

1. Describe, with the aid of an example, the meaning of *formal information flow* within an organisation. (3)

13.3 Information Flow

- A system with fully documented / agreed procedures(1)
- Stating stages of flow / control / exception handling / distribution(1)
- Suitable examples(1)
 - NOT just Channel of communication
 - 'e-mail' or intranet/internet only accepted if it follows 'fully documented' or 'set procedures' answer
 - Lotus notes acceptable as an example
 - 'Business letter' is a good example; 'Letter' on its own not good unless a **very** strong definition.

2. A company which distributes car parts has recently expanded and wants to commission a new corporate information system. It needs the system to be successful to ensure the future growth of the business.

State **five** factors that could cause the failure of such an information system.

(5)

13.2 Success or failure of an MIS

1 per factor to maximum 5

- inadequate analysis / testing / life cycle stage
- lack of management / end-user involvement in design / testing / development
- emphasis on computer system
- concentration on low level data processing
- lack of management knowledge of ICT and its capabilities
- inappropriate or excessive management demands
- lack of team work
- lack of standards
- problems with change over

NOT

- size of project
- resentment / resistance to change
- organisation structure
- training
- costs

3. New employees joining a company are each asked to sign an agreement to adhere to a code of practice for using the organisation'.

Explain **four** issues that such a code of practice should address. (8)

13.9 Information and the professional

Max 4 x (2, 1, 0) but if answer written from user point of view then 1 mark per point maximum. First mark for the issue, then second mark for either an example, or a good expansion or a penalty for misuse point.

- Responsibilities for use of company hardware
- Responsibilities for use of company software
- Responsibilities for use of data
- Responsibilities for correct use of time
- Responsibilities for use of the internet or intranet
- Authorisation paths / levels, access rights / job related security, passwords / ids / physical aspects
- Company's implementation of legislation eg. DPA

NOT

- General responsibilities to public
- Plagiarism
- Locked out when leave company

4. A Medical Practice has installed a new information system that links patient records and prescriptions to the financial systems of the practice. The financial records must be secure against fraud as they are used to claim money from the Health Authority.
- Describe **four** factors that should be included in an IT security policy for the practice. (8)
 - Describe **one** measure the practice could take to show that their records were accurate. (2)
 - Describe **three** criteria that could be used to select a disaster contingency plan to recover from a breakdown of this system. (6)

13.6 Legal aspects, Audit, Disaster recovery

- (a) 1 for factor (F), 1 for description/example (E) - max. 4 x (2, 1, 0)
- prevention of misuse/protection against misuse/prevent unauthorised access (F); allow any sensible prevention example e.g. physical, anti-hacking etc (NOT vetting of staff)
 - detection of misuse; e.g. finding an anomaly/discrepancy by regular checking investigation of misuse; e.g. by using monitoring software, audit trail etc
 - procedures for keeping data safe e.g. data backup, file passwords etc
 - staff responsibilities e.g. network manager monitors, responsibilities for backup procedure
 - disciplinary procedures
- (b) By using an audit trail (1) to show what was amended and by whom/when (1)
- (c) 1 for name, 1 for description/expansion/example - max. 3 x (2,1,0)
Generic answers/example accepted, therefore context not important, but do not allow examples using contexts that are definitely not medical centre related
- Scale/size of organisation
 - Timing e.g. how quickly to recover system and be up and running, how important for the company
 - Costs of implementation/contingency site/external contract (make sure costs are of the plan, NOT costs if no disaster recovery plan or as a result of a disaster)
 - Likelihood of disaster
- NOT
- volume of data
 - any of the contents of the plan

5. Many commercial organisations already operate using computer-based information systems, yet they often introduce new systems or replace current ones.
- a. State **three** reasons why a feasibility study might recommend the replacement or updating of an existing information system. (3)
- b. Describe **three** factors that should be considered when discussing the introduction of a new information system. (6)

13.2 Development & Life cycle

(a) Maximum 3 x 1

- Current system no longer fit for purpose/is ineffective
- Changes in processes/business methods (Do not allow business studies reasons)
- New legislation forces changes
- Technical developments mean current system outdated/redundant
- Current system inflexible/too expensive to run/developer skills rare therefore expensive

NOT competitive edge

(b) 1 for factor (F), 1 for expansion/example (E) - max. 3 x (2,1,0)
(if give TEL a S as single words, then one mark only; if say 'issues' e.g. 'Technical, Economic and Legal issues' then 3 marks)

- Technical issues
- Economic issues
- Legal issues
- Operational issues
- Schedule issues
- Training Issues
- Changeover Issues

6. A company keeps records of its sales and uses a Management Information System to produce reports for its sales personnel and for its share holders.
- a. Describe **two** differences between the information needed by sales personnel in their day-to-day work, and by shareholders reading the annual report. (4)
- b. Describe, with the aid of an example, **one** characteristic of good quality information that might be produced by this system. (3)

13.4 Information & Data

- (a) 2 marks per point, max 2 points - 2 x (2,1,0)
- Level (operational/strategic)
 - Timing (current/historical)
 - Frequency (short/long-term)
 - Use
 - Type
- (b) 1 for characteristic, max 1 for description and up to 2 for example 1 x (3, 2, 1, 0)
- Relevant
 - Accurate
 - Complete
 - User Confidence
 - To right person
 - At right time
 - In right detail (appropriate format - shows the correct level of detail for the recipient)
 - Via correct channel of communication
 - Understandable (appropriate format - shows in an appropriate style e.g. graphs for shareholders may communicate more)

7. A small legal firm is about to replace stand-alone computers with a new computer network. Industry standard software will be installed. As new users of both the equipment and the software, the firm is concerned about the levels of support and training that will be needed. There are three levels of system user: the solicitors themselves, the practice management and the administrative staff.
- a. Explain **two** factors that need to be taken into account when planning the training. (4)
 - b. Describe **two** different ways of giving technical support to these users. (4)
 - c. State **two** means of providing the training material, and give an advantage of each. (4)

13.7 User Support & Training

- (a) 1 for factor(F), 1 for explanation/example(in context) (E) - max.2 x (2,1,0)

- Level of detail for level of user/type of use of training e.g. skill-based or task-based
- Staff familiarisation with hard/software
- Staff IT literacy
- Strategy for new staff

But NOT

- Timing of training
- Who and how many/train the trainer
- Cost
- Age of trainee
- Location
- Method of training

- (b) 1 for method, 1 for description - max. 2 x (2,1,0)

- Help Desk/phone line open hours of business (1), someone technical to guide/help (1)
- On-site technical support (1), for first few weeks/months of new installation/to be on-hand (1)
- User guides/articles/utilities/books/documentation (1), people can work at own pace/have instructions at side/look it up for themselves (1)

- Communications systems/bulletin boards/internet site/email updates (1), more able users can help themselves (1)
 - On-line technical help (1) use of the internet to get queries solved by a technical expert/via email (1)
 - On-screen help (1) installed with package/wizards to help solve problems (1)
- (c) 1 for method, 1 for advantage - max. 2 x (2,1,0) advantage must be viable in context and is dependant on the method (i.e. no single marks for advantage)
- CBT (allow CD-Rom or DVD-Rom)/course on intranet/delivered through network,. adv. e.g. Study at own pace
 - Video/Interactive video adv. e.g. can be rewound On-line tutorial
 - Self-study/step through guides
 - Formal external course adv. e.g. tutor present to help or answer questions

8. A large chain of supermarkets makes use of data processing systems and information systems.
- a. With the use suitable examples, identify the difference between a *data processing system* and an *information system*. (4)
 - b. Describe, with an example of each, the role of an information system in decision making for the following levels of supermarket management:
 - i. Tactical
 - ii. Strategic (4)
 - c. Give an example of how a data processing operation in a supermarket might provide data for a company-wide information system. (2)

13.2 Information Systems & organisations

- (a) 1 mark for each of DP and IS, plus 1 for each example
 - DP - precise/low level/electronic data capture/used for repetitive/routine business activities. (1)
 - Examples: Stock control/payroll calculations/invoices/ point-of-sale (1)
 - IS - collection of data to improve performance/aid to decision making/support for management. (1)
 - Examples: Sales Information system/Financial Info system/stock summary (1)
- (b) 2 marks for each level - 2 x (2, 1, 0)

Tactical (local in this context) - affecting hour by hour/day-to-day/short-term operational decisions (1), e.g. staff rosters, reorder quantities on previous local sales, how many tills to open etc (1)

Strategic (central in this context) - long term decisions (1), where to locate new stores, what lines of merchandise to carry, based on sales figures etc (1)
- (c) Must be in context - first mark for indicating output from OP system is used/processed by an MIS; second mark is dependant on the first
 - The data from the POS system (items sold, loyalty card information) is processed (1)

AND

 - to show who buys what, location, time of day/week/year (1)

OR

 - into information that can be presented in a way to enable management to make strategic decisions(1)

- 9 New information and communication technologies are frequently introduced into companies as a result of outdated existing systems, market pressure, new legislation and other factors. Companies have to adopt quickly or face going out of business.

Discuss the factors that need to be considered to manage such changes successfully within an organisation. Particular attention should be given to:

- Organisation structure and information needs;
- Management and staffing issues;
- Internal procedures, external procedures and the customer interface.

Illustrate your answer with specific examples.

The quality of written communication will be assessed in your answer. (20)

13.1 Organisational Structure

13.3 Corporate Information Systems strategy

13.5 The Management of change

13.6 Legal aspects

13.8 Project management and effective ICT teams

13.9 Information and the professional

Maximum 6 marks in each category; generally 1 for point, plus 1 for expansion or example, but can give up to 4 single points (but no example mark without point made). Maximum 16 content marks each marked with a letter as given below.

Organisation structure and information needs [O]

- Changing shape of organisational structure (need to mention hierarchical/flat or jobs created/lost) (be careful not to credit pure business studies answers - changing shape is due to new systems)
- Levels of information pertinent to different people/Operational, Tactical and Strategic
- Definition of an MIS, plus reasons
- Information strategy in organisation
- Information flow

Management /Staffing issues [S]

- Team working/Project organisation

- Code of practice/code of conduct
- Staff attitude/resistance to change
- Importance of good communication
- Staff training planning/re-skilling
- Employment patterns/conditions

Internal and External procedures and interfaces [P]

- Changeover methods
- Security procedures
- H&S policy/procedures
- Other internal policy/procedures/guidelines
- Coping mechanisms for legislative changes
- Management/interface with external sources and sinks

Quality of written communication will be assessed in this answer [Q]

- | | |
|---------|---|
| 4 marks | The candidate has expressed complex ideas clearly and fluently. Sentences and paragraphs follow on from one another smoothly and logically. Arguments will be consistently relevant and well structured. There will be few, if any, errors of grammar, punctuation and spelling. |
| 3 marks | The candidate has expressed moderately complex ideas clearly and reasonably fluently through well-linked sentences and paragraphs. Arguments will be generally relevant and well structured. There may be occasional errors of grammar, punctuation and spelling. |
| 2 marks | The candidate has expressed straightforward ideas clearly, if not always marks fluently. Sentences and paragraphs may not always be well-connected. Arguments may sometimes stray from the point or be weakly presented. There may be some errors of grammar, punctuation and spelling, but not such as to suggest a weakness in these areas. |
| 1 mark | The candidate has expressed simple ideas clearly, but may be imprecise and awkward in dealing with complex or subtle concepts. Arguments may be of doubtful relevance or obscurely presented. Errors in grammar, punctuation and spelling may be noticeable and intrusive, suggesting weaknesses in these areas |

