

(b)

- Slow response if network heavily used
- Limited storage capacity on server
- Restriction of file types stored on server
- Restrictions on number and/or type of printout
- If the server fails then no access to any network facilities
- Inability/limited ability to customise desktop etc
- Viruses can spread more quickly
- Online bullying. **Max 2**

NO MARKS for any answers to do with WANs or the INTERNET

11.9 . Network environments

A graphics design company uses a Local Area Network (LAN). The designers can use their computers 'stand alone' or as part of the network. The LAN has a star topology.

(a) Draw a diagram of the LAN and give one advantage of using a star topology.

(b) Describe one advantage to the designers of using their computers in 'stand alone' mode.

(c) Describe one advantage to the designers of working on the network.

(a)

- Diagram structure
- Direction of data flow/labelling of diagram
- Problems with one communications link do not affect the others
- Performance does not degrade under load **Max 3**

(b)

- Exclusive use of peripherals (e.g. scanner, printer)
- Pictures/animations may contain large amounts of data
- Designers may be kept working because of network activity
- Better security
- As data/files not available to others on the network
- Can continue to work if server fails
- Viruses less likely to be transferred
- Work not disrupted by electronic messages

ALLOW extra mark for expansion of point **Max 2**

(c)

- Data/information can be shared
- Designers can work on same project
- Shared software
- Shared peripherals
- Shared resources
- Data transfer is improved
- So communications are improved between users
- Centralised upgrading / installation of software
- Central control of security
- Centralised control of backup

ALLOW extra mark for expansion of point

Three colleges in a large city are to merge and become a single college spread across the three sites. Each college has a Local Area Network (LAN) and these networks are to be joined together to form a Wide Area Network (WAN).