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| 1.3 Types of computer system. Find out about the following: | |
| Desktop/server |  |
| Tablet/hybrid |  |
| Smartphone |  |
| Embedded system/Internet of Things (e.g. cars, home appliances, etc.) |  |
| Mainframe |  |
| Quantum Computers |  |
| Name some benefits of these computer systems (e.g. desktop computer can have a large screen which can improve productivity) |  |
| Limitations of some of these computer systems (e.g. mainframes can be expensive to purchase and maintain) |  |
| Explain some of these connectivity methods. How does these connects work? |  |
| Copper in the leads |  |
| Fibre optic leads |  |
| Wireless technologies (Bluetooth, WiFi, microwave,infrared, laser, Satellite, GSM, 3G/4G and future technologies) |  |
| What are the following? Explain and add images of what these devices are. |  |
| Hub |  |
| Switch |  |
| Router |  |
| Modem |  |
| Wireless access point |  |
| Combined/hybrid devices |  |
| Units of measurement, Explain the following measurements and what data they represent |  |
| Bit, nibble, byte |  |
| Metric (kilo, mega, giga, tera, peta) |  |
| Binary (kibi, mebi, gibi, tebi, pebi**)** |  |
| Decimal |  |
| Hexadecimal |  |
| How do you convert between binary, decimal and hexadecimal. Put in the equations to the right here. |  |
| Explain the meaning of the different types of software that you can buy/obtain. | |
| Open source |  |
| Closed source |  |
| Off the shelf |  |
| Bespoke |  |
| Shareware |  |
| Freeware |  |
| Embedded |  |
| What is a VOIP? |  |
| Explain what is teleconferencing? |  |
| Find out what the following protocols stand for. What is a protocol? |  |
| IP |  |
| TCP |  |
| UDP |  |
| SMTP |  |
| FTP |  |
| HTTP |  |
| SNMP |  |
| ICMP |  |
| POP |  |
| What is a server? Explain some of the different types like file/print, database, web and email servers. |  |
| Explain the following network characteristics |  |
| Peer to peer |  |
| Client server |  |
| Bus/star/ring/mesh – Draw the topology diagrams for these |  |
| Explain the different connectivity methods |  |
| LAN (Ethernet, Token Ring) |  |
| WAN (ADSL, leased line, ISDN) |  |
| MAN |  |
| Voice (PSTN, cellular) |  |
| Satellite (voice, data) |  |
| Explain the following different business systems. | |
| MIS |  |
| CRM |  |
| SOP |  |
| Explain what is meant by whistle blowing? |  |
| Explain what are these threats? How can they be prevented? |  |
| Phishing |  |
| Hacking |  |
| Viruses |  |
| Trojan |  |
| Interception |  |
| Eavesdropping |  |
| Data theft |  |
| Explain the terms to do with physical security. What do the following definitions mean? How can they help with making sure computer systems are secure? |  |
| Locks |  |
| Biometrics |  |
| RFID |  |
| Tokens |  |
| Privacy screens |  |
| Explain about the following digital security measures that can be used by a business. | |
| Anti-virus software |  |
| Firewalls |  |
| Anti-spyware |  |
| Username/passwords |  |
| Permissions |  |
| Encryption |  |
| Safe disposal of data and computer equipment |  |
| Overwrite data |  |
| Electromagnetic wipe |  |
| Physical destruction |  |