

8. This question is about ICT, CAD, CAM, systems and processes. It is worth a total of 15 marks.

- (a) (i) ICT, CAD and CAM are frequently used in textile technology when developing new products.

Place a tick (✓) in the grid below to indicate the most appropriate abbreviated term for each statement. [3]

Statement	ICT	CAD	CAM
Computers controlling machinery.			✓
Using computers to present information.	✓		
Using computers to develop ideas.		✓	

- (ii) The pictures below show two different ways of presenting design ideas.

Computer Aided Design



Hand Drawn Sketch

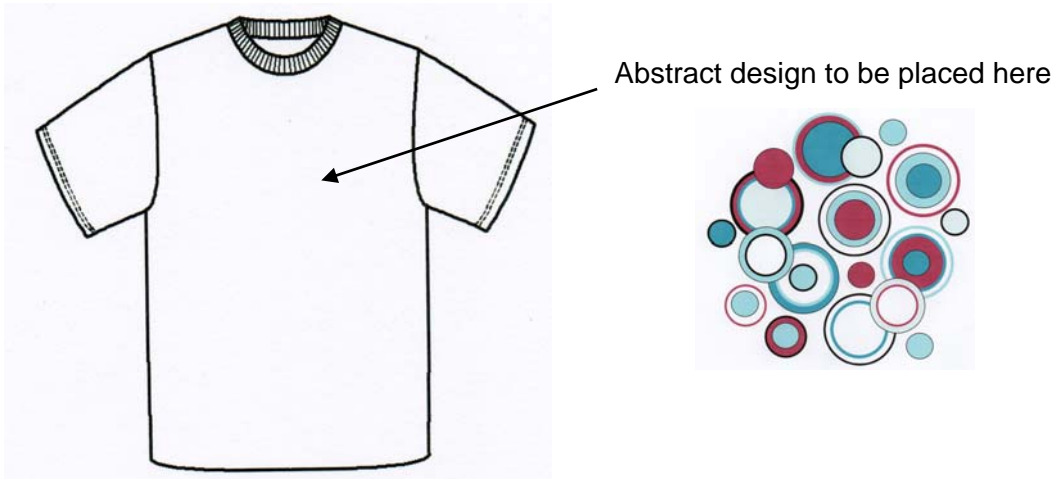


Describe **two** advantages of using CAD to develop and present ideas compared to hand drawn sketches.

Advantage 1: Designs look more professional when presented using CAD and any changes can be made quickly when presenting to clients.

Advantage 2: Images can be manipulated and changed easily which speeds up the development process.

(b) The T-shirt shown below needs to be embellished with the abstract design shown alongside.



Explain how you would use CAM to print the design onto the T shirt. Include the name of a suitable CAM process in your answer.

The design could be created using an appropriate software programme such as paint then printed out on to heat transfer printing paper; it could then be ironed on to the T shirt. The printer is the CAM process in this example.

(c) The picture below shows an embroidery machine being used to stitch a motif on to fabric.

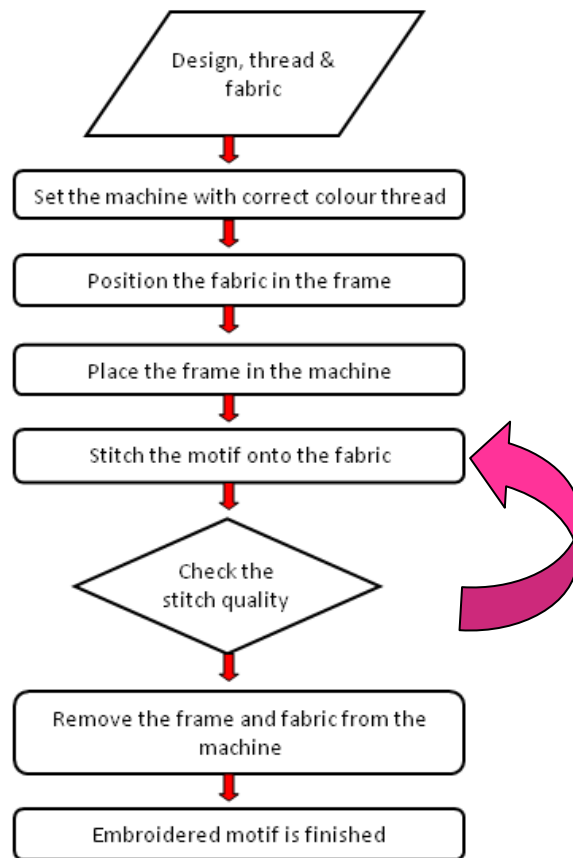


Describe **one** advantage of using this method of manufacture.

[2]

It's quicker and more professional looking than using an ordinary sewing machine where each design would be done separately and the quality would not be as good.

(d) The flowchart below shows the organisation of processes needed to stitch a motif onto fabric.



- (i) On the diagram above draw an appropriate feedback loop. [1]
- (ii) Explain the importance of feedback in controlling systems. [2]

If there is a fault in a system it can be identified quickly and rectified so that production can continue as planned.