The Industrial Revolution

**Introduction**
The Industrial Revolution of the 18th and 19th Centuries was the most influential transformation of culture and working patterns since the advent of agriculture around ten thousand years before.

Its effects fuelled change in labour patterns, social structure, the function of the family and the values and attitudes of the individual. It involved more than simply technological expansion - it was driven by massive social change.

**Transforming society**
The European economy of 1750 was overwhelmingly agricultural. Aristocratic landowners leased their land to tenant farmers who paid for it with the goods which they produced.

Non-agricultural items were created by individual families with specific skills (such as making wagon wheels). Only a small amount of economic activity centred around this limited production.

Many machines were already known, and there were factories using them, but these were the exceptions rather than the rule. Wood was the only fuel, water and wind the only power.

However, in just a few decades European economic life would be turned on its head - it would move from a family based rural economy to a capitalist-based urban system.

**Revolution?**
There has been much objection to the term revolution because the it suggests sudden, violent, unparalleled change, whereas the transformation was, to a great extent, gradual.

Some historians argue that the 13th and 16th centuries were also periods of revolutionary economic change.

However, in view of the magnitude of change between 1750 and 1850, use of the term does give an adequate perception of the dramatic social and economic transformation that swept through Europe.

**Seeds of change**
It is impossible to accurately identify the beginnings of the Industrial Revolution, but consensus suggests that it began in England when a series of eighteenth century technological innovations forced communities out of their traditional working patterns.

These new technologies increasingly forced production out of the home and into the factory.

The invention of the steam engine was one of the key factors in driving forward industry. From the Greek inventor Heron of Alexandria to the Englishmen Thomas Newcomen and John Cawley, many people contributed to the work of harnessing steam.
However, James Watt's steam engine, patented in 1769, provided the first practical solution. Watt's revolutionary designs resulted in a 75% saving in fuel and made the steam engine far more efficient and practical for industry.

Watt's continuing efforts produced a governor, a mercury steam gauge, and a crank-flywheel mechanism; all of which prepared the steam engine for a major role in the Industrial Revolution.

The Spinning Jenny, invented by James Hargreaves in 1797 allowed sixteen strands of cotton to be spun together at the same time – doing the work of several labourers in a fraction of the time. The effect on cotton output was dramatic.

The Cotton Gin, invented by American Eli Whitney in 1793 mechanised the separation of seeds from cotton fibres. Cotton became cheaper and more expandable but due to the size of the machines, the industry transferred into large factory mills.

The mercantile economy was also assisted by the ease and price of travelling around England.

Trade thrived in England because there were no internal tariffs or duties on commerce, which was not true of the continental European states. Moving goods around cheaply meant that profits soared and industry thrived.

The big railway boom between 1844 and 1847 meant that cargo could be transported around the company cheaply.

**Overseas Trade**

Increased demand in the international market for European goods also drove the conversion to a marketing economy.

From the old commercial empire there was a significant English fleet which was utilised in trade with foreign markets from the mid nineteenth century.

England shot to the forefront of the new capitalist economy primarily through its navy. Notably, they also still possessed colonies which could furnish raw materials and act as captive markets for manufactured goods.

As almost every war that Britain fought in the eighteenth century resulted in the acquisition of foreign territory, the country monopolized overseas trade.

**Population**

As the standards of production were rising, so was the English population.

Which of these came first in the context of the Industrial Revolution is a long standing historical debate.

The previous national economy, founded on the family structure, centered around subsistence. The new manufacturing economy however produced considerable surplus for trade.