***Chapter 8 Examination preparation solutions***

1. Conceptual relationships:
   1. In order to be competitive, a business must be productive. It must focus on getting the most out of its inputs. A business can improve productivity by for example, investing in technology that speeds up the manufacturing process and reduces the cost. A business that is able to produce more for less cost will be more profitable compared to its peers, and therefore more competitive.
   2. The business that is able to produce the highest quality product is likely to win a large share of the available market. Consumers look for products that are durable and long lasting. They understand that quality can sometimes cost a bit more, but they are prepared to pay for it if it means they won’t need to purchase the product again. As a result, the business that can produce a quality product and successfully communicate the quality of their product to their customers is likely to be the most competitive player in the market. They will attract customers, and generate revenue and profit.
2. KPI’s
   1. Productivity levels: Number of lollies produced per hour.
   2. Quality of production: Number of defective lollies produced per hour.
3. Automation involves replacing human labour with technology. When a production line is automated, human labour is reduced or removed and replaced with a series of workstations linked together by a conveyor belt. Inputs move along the belt and through the workstations where machinery and technology processes the inputs before they move on to the next station. The inputs emerge as a completed product. Humans are often involved to supervise the system, to conduct quality checks, to maintain the equipment and to fix any problems that arise.
4. Quality management strategies:

Quality control (QC) involves checking the products being produced at various stages of the production process. The purpose is check that the products meet predetermined quality standards and to identify and remove defective products before they make their way to the ultimate consumer. The business will reflect on the defects found and then develop strategies that aim to prevent that defect from occurring again. For example, an organisation that produces soft drink might check the inputs prior to mixing, check the liquid after the mixing stage and check the finished product after it has been bottled.

Quality assurance (QA) involves employing an independent consultant to examine the entire production process and advise on the adjustments that need to be made in order for the business to meet the standard required for national or international quality certification. Once the business makes the necessary adjustments, they will be certified. This means that an independent organisation has judged the business as having met national or international standards of quality excellence. For example, a biscuit factory may hire a consultant from SAI Global to advise them on how to achieve ISO certification.

1. Introducing robotics to the production line has many advantages. Robots are used to replace human labour. A business that invests in this type of technology can therefore save money on labour costs by reducing staff numbers. Robots can make the workplace a safer place for the remaining staff members by taking responsibility for completing dangerous jobs like heavy lifting and welding. Robots can also make the remaining jobs more varied and interesting by taking responsibility for repetitive jobs that human labour can find tedious and boring. Robots are faster, more precise workers than humans, and do not require breaks. As a result, they produce more output, make fewer mistakes and produce higher quality output. Less waste improves productivity and competitiveness.

However, there are some disadvantages to robotic technology. It is very expensive to purchase and requires regular maintenance. Specialist engineers and service people will need to be employed to operate and maintain the equipment. Also, the redundancies associated with the implementation of robotic technology can be costly for the business. The business will need to make payouts to employees and offer transition services. In addition, redundancies can have a negative impact on the image of the business. The speed at which technology is replacing human jobs is becoming a societal concern. As more people are pushed out of work, there are concerns being raised about the creation of new structures of inequality.