

- 1 Give two functions that should be incorporated into a software package to prevent accidental deletion/alteration of data. (2)

- Read only File or File/Cells password protected/locked
- Message e.g. 'Update Y/N'
- Audible sound
- Undo

NOT ACCESS LEVELS/AUTOSAVE/RECYCLE BIN/BACKUP

ALLOW SINGLE WORD OR PHRASE

Max 2

2 Modern personal computer systems usually include a CD-Rewriter.

State two legal uses for a CD-Rewriter. (2)

- Transporting (large) amounts of data/or ICT example e.g. transporting created music/software (NB must be own work or clearly copyright free)
- I Backing up work/application
- Archiving work

NOT JUST SAVING WORK

ALLOW SINGLE WORD OR PHRASE

Max 2

- 3 State two advantages and two disadvantages of using a computer on a server based network rather than stand-alone. (4)

Advantages

- Data/information can be shared (without need for duplication)
- Software can be shared
- Data transfer is improved/accessed from any terminal
- Communications are improved between users e.g. e-mail, diary scheduling
- Centralised upgrading/installation of software
- Improved sharing of peripherals e.g. printers
- Central control of security
- Central control of backup

NOT MONITORING/MORE STORAGE SPACE Max 2

Disadvantages

- System more complex another layer of software is introduced
- Access rights to files/resources need to be carefully set-up as files can be hacked
- Extra hardware needs to be purchased/allow example/allow network points
- If server goes down then stations cannot access server based resources/Allow cannot logon
- Conflict of access to resources e.g. file deleted/in use by other user
- System performance can degrade under heavy network traffic
- Easier to spread viruses

NOT MONITORING/TRAINING

NB Specialist IT staff needed to manage Network CAN BE PRESENTED AS EITHER AN ADVANTAGE OR A DISADVANTAGE BUT MUST BE A WELL ARGUED POINT

Max 2

- 4 All employees of a company have an eight-digit password to access the company's computer network.

State three rules that the employees should follow to ensure the effective use of the password system. (3)

- Employees should not write their passwords down
- Passwords should be changed regularly
- Passwords should not contain memorable data/be used for other systems/allow an example
- Passwords should not be revealed to other people
- *Allow* not leave stations logged on

NOT VARIABLE LENGTH PASSWORD/ENCRYPTED ON SCREEN

NB PASSWORD IS ALL NUMBERS (DIGITS)

Max 3

5 A large national bank updates customers' bank accounts overnight with deposits made during the previous day.

- (a) Name an appropriate type of processing that the bank could use for this operation. (1)
- (b) Give three features of this type of processing. (3)

(a)

- Batch processing

(b)

- it can be run without intervention from the user
- Batches of deposits/data will need to be collected/keyed in off line (1) then processed periodically(1)
- the processing/output is not time critical
- processing is done when the system is least used
- Records of deposits/data will not to be up to date at all times. (in fact it cannot be with current banking systems)
- Large volume of documents all of the same type
- Use of hash/control totals (to ensure integrity of data)
- Allow use of serial storage media e.g. magnetic tape

NOT DEPENDENT ON CORRECT ANSWER FOR (a)

Max 3

- 6 Explain the difference between the terms verification and validation when applied to data. Illustrate your answer with an example of each. (4)

Verification

- Checking by comparison that no alterations are made to data as it is transferred from one system to another/on first entry into the computer system
- E.g. keying data twice and comparing on input/read after write check/checksum

Validation

- Checking that data is sensible (allow suitable alternative word NOT CORRECT)/ rejecting data that is unreasonable
- E.g. Presence check/Format check etc/description/ actual example.

ALLOW JUST NAME OF CHECK

- 7 Applications software can be described as being generic package software, specific package software or bespoke software.

Describe, using examples, the characteristics of these three types of software. (The use of brand names will not gain credit.) (9)

Generic Package Software

- A package that is appropriate to many areas
- Of day to day business operations
- Word-processors/DTP/spreadsheets/database management systems/integrated package/presentation graphics

Max 3

Specific Package Software

- Software to perform a specific task/support a specialist application
- User requires knowledge of the subject area
- Payroll/CAD/CAM/Project Management/Music Software/ etc.

Max 3

Bespoke Software

- Specially written/tailor made
- To match user's specific requirements
- Suitable example

Max 3

NOT COST

ALLOW E-MAIL OR WEBROWSER AS AN EXAMPLE OF GENERIC OR SPECIFIC BUT NOT BOTH

- 8 A small business has been forced to purchase new computer hardware and software to replace its 10 year old system which has been destroyed in a fire.
- (a) Describe four items of software that the company will need to buy, explaining why each item is required. (The use of brand names will not gain credit.) (8)
- (b) The staff have used the old system successfully for the past 10 years. Give two reasons why it will be necessary for the company to provide training for all its members of staff on the new system. (2)

(a)

- Operating System (1) Reason (1)
- Word processor/DTP (1) Reason (1)
- Spreadsheet (1) Reason (1)
- Database management software (1) Reason (1)
- Browser/E-mail software (1) Reason (1)
- Integrated Package (1) Reason (1)
- Any other reasonable (1) Reason (1)

Max 4 x (2, 1, 0)

(b)

- New/updated software will have different/more/new features
- Staff will need to extend their skills
- Staff will be unfamiliar with new hardware/ software

Max 2

- 9 A flat file system is used to store orders taken by an electrical retailer. Examples of records from the file are shown below.

Customer	Address	Order No	Date of Order	Item No	Description	Price	Phone No	Sales Staff No	Sales Person
Paul Smith	38 Beech Road	2345	4/11/2001	456	Steam Iron	£35.45	01234-665577	78	Sue Sneath
Anne Chu	27 Ash Square	2359	4/11/2001	764	Toaster	£19.99	01234-897645	62	Bert Jones
Anne Chu	27 Ash Square	2359	4/11/2001	798	Kettle	£19.99	01234-897645	62	Bert Jones
Sean Page	19 Elm Lane	2361	5/11/2001	461	Microwave Oven	£125.00	01234-567483	78	Mrs Sneath
Joan Patel	16 Oak Close	2362	5/11/2001	764	Toaster New	£15.99	01234-192837	78	Sue Sneath

- (a) Referring to the examples above, describe the problems that have occurred by storing the data in a single flat file. (6)
- (b) The flat file system is to be replaced by a relational database. What structures would be needed in this database to allow for the effective updating and retrieval of data? (4)

- (a)
- Data is inconsistent (1) Sales person Sue Sneath (1) Description/Price Toaster and New Toaster (1)
 - Data is unnecessary redundant/duplicated/repeated (1) Anne Chu name/address/phone no (1) order number/date order (1) Bert Jones/Sue Sneath (1)
- Any 2 x (3, 2, 1, 0)

- (b)
- Tables/Relations
 - e.g. Customer/Salesperson/Order/Stock
 - Primary Key
 - E.g. Sales Staff No. in Salesperson Table/Item No. in Stock Table/Order No. in Order Table/Allow Customer No. to be added to Customer Table
 - Relationships/links e.g.
 - Use Item no in Order/Use Sales Staff no in Order/Use Customer No. in Order
 - As a foreign key

NOT QUERY /FORM/REPORT /MACRO

max4

- 10 A mail order company receives orders from its customers, handwritten on pre-printed forms. These are then used by clerks to enter the data into a computerised system. A sample blank customer order form (Figure 1) and input screen (Figure 2) are shown on the loose insert provided with this question paper.
- (a) With reference to Figure 1 and Figure 2, describe three features of the input screen that provide an effective human/computer interface. (6)
- (b) Identify three data items that the software will enter automatically and, for each item, state the event that triggers the automatic entry. (6)

- (a)
- Inclusion of heading/headings (1) reference to screen (1)
 - Screen design in same order (1) as form (1)
 - Areas clearly labelled on screen (1) reference to screen (1)
 - Sufficient space left for data entry (1) reference to screen (1)
 - Navigation buttons clearly included (1) reference to screen (1)
 - Instructions for data entry clerk included (1) reference to screen (1)
 - Drop down box (1) reference to screen (1)
 - Use of colour (1) reference to screen (1)
 - Use of * for colour blind users (1) reference to screen (1)
 - Use of scroll bar (1) reference to screen (1)

Any 3 x (2, 1, 0)

(b)

Automatic

- Order Number (1) on pressing new order/opening of screen or first entry on screen (1)
- Customer Surname and Forename and/or Customer Address and/or Customer postcode (1) on entry of Customer Number (1)
- Description and/or Unit Cost (1) on entry of Item Code (1)
- Total and/or Order Total (1) on entry of Quantity (1)
- Date (1) on opening of screen or first entry on screen (1)
- Customer Number (1) on pressing new customer button (1)
- Partial address (1) on entry of new customer's postcode (1)

Any 3 x (2, 1, 0)