

	F
	T
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	T

Task 3 – Explain two reasons why...

- a. **Higher level of demand (for the land), pushing up rental values; Lower supply of quality locations, again pushing up the cost of land in the city.**
- b. **Government wishes to encourage employment and economic activity in these assisted areas; Provides a financial incentive for firms to locate in areas that they may not have otherwise considered being located in.**
- c. **Enabling customers to make online purchases means that businesses can be more footloose; Location is no longer such a significant factor for overseas customers who can place orders online.**

Task 4 – Multiple Choice

1. D. **The need to be physically located near its customers**
2. D. **Internal economies of scale**
3. B. **Nixon Oil Company**
4. D. **Reduce transportation costs**
5. A. **Highly expensive products**
6. A. **Heavy, bulky and durable items**
7. A. **The cost of land**
8. C. **Taxes imposed on harmful by-products to protect the local community**
9. D. **Nature of local infrastructure**
10. C. **Management preferences**
11. B. **Industrial inertia**
12. C. **Clustering**
13. A. **Subcontractors**
14. A. **Cannot gain any cost advantage from a particular location**
15. D. **Proximity to the market**

## Unit 5.5

### Production Planning (HL Only)

Task 1 – Complete the missing words...

The **supply** chain (or logistics) refers to the sequence of activities from the production of a good or service to it being delivered to the consumer. A long supply chain increases the chances of things going wrong, so effective supply chain management helps to minimise costly mistakes to the business.

Production planning involves managers overseeing and controlling the level of stock in a business. Stocks can come in three forms: **raw materials**, **work-in-progress** and **finished** goods. The **economic order quantity** (EOQ) is the level of stock that minimises the firm's average costs. Firms need to balance the costs of holding large volumes of stock (known as **stockpiling**) with the drawbacks of holding insufficient quantities of stock (known as a **stock-out**).

Delays in the **lead** time (the period of time taken for a supplier to process and deliver a stock order) will

mean that stocks fall below the desired minimum level so the firm has to rely on its **buffer** stock.

**Just in case** stock control systems rely on the use of buffer stocks in order to meet changing levels of demand. By contrast, **just in time** systems have stocks delivered immediately the moment that they are required for production. This helps to improve the firm's **working** capital as money is not tied up in stocks which might not be highly liquid.

#### Task 2 – Explanations...

- a. **JIC systems rely on the use of traditional stock control systems and buffer stocks; JIT is a core feature of lean production that eliminates the need to hold stock (instead it is delivered and used 'just in time' during the production process).**
- b. **Outsourcing can occur within a country or outside a country when a business sub-contracts work to an external agency; Offshoring occurs when the sub-contractor operates outside of the country.**
- c. **This depends on what operations are being outsourced, e.g. production could take place overseas (such as Apple using Foxconn to produce its iPhones and iPads in China) with growing consumer demand in the domestic economy.**
- d. **The organizational structure will become flatter as there are fewer employees (as subcontractors are used instead). The structure might even be replaced by a matrix organization or by project teams.**
- e. **Productive capacity is the maximum possible output of a firm, whereas capacity utilization measures the extent to which the firm operates at its maximum capacity.**
- f.
  - **AFC at full capacity =  $\$100\,000 \div 50\,000 = \$2$**
  - **However, AFC at 85% of full capacity is now  $\$100\,000 \div 42\,500 = \$2.35$**
  - **i.e. unit fixed costs are \$0.35 or 17.5% higher if operating at only 85% capacity**

#### Task 3 – Interpreting JIC stock control diagrams

- a. **i. Stock level (units); ii. Maximum stock level; iii. Re-order quantity; iv. Buffer stock or minimum stock level; v. Time (e.g. days or week)**
- b. **i. 20,000; ii. 20,000; iii. 30,000**

#### Task 4 – Multiple Choice

1. C. **Ordinary shares**
2. D. **Storage costs**
3. B. **Builds up excessive levels of inventory**
4. C. **Working capital is tied up**
5. C. **The quality of production might be more difficult to monitor**
6. A. **Labour turnover**
7. A. **There is flexibility to meet sudden changes in consumer demand**
8. C. **Just-in-time**
9. D. **Higher levels of wastage and reworking**
10. A. **Usage rate**

11. B. Economic order quantity
12. B. Sudden increase in consumer demand
13. D. 1 week
14. C. 1500 kgs
15. B. 3000 kgs
16. C. Higher average fixed costs of production
17. B. 80%
18. B. Queuing times will rise
19. D. Subcontracting work
20. D. low, high
21. B. Subcontracting
22. D. Consideration and observation of overseas regulations
23. D. Ratio analysis
24. C. Greater job security
25. B. Offshoring

## Unit 5.6

### Research and Development (HL Only)

#### Task 1 – Complete the missing words...

**Research** is about investigating the unknown, such as new products or processes. **Development** is about using research findings to create new products that might be commercialised. The purpose of **Research** and **Development** (R&D) is to provide continual advancements in production and to launch new products to satisfy customer needs in a profitable way. **Innovation** is the commercialisation of these new processes, products or ideas.

In order to provide inventors with an incentive to innovate, the legal system controls and enforces the use of intellectual **property rights** (IPRs), such as **copyrights** and **trademarks**. People or firms wishing to use the IPR of others must first seek the legal permission of the IPR holder. For instance, **patents** give an entrepreneur or a business the exclusive and legal right to produce a new product or to use a particular production process. Intellectual property rights are recorded on a firm's **balance sheet**, under the section of intangible fixed assets.

#### Task 2 – True or False?

	True / False
a.	T
b.	T
c.	F
d.	F
e.	F
f.	T
g.	T
h.	T