## Question 25

a) (i) This keeps 3 generations of backup (son being the youngest) which means if there are errors in the most recent backup (son) you can go back another generation. If there is an error with this you can go back a further generation. If system failure occurs not much data is lost if you return to the most recent backup.

(ii) If the system fails an alternative that works efficiently is extremely important because businesses rely very strongly on their TPS's. Breakdown could cause business to slow or stop altogether, losing customers and income. Periodic testing is essential to ensure the alternative can take over successfully so a business can continue. People must be completely sure about how to use the alternative system, so there is minimal disruption to business if a breakdown occurs

b) (i) The website could be linked to a database so that only pics that are in season are displayed for sale. An online order form could be created on the website. It could also have a mail merge to the order form only displays pics that are currently available. The order form could be redesigned so you just fill in the boxes with the quantities required, and this data when sent could go directly into a connected database in the
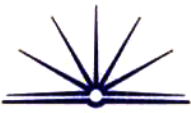
Staff don't have to enter orders at all. This connected database could store all orders placed by customers. You could also design a facility to process credit card payments automatically.

(ii) • Privacy of customer details - once you link the database to the website measures must be put in place so people can't access the database alim and access customer details especially personal details (address, phone number) and financial details (credit card numbers).

• Nature of work - this could result in redundancies of data entry operators, or their retraining to other positions. Also More IT staff would be required to design and maintain the system

• Security - other company details could be accessible to hackers through the connected databases, and this could fall in competitors hands.

c) This information would be of a highly sensitive nature and would require very high security levels to protect it during transmission. It would require an encryption method- The difficulty here is finding one that is both easy to use and hard to decode.

Errors could occur in transmission. There must be methods
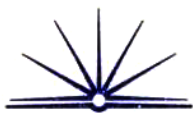
to ensure that either link sides process the transaction completely. If one side processed the transaction but not the other, integrity would be compromised or it is aborted. Complex error checking methods would need to be in place to ensure data arrived correctly, and both ends musts process the transaction correctly, thus You would need a secure connection and agreed encryption method as well as high level data validation and error checking. Data Errors would have to be ~~validated probably using CRC method and checked~~ detected probably using CRC method not data validation would take place at point of transaction and destination. It would probably use a check digit to ensure things such as account numbers were correct. CRC would be the most accurate method of ensuring data was correct.

Information such as this is highly sensitive. Both banks would need to keep data completely accurate, and thus appropriate measures are needed to ensure data accuracy, integrity and security. People could end up losing money or gaining money unless it is carefully managed. If data was intercepted, people could have access to the banking details.