



Higher Still  
**Notes**  
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# Higher Information Systems

HSN34200

Information Organisation Specimen Questions

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## Information Organisation Specimen Questions

1. A mail order company sells a range of fashionable clothing, footwear, jewellery and fragrances to customers within the United Kingdom. Customers can order items by either requesting a free catalogue from the company and posting in their order, or by accessing the company's web site using the World Wide Web (WWW) and placing an order through a secure server.
    - (a) The company uses two types of media to provide information.
      - (i) Identify the two types of media used and give a relevant example of each. 1
      - (ii) Compare these two types of media used to transmit information in terms of their accessibility and structure. 2
    - (b) The manager of the company is concerned about the security of the system used to collect data from orders processed through the company's web site. With reference to the Computer Misuse Act (1990) outline the manager's concerns, and any measures the company may take to address these concerns. 2
    - (c) The Data Protection Act (1998) came into force on 1st March 2000. It sets out the rules and practices which must be followed when processing information about individuals. Explain how this Act of Parliament may affect the mail order company. 2
    - (d) Some people are pessimistic about staying at home to shop through catalogues and the World Wide Web. Despite this, home shopping is on the increase. Discuss the possible benefits of shopping from home for customers of mail order companies, the mail order companies themselves and society. 3
- (10)

## Information Organisation Specimen Questions (cont.)

2. There are a number of contemporary Information Systems which play an important part in peoples' daily lives.
- (a) Users of the World Wide Web (WWW) can find particular items of information by using a search engine.
    - (i) How does a search engine work? 1
    - (ii) Search engines provide a query language to assist users to locate specific information. Explain the difference between natural language queries and Boolean queries. 1
    - (iii) Describe how a user could make efficient use of a search engine. 1
  - (b) Most homes in the United Kingdom have at least one television equipped to receive teletext.
    - (i) Describe the process of navigating teletext. 1
    - (ii) Teletext is a very popular method of delivering information to a wide audience. However there are several drawbacks of teletext for transmitting information. Describe two of these drawbacks. 2
  - (c) Companies often publish information on an Intranet which allows employees of the firm to share information in the same way that the Internet allows users to share information. Explain the benefits an Intranet would bring to an organisation. 2
  - (d) Many businesses make use of Electronic Data Interchange (EDI) to exchange business documents with their business partners. Outline the benefits associated with EDI. 2
- (10)

## Information Organisation Specimen Questions Marking Scheme

(a) The company uses two types of media to provide information.	
(i) Identify the two types of media used and give a relevant example of each.	<p>The types of media used to provide information are:</p> <ul style="list-style-type: none"> <li>• paper eg the catalogue</li> <li>• digital eg the website</li> </ul> <p>1 mark for naming both media plus examples relating to question</p>
(ii) Compare these two types of media used to transmit information in terms of their accessibility and structure.	<p><b>Accessibility</b></p> <ul style="list-style-type: none"> <li>• <b>paper</b> – each user needs their own copy of the information to view it; the user does not need special equipment to access it</li> <li>• <b>digital</b> – information is accessible at any time from any computer connected to the Internet; requires technical knowledge</li> </ul> <p>1 mark for appropriate comparison between different media</p> <p><b>Structure</b></p> <ul style="list-style-type: none"> <li>• <b>paper</b> – no search facilities; navigation limited to page layout and contents/index</li> <li>• <b>digital</b> – navigation and search facilities are available making information easy to find</li> </ul> <p>1 mark for appropriate comparison between different media</p>
(b) The manager of the company is concerned about the security of the system used to collect data from orders processed through the company's web site. With reference to the Computer Misuse Act (1990) outline the manager's concerns, and any measures the company may take to address these concerns.	
<p>Concerns of the manager as outlined in the Computer Misuse Act 1990:</p> <ul style="list-style-type: none"> <li>• access to the company's computer system without authorisation</li> <li>• unauthorised access to the company's computer system with intent to commit or facilitate commission of further offences</li> <li>• unauthorised modification of computer material</li> </ul> <p>1 mark for appropriate concern from above or similar; must refer to the Act</p>	

## Information Organisation Specimen Questions Marking Scheme

Addressing the concerns by use of:

- firewall – a piece of software that will protect the resources of the company's computer system by restricting access to them
- encryption – sensitive information is coded so it cannot be intercepted and understood by third parties
- password protected levels of access – this will restrict access to data as users will have to enter passwords to access particular data

**1 mark for appropriate measure and how it will work**

(c) The Data Protection Act (1998) came into force on 1st March 2000. It sets out the rules and practices which must be followed when processing information about individuals. Explain how this Act of Parliament may affect the mail order company.

A range of possible answers could be given here. The candidate must make reference to the Data Protection Act 1998 and why it will affect the company, e.g. "Since the mail order company will process personal data about the data subjects they must notify the UK Information Commissioner that they are intending to hold these details and the purposes for which they will be held."

**1 mark for appropriate reference to registration and why**

The mail order company also has responsibilities when holding personal data under the Act:

- data must be collected and processed fairly and lawfully
- data must be obtained fairly and lawfully and only for the purpose(s) specified
- data must be adequate, relevant and not excessive in relation to the purpose(s) it is held for i.e. a data controller must be able to justify possession of all data it holds and uses
- data must be accurate and up to date
- data must not be kept longer than necessary for the stated purposes
- data must be used in accordance with the data subject's rights
  - individuals may make subject information requests
  - individuals have rights to prevent processing likely to cause substantial damage or distress to them or someone else
  - individuals have the right to object to direct marketing
  - individuals are entitled to compensation from data controllers for breaches of the Act (a range of breaches may be given as examples)
- appropriate technical and organisational measures should be taken against unauthorised or unlawful processing of personal data and against accidental loss/destruction/damage to personal data

Continued...

## Information Organisation Specimen Questions Marking Scheme

- data must not be transferred outside the European Economic Area unless the country to which it is being transferred ensures an adequate level of protection for the rights and freedoms of data subjects

**1 mark for any two bullets or two appropriate points relating to scenario**

(d) Some people are pessimistic about staying at home to shop through catalogues and the World Wide Web. Despite this, home shopping is on the increase. Discuss the possible benefits of shopping from home for customers of mail order companies, the mail order companies themselves and society.

### **Customers**

- avoid traffic and cut down on transport costs
- avoid queues and busy streets/shops
- easier to find items due to searching facilities on web site
- disabled users may find it easier
- can shop at any time
- can shop from any location within the country

### **Companies**

- no expensive overheads e.g. shop
- wider range of customers from any location within the country
- profits are greater due to lower overheads and less staff (less wages)
- no opportunity to shoplift

### **Society**

- less traffic and therefore less pollution
- town centres will be quieter

**1 mark for any appropriate point under each heading (must be benefits—not uses); answers do not need to relate directly to scenario**

## Information Organisation Specimen Questions Marking Scheme

(a) Users of the World Wide Web (WWW) can find particular items of information by using a search engine.	
(i) How does a search engine work?	<p>A search engine works by:</p> <ul style="list-style-type: none"> <li>• moving across the web, requesting documents from servers and building up a map of the sites it visits</li> <li>• creating an index of the content of pages it visits</li> <li>• compares users' search requests to entries in the index and returns the results to the user</li> </ul> <p><b>1 mark for any bullet</b></p>
(ii) Search engines provide a query language to assist users to locate specific information. Explain the difference between natural language queries and Boolean queries.	<p>The difference between natural language and Boolean queries is:</p> <ul style="list-style-type: none"> <li>• natural language queries use English type syntax (often in the form of a question)</li> <li>• boolean queries use Boolean operators e.g. AND, NOT and OR (using stricter syntax)</li> </ul> <p><b>1 mark for appropriate comparison</b></p>
(iii) Describe how a user could make efficient use of a search engine.	<p>A user could make efficient use of a search engine by using well chosen search criteria.</p> <p><b>1 mark</b></p>
(b) Most homes in the United Kingdom have at least one television equipped to receive teletext.	
(i) Describe the process of navigating teletext.	<p>The process of navigating teletext involves:</p> <ul style="list-style-type: none"> <li>• typing in numbers on the remote control relating to the page you wish to view</li> <li>• using the four coloured buttons on the remote control relating to the coloured buttons on each page (if the system is 'fasttext')</li> <li>• selection from menus</li> </ul> <p><b>1 mark for any two bullets</b></p>

## Information Organisation Specimen Questions Marking Scheme

<p>(ii) Teletext is a very popular method of delivering information to a wide audience. However there are several drawbacks of teletext for transmitting information. Describe some of these drawbacks.</p>	<p>Drawbacks of teletext are:</p> <ul style="list-style-type: none"> <li>• pages are difficult to update; the teletext provider has to update everything</li> <li>• there are a limited number of pages available as if there were too many the time taken to cycle through them all would be too long</li> <li>• the non-interactive nature of teletext means that customers cannot order company's products if it was being used to advertise</li> </ul> <p><b>1 mark for each bullet, maximum 2 marks</b></p>
<p>(c) Companies often publish information on an Intranet which allows employees of the firm to share information in the same way that the Internet allows users to share information. Explain the benefits an Intranet would bring to an organisation.</p>	
<p>Benefits of using an Intranet:</p> <ul style="list-style-type: none"> <li>• allows communication between staff</li> <li>• all staff have access to a central source of information</li> <li>• managers can efficiently issue staff with instructions</li> <li>• provides up to date information for decision making</li> <li>• an Intranet can be connected to the Internet to extend its capabilities</li> <li>• remote users can dial-up the Intranet and connect to it to access its information and resources; in this way employees can access the organisation's system whilst out of the office</li> </ul> <p><b>1 mark for each appropriate benefit explained, maximum 2 marks</b></p>	
<p>(d) Many businesses make use of Electronic Data Interchange (EDI) to exchange business documents with their business partners. Outline the benefits associated with EDI.</p>	
<p>Benefits associated with Electronic Data Interchange:</p> <ul style="list-style-type: none"> <li>• less paper consumption due to the electronic transmission and storage of transactions; this means less cost</li> <li>• reduced communication costs due to reduced postage and handling costs; documents are less likely to get 'lost'</li> <li>• time saved as there is less data re-entry and transcription</li> <li>• reduced order time because transactions can be made immediately</li> </ul> <p><b>1 mark for each appropriate benefit explained</b></p>	