***Chapter 8 Revision Test Answers (20 marks)***

Part A: Multiple choice answers (5 marks)

1. The use of computers to control machinery, tools and equipment in order to produce a product is commonly called:

 *C CAM*

1. A well-designed website:

 *D all of the above*

1. Which of the following tools assists with optimising materials management by calculating what materials will be required in what quantities and when.

 *C materials requirement planning (MRP)*

1. Inventory is the storage of:

 *D all of the above*

1. Quality assurance:

 *A may involve the use of an external ‘certification body’*

Part B: Short answer answers (15 marks)

1. Using an example, explain how technology has impacted on the operations of service industries. (2 marks)

*Technology is changing the role of human labour in the service industry. For example, some cafes and fast-food restaurants use tablet based ordering and payment systems instead of human labour. When ready, customers enter and pay for their order on a tablet that is either centrally located, or on their table. The order is sent straight to the kitchen. This removes the need for the business to employ staff to take orders. Instead, staff can concentrate on cooking and distributing food orders. Businesses who use this kind of technology can speed up the ordering process, reduce ordering errors and decrease their staff costs. A more efficient ordering and payments systems allows increases customer turnover, which allows a business to serve more customers each day, leading to increased revenues and profit.*

1. Define the term ‘ecommerce’ and describe three benefits of this type of business. (4 marks)

*ecommerce is a type of business model where goods and services are bought and sold over the internet. It is an increasingly popular business model because it is cheap to set up, compared to a traditional ‘bricks and mortar’ store. All that is needed is a website. No physical store presence is necessary. A business that sets up this way has access to a global audience – billions of potential customers. The nature of the internet is that it is available 24/7. Therefore, ecommerce websites are always open. This significantly increases the opportunity for interaction with customers and for sales. Once a customer has purchased from a website, the business understands their buying preferences. Businesses who operate this way collect their customer’s personal details and then send them targeted marketing information designed to bring them back to the store for further purchases. This kind of targeted marketing is cheaper and more effective than alternative forms like television and radio advertising.*

1. Describe one way in which a business can improve the efficiency and effectiveness of operations using: technology, materials, quality and waste minimisation: (2 x 4 marks = 8 marks)

*A business can improve the efficiency and effectiveness of their operations by:*

* *Using automated production lines. This is a technological solution which involves designing and constructing a series of workstations linked by an automated transfer system (assembly line). The product being manufactured is constructed step by step at each work station. The workstations use robotic technology to complete tasks which construct the product in place of human labour. Although, some human labour is retained to supervise the process, service the machinery, and complete quality checks. The use of machinery in place of human labour increases the speed and accuracy of the production process, reduces stoppages and loss due to human error, improves the quality of uniformity of the output and reduces the wage costs of the business.*
* *Using the JIT inventory management system. The just in time system allows a business to avoid having to purchase or rent and maintain a warehouse for the storage of inputs and outputs. Storage space is expensive and large storage spaces are hard to find. The just in time system allows businesses to save on warehousing costs by relying on inputs being delivered just as they are required for production, and outputs being picked up and distributed to customers as they are completed. When this system is used, the business only has what is required on hand, optimising their use of physical space.*
* *Using quality control: Quality controls allows a business to improve its processes through the identification and rectification of errors. This system involves checking the product as it is produced at different points in the process. At each check point, the product is assessed against a series of predetermined standards. Any products that fail the standard are rejected. This process allows the business to highlight where problems are occurring and fix those issues in order to reduce future waste.*
* *Using lean management: Lean management is a system designed to identify and eliminate waste in the production system, thereby saving resources, time and money. Everyone in the organisation is responsible for identifying activities and processes that do not directly add value to the product being produced. The idea is that, if an activity does not add value, then the resources being devoted to it are being wasted and should be diverted to more productive activities.*
1. Identify the four core TQM concepts. (1 mark)
2. *Continuous process improvement*
3. *Customer focus: Everyone has a customer*
4. *Defect prevention*
5. *Universal responsibility*