



24. a) Cyclic Redundancy Check - the no. of data bits in each data packet are divided and the remainder attached and sent with data. If the remainder matches once the data has been received, then no errors have occurred.

Parity - can be odd or even. (eg: Binary of each character<sup>1</sup> is even

eg. 1101010 4 1's

∴ sent: 11010100 4 1's → no error

b) Madison may use data mining to investigate connections between which age group of customers buy which products. They could also use forms that have previously stored data about customers, as this would increase the speed in which their credit card details are processed leading to a more efficient and effective system. By the use of an electronic system, it reduces the time in which is spent processing (real-time processing) as the data is validated when it is entered.



- c) If the e-mail is intercepted by someone who informs John, he may report them to higher management. It is also difficult to make sure whether Pat is joking about John being retrenched or being serious. ~~If he~~ Because Sam is unable to read his body language, facial expression or tone of voice. Internal e-mails are meant to be used for the purpose of business and not to talk about fellow employees.