Name: Class:

# Task 1

An inkjet printer is about to print out a document. The table below lists 7 steps that need to occur to print the document. They are not in the correct sequential order.

Put the numbers 1 to 7 in the first column to show the correct sequence of steps.

|  |  |
| --- | --- |
| **Order of step** | **Steps** |
|  | Once the print head has printed the row, the page is fed forward so that they next row can be printed. |
|  | The data is sent to the printer. |
|  | The print head moves across the page. As it moves, nozzles will eject small dots of ink onto the page. For colour printers, cyan, magenta, yellow and black (CMYK) inks are used. |
|  | The printer uses an actuator to move the page to the first line that the print head will move across. |
|  | Each of the rows are now printed one by one until the whole page is complete. |
|  | The last part of the page is advanced until it is out of the printer. |
|  | Once the ink cartridges are empty, they will need replacing. |

**Task 2**

A laser printer is about to print out a document. The table below lists 12 steps that need to occur to print the document. They are not in the correct sequential order.

Put the numbers 1 to 12 in the first column to show the correct sequence of steps.

|  |  |
| --- | --- |
| **Order of step** | **Steps** |
|  | As the printer drum rotates a laser beam scans across it, removing the positive charge in certain areas; this leaves negatively charged areas which match the text or images to be printed. |
|  | At the very end of the printing process, a discharge lamp removes the electric charge from the drum making it ready for the next page |
|  | The print data is sent to printer and stored in the printers RAM. |
|  | The negatively charged sheet of paper is then rolled over the drum. |
|  | The paper goes through a heated fuser which causes the toner to fuse permanently to the paper. |
|  | The printer drum is coated with positively charged toner; it only sticks to the negatively charged parts of the drum. |
|  | The printing process starts by giving the printer drum a positive charge. |
|  | The toner on the drum now sticks to the paper producing exact copy of the text and images. |

**Task 3 Choice of printer**

Complete the table below to suggest the most suitable printer technology for the situation.

|  |  |
| --- | --- |
| **Situation** | **Most suitable printer technology** |
| A photograph kiosk at the end of a theme park ride. |  |
| A business printing invoices for customers. |  |
| Printing a report for a business meeting. |  |
| Quickly printing 1000 address labels |  |

**Task 4 3D printers**

(a) Find **four** different applications of 3D printers. Explain why 3D printers are used in each of the applications you name.

(b) Produce a graphical instruction manual to explain how 3D printers work.