



Question 22

(a) Segment 1 — ~~electromag~~-magnetic waves is used by mobile phone, this uses similar technology such as radio waves. Mobile phones is appropriate as this ~~allows~~ is a ~~tot~~ wireless connection that can be accessed ~~any~~ anywhere ~~with~~ within the range, this prevent Jill from finding for telephone line.

Segment 2 — Fibre-optics cable can be placed across the mountains. It allows long distance transmission at high speed, placing it underground can prevent the problem of the ~~to~~ ~~un~~ uneven terrain but may be expensive to place.

Segment 3 — Fibre-optics cable can be placed this is because of its vast distance. ~~It~~ It allows long distance transmission at high speed, ~~place~~ the terrain may not affect ~~the~~ the transmission as it can be placed underground but may be expensive to implement.



Segment 4 - Twisted copper wire, ~~is~~ currently use it the telephone line. This is a cheap medium as it is usually already available. This is used to connect ~~to~~ the Head office building to the ISP or the network to communicate with Jill.

(b) Since Jill's job involved lots of travelling throughout the state, she does not have ~~any~~ constant access to fixed phone line to connect to ~~an~~ ^{the telephone exchange} ~~ISP~~. The use of ~~a~~ mobile technology allows wireless connection to the telephone exchange. This allows connection to the head office without the disability ~~to be~~ ~~of~~ ~~connecting~~ to a fixed phone lines. The head office network can be accessed during her travels where there is a lot of waiting time.

(c) Data dictionary ~~is~~ stated the characteristics of the data. By using data dictionary, Jill can understand more about the data, so that she can decide which one she ~~needed~~ needs. SQL queries ~~requires~~ requires the user to understand the data in order to plan out the required data. Data dictionary also contains the range of data that is allowed, ~~the~~ and the type of data, this allow Jill to perform queries ~~efficient~~ efficiently by knowing the range she needs (such as above or under) and the types of data required (such as numeric) as she ~~needed~~ to write the conditions of the results. Data dictionary also ~~tells her the data,~~ allows her to know which data is to be displayed for her needs.