Unit R115 – Engineering applications of computers

Hand held devices in manufacturing and maintenance

Instructions and answers for teachers

These instructions should accompany the OCR resource **'Hand held devices in manufacturing and maintenance'** *activity which supports OCR Cambridge Nationals in Engineering.*

The Activity:

This resource comprises of 1 task.

This activity offers an opportunity for English skills development.

Associated materials:

'Hand held devices in manufacturing and maintenance' activity sheet

The task is best completed individually by learners.

Suggested timings:

Task 1: 1 hour

Task 1

For this activity learners are tasked to look at the reasons for using barcode readers in a supermarket setting, and then their use in manufacturing and maintenance operations.

In a supermarket setting, barcode readers are primarily used for stock control, billing and managing trend analysis:

- Producing billing at point of sale (at the checkout)
- Adding items to stock (when delivered or returned to the store)
- Removing items from stock (when sold or disposed of)
- Re-ordering of stock when a certain stock level reached
- Trend analysis of sales (by week, date, customer etc)
- Date tracking (of sell by date on items)
- Tracking stock location (in warehouse, and on shelves)
- Picking of items (for on-line ordering and self-scanning)

Barcodes are similarly used in manufacturing for:

- Stock control and management – adding and removing items from stock
- Re-ordering of stock
- Ensuring component assemblies are correct (eg tracking that all items that are used to make an assembly are correct)
- Stock location management (e. tracking where items are within a factory)
- Trend analysis of stock usage
- Tracking of specific components and assemblies – when being manufactured and when in service (eg parts in an aeroplane engine when in service)

Similarly, barcodes are used in maintenance operations for:

- Rapidly and reliably identifying components, assemblies and machines
- Tracking components throughout their lifecycle
- Recalling component or machine service data sheets and instructions
- Updating and maintaining service log records
- Reporting on component failure trends

Learners may find other applications of barcodes in manufacturing and maintenance operations, and may extend their research into the features of the different types of barcode styles in use (including 3D barcodes).

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