1. **Which computer hardware is responsible for processing the instructions given to a computer? (1mark)**

**CPU- Central Processing Unit**

1. **Why is the BIOS considered a non-volatile memory? (2 marks)**

**Because it loses all his memory after you shut down the PC**

1. **What does POST stand for? (1 Marks)**

**Power -on- self- Test**

1. **Mention four departments of a company and state one function for each. (8 marks)**

|  |  |
| --- | --- |
| **Department** | **Function** |
| **Accounting** | **Hire and fire humans in the company** |
| **Shop** | **Buy and sell ressources** |
| **Human resources** | **Navigate all humans plan orders and who work where when** |
| **Management** | **To manage all projekts** |

1. **The start topology is the most common in computer Networks. State two advantages and two disadvantages of this topology. (2 marks)**

**Advantages: If one user disconnected the topologies will be stable**

**Easy to Upgrade more end-user.**

**Disadvantesges: If the Router disconnected all other user will be lost, too.**

**If a Hacker login in the router he can read all end-user.**

1. **Fill in the layers of the TCP/IP and OSI models and the missing protocols of the transport layer. (10 marks)**

|  |  |  |
| --- | --- | --- |
| **TCP / IP model** | **Protocols & services** | **OSI model** |
| **Application** | **HTTPS, HTTP, FTTP, Telnet, NTP, DHCP, PING** | **Application** |
| **Process** |
| **Session** |
| **Transport** | **TCP,UDP** | **Transport** |
| **Internet** | **IP, ARP, ICMP, IGMP** | **Network** |
| **Network** | **Ethernet** | **Data** |
| **Physical** |

1. **Explain how the VPN is a secure method of sharing data through the internet.**

**(6 marks)**

* **The data a not avaible for the rest of the internet because there are tunnel**
* **The tunnel wall can be detect enemys who try to connect with the vpn**
* **The data in the tunnel are encrypted**

1. **Give the meaning of the following abbreviations. (10 marks)**

* **IDE = integrated development envioment**
* **HTTPS = Hypertext Transfer Protokoll secure**
* **VPN = Virtual Privat Network**
* **DHCP = Dynamic Host Configuration Protocoll**
* **CPU = Computer Processing Unit**
* **WLAN = Wireless Local access network**
* **VLAN = Virtual local access network**
* **ERP Enterprise Ressoure Planing**
* **UEFI =….Firmware Interface**

1. **State four measures of maintaining the health of your computer (4 marks)**

**1)Disk Cleaner**

**2)Defragmentation**

**3)Clean your registry**

**4)Antivirus program**

1. **State 2 advantages and 2 disadvantages of the cloud storage. (4 marks)**

**Advantages: The feeling of unlimited storage. You can connect everywhere you are with the cloud if you got an internet connection.**

**Disadvantages: can be easy hacked, extra storage not really cheap.**

1. **What is referred to as the single point of failure in the Star topology (2 marks)**

**It calls, that we got just 1 pint where all connect and if there fault, it’s the single point of fault, if one end-user fail it will be nothing happen with the network.**

1. **State four other network topologies apart from the star topology. (4 marks)**

**1 Line**

**2 Ring**

**3 Tree**

**4 Mesh**

1. **What is the English translation of the following German Vocabulary? (10 marks)**

* **Instand halten - maintrace**
* **Installieren - Install**
* **Fehlerhaft - Error**
* **Leistungsfähigkeit – powerfull?**
* **Speichern - Save**
* **Symbolleiste – Icon list**
* **Quellcode - Source**
* **Umsetzen – convert?**
* **Übermitteln - Tranfer**
* **Anbieter - Provider**

1. **Name four input devices and four output devices. (8 marks)**

|  |  |
| --- | --- |
| **Input** | **output** |
| **Microphone** | **Monitor** |
| **Keyboard** | **Speaker** |
| **Mouse** | **Gamepad with vibration** |
| **Gamepad** | **Headset** |

1. **ERP and BI are examples of Enterprise software. (7 marks)**
   1. **what do these initials stand for?**
   2. **State the difference between the two.**
   3. **What are the benefits and the drawbacks of these software for a company?**
2. **ERP is Enterprise resourcing Planning**

**BI is Business Intelligence**

1. **Differences:**

|  |  |
| --- | --- |
| **ERP** | **BI** |
| **A lot of funktion** | **Just for the anaylsis** |
| **Can order ressources** | **Cant do that** |
|  |  |

1. **Name three Benefits and three drawbacks of the software for a company (3 marks)**

Advantages ERP: All Ressources are trackable from the moment they are ordered to they leave the company

Disadvantages ERP: Large amount of data storages

Advantages BI: Provides complex data analysing to improve efficiency

Disadvantages BI: System can only work with data there you insert

1. **Compare wired and wireless connection. What are the advantages and the disadvantages of each? (6 marks)**

Wired connection is a Lan connection between the pc and router with a ethernet cable. Wireless connection are WLAN the wireless brother of LAN for this you need a wireless compatible router.

Advantages Lan(wired): stable connection

Disadvantages LAN(wired): cost more then wireless, because you need an extra ethernet cable.

Advantages WLAN(wireless): can be used for long connection

Disadvantages WLAN(Wireless): can be hacked, and easy to unstable the connection

1. **What is referred to as the single point of failure in the Star topology (4 marks)**

**It calls, that we got just 1 pint where all connect and if there fault, it’s the single point of fault, if one end-user fail it will be nothing happen with the network.**