

## Milestone: Keeping Time: Homework 7

Due: 23 October 2020

### 1 Portable watches

- a) Which country dominated production of portable watches in the period from 1800 to 1850?
- b) Which company pioneered the mass production of portable watches? Briefly describe what the innovations that allowed them to mass manufacture portable watches cheaply.

### 2 Demand for portable watches

Briefly describe some of the reasons for the increased demand in portable watches in the late 19<sup>th</sup> century.

### 3 Your watch versus that of one hundred years ago

- a) Briefly describe the main differences, in terms of how they operate, between your watch and a watch that would have been used 100 years ago.
- b) In terms of time-keeping functionality and usefulness for everyday tasks is either watch better? If so, explain how.

### 4 Limitations of mechanical timekeepers

Any timekeeper that uses a mechanical oscillating device (e.g. pendulum or spring/balance wheel) has fundamental limitations to its accuracy. These basic origin of this inaccuracy is the same for all systems. Briefly describe what the fundamental source of inaccuracy with any such mechanical oscillator is and why it results in inaccuracies in timekeeping.

### 5 Research paper 3

Provide the topic for your third research paper plus at least one possible source of information/evidence that might deal with the issue that your research paper considers. *This just seeks two pieces of information: the topic and the source. At this stage, you don't need to describe how the source might deal with the issue.*