

Technology and Design Department

**AQA**

**Design and Technology:  
Resistant Materials Technology**

**Unit 1: Metals**

5 Question 5 is about tools and equipment.

You are advised to spend about 15 minutes on this question.

5 (a) Name each of the following tools.

Give details of a specific process where you would use each tool.

5 (a) (i)



Name .....

Process .....

.....

.....

(2 marks)

5 (a) (ii)



Name .....

Process .....

.....

.....

(2 marks)

7 (a) (ii)

Ring



Material .....

(2 marks)

Reason .....

.....

.....

(1 mark)



**Metal chair**



Material .....  
(1 mark)

Reason .....  
.....  
.....  
(1 mark)

Original source of the material  
.....  
(1 mark)

# Metal Practice Questions

1 A Non-tarnishing metal is needed for a jewellery project. Which of the following would be a possible metal for this project? Tick the correct option.

- A Silver       B Copper   
 C Gold       D Brass

2 Which of the following statements describe valid reasons for applying a finish to a ferrous metal? Tick the correct options.

- To help protect the surface from moisture   
 To stop it from being bent.   
 To save time when finishing.   
 To help protect the metal from rusting.   
 To improve the appearance of the surface.   
 To cover up the mistakes that have been made.

3 Complete the chart below.

Material	Properties	What is it Used For?
Steel	A) _____ _____	B) _____ _____
Cast iron	C) _____ _____	D) _____ _____
Brass	E) _____ _____	F) _____ _____
Aluminium	G) _____ _____	H) _____ _____

4 What would be a suitable steel for making nuts and bolts? Tick the correct option.

- A Stainless steel       B High speed steel   
 C mild steel       D Cast iron

5 Choose the correct words from the options given to complete the following sentences.

**Cross      line   dot   ruler   odd-leg callipers   hole punch scribe   dot punch**

When marking out the centre of a hole on a piece of metal, make a \_\_\_\_\_ using the \_\_\_\_\_. Make a small dent using a \_\_\_\_\_ at the centre of the cross then deepen it with a \_\_\_\_\_ ready for drilling.

6 The table contains the names of six metal finishing methods. Match descriptions **A,B,C,D,E** and **F** with the methods **1-6** in the table. Enter the appropriate number in the boxes provided.

	Finish
<b>1</b>	Plastic dip-coating
<b>2</b>	No finish required
<b>3</b>	Anodising
<b>4</b>	Plating
<b>5</b>	Galvanising
<b>6</b>	Metal polish

A rust-proof layer on a steel dustbin

A coating for mild steel applied by dipping hot metal into a tank of plastic powder

A tin layer of tin to seal the inside of a food can

The surface of stainless steel

The surface of aluminium

A small copper box

7 What do the letters stand for in the following acronyms?

MIG \_\_\_\_\_

PVA \_\_\_\_\_

TPI \_\_\_\_\_

8 Which files would be suitable for the following situations?

File	Type of Teeth	Situation
<b>A)</b> _____ _____	<b>B)</b> _____ _____	Removing a lot of steel quickly from a flat steel bar
<b>C)</b> _____ _____	<b>D)</b> _____ _____	Filing the inside of a square hole in steel
<b>E)</b> _____ _____	<b>F)</b> _____ _____	Filing a concave surface (curved inwards) from a flat piece of steel
<b>G)</b> _____ _____	<b>H)</b> _____ _____	Draw filing a convex surface (curved outwards)

9 What would be a suitable steel for making chisels and drills? Tick the correct option.

- |                     |                          |                          |                          |
|---------------------|--------------------------|--------------------------|--------------------------|
| <b>A</b> Cast iron  | <input type="checkbox"/> | <b>B</b> Tool Steel      | <input type="checkbox"/> |
| <b>C</b> Mild steel | <input type="checkbox"/> | <b>D</b> Stainless steel | <input type="checkbox"/> |