## Exam Techniques

**Using Connectives to Answer Exam Questions.**

**To be successful in answering questions I must:**
- **Write in paragraphs so that the answer has a clear structure.**
- **Use a range of connectives to signpost readers through your points.**


**TIME CONNECTIVE: Shows the order of your points.**
***first, then, after, later, secondly, thirdly, finally, to begin with, next, in sum, to conclude, in a nutshell***

**OPPOSING CONNECTIVE: Introduces an opposite argument.**
***however, although, nevertheless, on the other hand, in contrast, though, alternatively, anyway, yet, in fact, even so, whereas***

**ADDING CONNECTIVE: Adds a further point.**
***also, too, similarly, in addition, indeed, let alone, furthermore, moreover, likewise***

**RESULT CONNECTIVE: Introduces a result or solution.**
***therefore, consequently, as a result, so, then, because, since, as, for,***

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### Using Connectives to Answer Exam Questions.

**Common mistakes:** Its Fast | Its Cheap | Its Easy | Its Convenient

If you have mentioned any of the words shown above in your answer then you must use a connective to explain why. Saying something is fast without an explanation means nothing.

Laser and Inkjet printers both print in high quality however, a Laser printer is normally used when printing in high volumes.

Dot Matrix printers can be used in hot and dusty environments however it makes more noise when printing in contrast to lasers and inkjet printers.

**Online Shopping is faster because:**

- You save time travelling to shops and queuing up at the tills.

**Online Shopping is more convenient because:**

- You can shop 24/7 consequently allowing you to shop outside the traditional shop opening times.

**On the other hand:**

- You may spend and waste more time on the internet due to the increase in choice (variety of shops).

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### Using Connectives to Answer Exam Questions.

**Example 1:** Most supermarkets now operate online shopping. Discuss the advantages and disadvantages to supermarkets of this development.

**Advantage:** Costs will be reduced for the supermarket **because** fewer retail outlets will be required **therefore,** less expenditure will go on rent and utilities.

**Example 2:** A hospital's intensive care department uses a computer to monitor patients' conditions. Give advantages of using a computer to collect the data rather than having it done by nurses.

**Advantage:** Computers can monitor continuously and **also** readings can be taken more frequently. **As a result** nurses are free to do other tasks.

**Example 2:** A bank has introduced a system whereby its customers will use contactless smart cards to make purchases. Discuss the advantages and disadvantages of this method of payment compared to using chip and PIN cards.

**Compare:** Contactless systems reduce the time taken by retailers to deal with each customer **therefore**, customers don't need to queue for so long as contactless cards speed up the transactions. **However** customers are limited in what they can buy as transactions must be below a certain value.

## Exam Techniques



### Using Key Words to Answer Exam Questions.

**To be successful in answering questions I must:**

- Identify the **number of marks** available for each question.
- Identify **keywords** which will structure your answer. You should use a keyword for every point you make.


**Doctors often use expert systems to diagnose illnesses of patients**
**Describe how an expert system diagnoses illnesses. (4 Marks)**

| Key Words: | User Interface. | Inference Engine | Knowledge base | Rules base |
|---|---|---|---|---|

| Mark & Keyword | Answer |
|---|---|
| 1) User Interface | User will interact with the **user interface** and enter their symptoms. **Inference Engine** will act as a search engine and compare the data which is held in the **knowledge base**. The knowledge base will use the **rules base** to give an appropriate match. Further questions could be asked via the **user interface** until the system suggest a probable illnesses. |
| 2) Inference Engine | |
| 3) Knowledge base | |
| 4) Rules base | |

## Exam Techniques



### Using Key Words to Answer Exam Questions.

**A mining company has asked a knowledge engineer to devise an expert system to help them with their prospecting for valuable minerals.**

**Describe how this expert system would be created.(5 Marks)**

| Key Words: | User Interface | Inference Engine | Knowledge base | Rules base | Testing |
|---|---|---|---|---|---|

| Mark & Keyword | Answer |
|---|---|
| 1) Knowledge base | Data is collected from the experts to develop the **knowledge base**. The **rules base** is then created based on the information from the knowledge base. The **user interface** screen is designed/created which would provide the user with the ability to interact with the system. The **inference engine** is designed/created as search engine between the user interface and the knowledge base. The system is then **tested**. |
| 2) Rules base | |
| 3) User Interface | |
| 4) Inference Engine | |
| 5) Testing | |

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**Using Key Words to Answer Exam Questions.**

**An office has a microprocessor controlled central heating system.**

**Describe how the microprocessor would keep the temperature of the office at a constant 19°C. (5 Marks)**

| Key Words: | Sensor | Microprocessor | Preset | Higher or Lower | Repeat (loop) |
|---|---|---|---|---|---|

| Mark & Keyword | Answer |
|---|---|
| 1) Sensor | The **sensor** measures the temperature. The **microprocessor** receives the data from the sensor and **compares** to the **preset** value (19 degrees). If the temperature is **lower** than 19 degrees then the Microprocessor will send a **signal to turn the heater on**. If the temperature is **higher** than 19 degrees then the Microprocessor will send a **signal to turn the heater off**. The process will continue to **repeat** to maintain a constant temperature. |
| 2) Microprocessor | |
| 3) Preset | |
| 4) Higher / Lower | |
| 5) Repeat | |

**Tip: You could also mention the ADC conversion.**

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**Using Key Words to Answer Exam Questions.**

**A chemistry student wants to measure how quickly a liquid cools after it has boiled. She will use a sensor connected to a computer to do this.**

**Describe how the computer would process the data into a form the student could use to analyse the results. (5 Marks)**

**Key Words:** Sensor | ADC | Spreadsheet | Graphs | Time

| Mark & Keyword | Answer |
|---|---|
| 1) Sensor | The **sensor** feeds data into the computer. The data is converted from **analogue to digital**. The reading are then recorded on to **spreadsheets** application. **Graphs** are automatically produced by the computer. The graphs can be plotted against **time** to examine the rate of cooling and compare against previous entries. |
| 2) ADC | |
| 3) Spreadsheet | |
| 4) Graphs | |
| 5) Time | |