**CNC Machining - Introduction Research Task**

Many of today’s machinists within engineering businesses will utilise and operate CNC Milling and Turning machines, especially in recent times where engineers are manufacturing ventilator parts on a scale of thousands to help treat COVID-19 (coronavirus).

Therefore, in preparation for your new start as an engineering student where you will be studying Machining as a module, research and explain the following areas:

1. Research and explain the term Computer Numerical Control (CNC) in no more than **200 words**.
2. Create a table showing a **minimum of 3** advantages/benefits of CNC Milling and Turning compared to traditional conventional machining methods such as manual turning and milling. An example of a table shown below:

|  |  |
| --- | --- |
| **Advantage** | **Explanation** |
| **Higher productivity** | Use of CNC machines allow the machinist to manufacture components at a much faster rate in comparison to traditional methods. This is because if a company has to manufacture a large quantity of the same part it can be easily repeated using CNC machines e.g. using bar feeder to automatically feed in the material whilst the program instructs the machine that 30 components need to be manufactured, this will continually feed the bar/stock material at the end of each run, reducing overall time and leading to higher productivity in a similar time compared to doing every process manually when using traditional processes. |

1. Explain what is meant by the term **Part Program** in CNC programming in no more than **200 words**.