

Quality Control

1 Quality control is an important part of the manufacturing process.

a) What is the purpose of 'quality control'?

.....

[2 marks]

b) Explain why only a sample of the manufactured items are used in quality control.

.....

[1 mark]

2 **Figure 1** shows a quality control mark used in printing.

a) Give the name of this mark.

.....

[1 mark]



Figure 1

b) Describe what it is used for.

.....

[1 mark]

3 **Figure 2** shows a tool used to check that the sizes of components are consistent and within tolerance.

a) Label **Figure 2** with the dimensions needed to ensure that a component is 50 ± 1 mm thick.

Upper limit:

..... mm

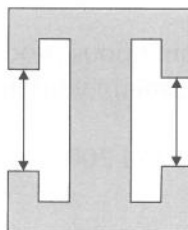


Figure 2

Lower limit:

..... mm

[2 marks]

b) Give the name of this tool.

.....

[1 mark]

c) Give **one** advantage of using this tool instead of a ruler to check the size of components.

.....

[1 mark]

4 **Figure 3** shows a design for a ketchup label.

a) Give **one** quality control check that could be made on the label.

.....
.....
.....

[1 mark]

b) The label is going to be stuck onto bottles at a distance of 25 ± 2 mm from the base.

i) State the greatest acceptable distance between the bottom of the bottle and the label.

..... [1 mark]

ii) Suggest **one** other thing about the label that should be checked after it has been stuck on.

..... [1 mark]

c) A cut label has a height of 47 mm and a width of 41 mm. Does the label fall within the stated tolerance? Explain your answer.

.....
..... [2 marks]

5 There are lots of ways of ensuring consistency and accuracy between products during manufacture.

a) A depth stop can be used to ensure holes are drilled to an exact depth. Describe how depth stops ensure consistency when drilling.

.....
..... [2 marks]

b) Laser cutters need to have the correct settings selected for the laser to cut out a material accurately. Give **two** settings which must be correctly selected.

1.
2. [2 marks]

c) Photo-etching is a process that is used to manufacture printed circuit boards (PCBs). Give **one** way of ensuring PCBs are made consistently during photo-etching.

..... [1 mark]

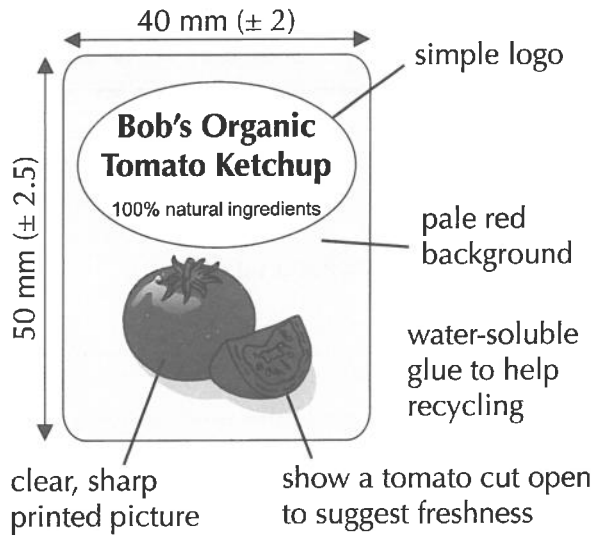


Figure 3

Score: / 19

