Answers

1. Edu Environments is a software development company for UK schools. They create various software and apps for schools to use such as Virtual Learning Environments (VLEs), registration systems and learner tracking apps. They employ a number of remote workers.

(a) Explain **two** systems that support remote working. [4]  
  
Virtual Private Networks / VPN (1) to enable a secure/encrypted access to a   
remote network (such as Edu Environment’s LAN) (1)  
Remote desktop technology (1) to allow support desks to access individual’s computers remotely (1)

(b) Tommy is going to be a remote worker for Edu Environments. Discuss the   
technology he needs to consider when creating his home office space. [6]  
  
**Hardware**  
laptop/desktop/PC/mouse/keyboard/computer display  
second display  
VoIP telephone / mobile phone  
Headphones / microphone / headset  
  
**Software**  
Remote desktop software (client version)  
  
He will also need any other software to be installed that he will need for his job, or accounts to be set up with cloud software / SaaS  
Typical software would include GSuite/Office 365, project management software, video conference software  
  
**Alternative access** to the Internet (backup)  
3G/4G/2nd line/mobile broadband  
  
**Backup electricity supply**  
UPS – to allow for small power cuts under 5 minutes  
Diesel generator – if backups are frequent for where they live

| **Level** | **Mark** | **Descriptor** |
| --- | --- | --- |
| Level 0 | 0 | No rewardable material. |
| Level 1 | 1-2 | Technical vocabulary is used but it is not used appropriately to support arguments, in relation to the issues of the question.  Issues are identified but chains of reasoning are not made, leading to a superficial understanding. |
| Level 2 | 3-4 | Accurate technical vocabulary is used to support arguments but not all arguments are relevant to the issues of the question.  There is consideration of relevant issues using logical chains of reasoning.  Considers the various elements of the question. |
| Level 3 | 5-6 | Fluent and accurate technical vocabulary is used to support arguments that are relevant to the issues of the question.  There is a balanced and wide-ranging consideration of relevant issues, using coherent and logical chains of reasoning that shows a full awareness.  Carefully considers the various elements of the question. |

1. Sport Digital is a photography business who employ specialist sport’s photographers who all remote work. The photographs and other electronic files need to be shared and used by everyone in the business, so they are considering online systems.

(a) Explain why security and cost should be considered when selecting an   
online system. [4]  
  
**Security:**  
Without using VPN (1) user’s connections will be unencrypted / liable to be eavesdropped (1)  
Secure connections must be used so that personal data (1) is protected under GDPR/Data Protection Act (1)  
The online system must have sufficient protections such as how they store data / use of encryption / two factor authentication / strong passwords (1) so that they reduce the chance of hacking (1)  
  
**Cost:**  
The pricing model needs to be investigated (1) to see the cost of the product over time / as the company grows (1)  
An online subscription may appear cheap upfront (1) but the price could increase / the user could be locked in and not able to move (1)  
The total cost of the online system should also consider other costs such as training / migration / support (any two points for 1 mark each)

(b) Other than security and cost, discuss other factors that need to be considered   
when selecting an online system. [6]  
  
**Migration**  
Data transfer  
Reliability

**Logistics**  
Office space or remote working protocols  
Utility costs (electricity etc)

**Support**  
IT technicians  
Staff training – both initial and ongoing

**Productivity** – Will the system make staff more productive or less productive?

**Features** – Does the software have all the features that the business requires? Is there a requirement to pay for many features that aren’t necessary?

**Connectivity** – What do staff do if they cannot connect? Alternative backups

**Ease of use** – how easy is the software to use? Is it appropriate for the technical ability of the users? Will it be accessible to different users/disabilities?

**Compatibility** – is the software compatible with all the different devices?

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[Total 20 marks]