## **EXAMINATION QUESTION - BATCH PRODUCTION**

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HELPFUL LINK:

https://www.technologystudent.com/joints/batch1.htm

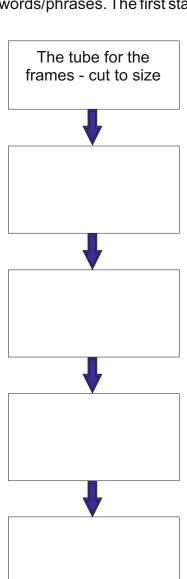
## WHAT IS BATCH PRODUCTION?

If your design was to be manufactured by batch production several hundred would be made on a production line. Each person/machine on the production line would complete one part of your product and then it would be passed on to the next person/machine. Many items in your home will have been manufactured by batch production - can you name any?

## CASE STUDY - BICYCLE BATCH PRODUCTION

Modern bicycle manufacture is component based. The company buys parts such as pedals from other manufacturers and puts the bicycle together on a production line.

Enter a brief description of the manufacturing process into each of the flow chart boxes - using key words/phrases. The first stage has been completed for you.



The tube for the bicycle frame is cut to size. One person will do this job and they cut enough tube for a batch of several hundred bikes in a week.

The tubes are set up in a 'jig' which holds the frame together. The frame travels along the production line and the joints are preheated to save time. Agas torch is used to weld the frame together.

After welding the frames and the front forks need cleaning in the 'Grit-Blaster'. This shoots tiny particles of sand, at high speed, at the frame and cleans away the 'residue' left behind by the welding process.

All frames are checked to ensure that they are straight. Small adjustments can be made at this stage.

The frames are now ready for painting. This is done by using a fine spray which covers every part of the frame with paint. The frame then moves down the production line into a special oven which 'bakes' the paint giving it a tough finish.

The wheels are assembled by hand and they are individually tested in a machine which automatically tensions each spoke to ensure that they are perfectly straight.

<u> </u>	BATCH PRODUCTION - continued  V.Ryan © 2008 World Association of Technology Teachers
	The frames are machined so that other parts such as the handle bars and the bottom bracket (pedals)can be attached. People operate the machine tools but they need some training before they can use the machines safely and efficiently.
	The bicycles are now ready for the shops where they will be viewed by customers and agents. Agents will buy 'batches' of bicycles for large stores.
	Before sending the bicycles to the shops, agents view them and suggest changes for the next batch. This helps the manufacturer improve the design and production of bicycles.
QUESTIONS: 1. Explain the difference	between batch production and single item (one off) production.
	nanufacture single items (one offs / prototypes) more skilled than those who in a factory that carries out batch production?