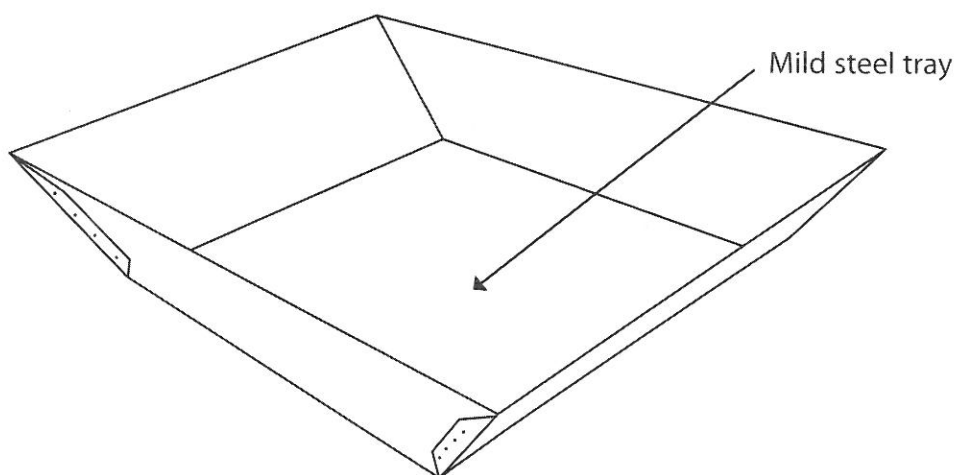
(d) Name **two** different metal joining processes which involve the use of heat.

(2)

1

2

(e) The wheelbarrow tray is made from mild steel.



Explain **two** advantages of making the wheelbarrow tray from mild steel.

(4)

1

2

(f) Explain **one** way in which materials can be reduced in the manufacture of the wheelbarrow.

(2)

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(Total for Question 11 = 19 marks)

