[Name of the Writer]

[Name of Instructor]

[Subject]

[Date]

Computer

**Q1**

Computer infrastructure consists of CU, RAM, ROM and ALU. There are different Cores in a CPU which include different chips sets or coprocessors. Infrastructure in terms of computer and networks include a complete computer network according to the requirements of an organization. There are different networking devices such as routers, switches, servers, cables, etc., which are part of a computer network infrastructure.

**Q2**

Infrastructure is very important for any organization to understand in terms of computers or networks. As the company grows the needs of the company's employees and consumers also grows, so it is important to design a computer and network infrastructure according to the needs of the company. An appropriate IT structure fulfills the needs of the users and provides flexibility in business operations to satisfy the organization requirements. With the increase in the size of an organization, there can be issues like security, connectivity, and productivity. It is important to understand the infrastructure of the computer, network and company to overcome such issues and find out the solution easily.

**Q3**

Decision making is a very important step because it plays a vital role in the company's operations. There are different aspects which needs to be considered while making any decision. It is important to make the right decision to become a successful manager. A manager is responsible for the decision making the process of any organization. A manager should figure out the steps which are necessary to find the solution to problems before taking a decision. The first step in decision making is defining the problem and do complete business research on the problem. The next step is to gather quantitive or qualitative data about the problem. After finding the data make a decision which is most appropriate to that data and in benefit of the organization.

**Q4**

Open source operating system are those who were easily available on the internet and can be modified easily. It is shared openly among the users and programmers can add or modify features of an open source operating system. Open source Operating system structure is easily available to the programmers and allows programmers to create their own version of OS with the help of open source code. The most popular open source operating systems include Linux, Android, COSMOS, Phantom OS, ITS, etc. The main advantage of Open source operating system is that they are free of cost and save a lot of money for the organizations. Open source OS allows companies to modify their OS according to their businesses requirements. However, they are less user-friendly and only the one who is familiar with the programming can understand how to use open source OS. They also have less support because they rely on developers to fix problems. The biggest issue which open source OS users can face is that anyone can view their code and can create vulnerabilities in their system (MacCormack et al., pp.1016).

Proprietary operating systems are those who can only be modified by the organization who has created that OS. Only the owner of the organization has the authority to allow the individual to make changes in the OS. However, if someone tries to make changes without permission of the owner in this type of OS that individual is doing a crime and can face some serious consequences. The most popular proprietary operating systems include Windows, Unix, iOS, etc. Proprietary OS is user-friendly and gives support to the organizations to fix bugs easily in the operating system. They consist of more features that appeal to the business owner. Proprietary OS provides more security to the users because they can only be modified by the company which made them. However, they are costly and are limited for the organizations because sometimes organizations want to modify systems according to their business requirements which are not possible in these Operating systems. I will prefer proprietary Operating system because they provide security which is most important for organizations to secure their sensitive data from unauthorized people. Proprietary OS may be costly for the organization but they are easy to use, and new users can understand quickly how to use a proprietary operating system (MacCormack et al., pp.1016).

**Q5**

Databases are used by organizations to store their huge amount of data. It is basically an organized collection of data which can be retrieved easily by users at any time. The advantages of a database are that it helps to reduce the data redundancy and helps in reducing the errors. Databases provide greater data integrity and improve the data security of an organization. It helps in increasing the consistency of data and provides different ways to users to access the data easily from anywhere at any time. However, databases are sometimes complex and difficult to understand. Sometimes it takes a lot of time in designing and developing databases due to complex data. Another disadvantage of a database is that a little damage to the database affects the whole applications associated with the database (Elmasri & Ramez, n.p). The four major types of databases are:

* Relational Database
* Hierarchical Database
* Network Database
* Object-Oriented Database

**Q6**

Relational databases represent and store data in a tabular form which include MySQL, SQLite, Oracle, Microsoft SQL server, etc. While non-relational databases represent and store data as files. As compared to the relational databases, non-relational databases have no relations between tables. In relational databases, each table has primary keys, and with the help of primary keys, each table is related to another table. While in non-relational databases data is stored in a hierarchical form which means that data can have one parent node and one or more children nodes. The advantage of relational databases as compared to non-relational databases is that they use structured query language (SQL) which makes easy for the users to create or manage a database (Elmasri & Ramez, n.p).

Relational databases came with built-in data integrity and also supported joins which one of their advantages over non-relational databases. However, sometimes a lot of joins slow down the speed of the database in the relational database which is their biggest disadvantage. It is also difficult to scale out relational databases as compared to non-relational databases which can easily be scalable. Non-relational databases have no schema and also decrease the development cost of organizations as compared to the relational databases. However, there is no data integrity, and data is denormalized in non-relational databases (Elmasri & Ramez, n.p).

**Q7**

Open source is those who are openly available to anyone, and anyone can modify them according to their requirement. While Proprietary are created by a specific company and can only be modified by the company who have to create proprietary software or OS. Open source is easily available on the internet free of cost to the users and saves million of yearly business cost as compared to the proprietary which is very costly, and users or companies have to buy their license before using them. However, proprietary provides more security as compared to the open source and are more user-friendly as compared to the open source. Some of the examples of opensource operating systems/ software include Linux, Android, MySQL, Mozilla Firefox, Wordpress, etc., and some of the examples of the proprietary operating systems/ software include Microsoft, iOS, Blackberry OS, Mac OS, Unix, adobe flash player, iTunes, adobe photoshop, etc. (MacCormack et al., pp.1016).

**Q8**

Self-hosting websites are those who are working on your own server and web hosting is the service provider which allows you to run your database using a third-party web hosting platform. Self-hosting websites are usually preferred by small business companies which don’t have enough cost to buy expensive servers for web hosting. However, web hosting provides more security as compared to the self-hosting and provides support which automatically fixes the bugs in the websites as compared to the self-hosting in which you have to fix errors yourself. Web hosting servers are costly, and it is important to maintain them to avoid any crashes. Self-hosting doesn't provide proper storage and backup options as compared to web hosting which provides proper storage and backup options to organizations so that they can recover their data in case of any incident easily. Web hosting is costly only for the first time, but in the long run, they are the most effective option as compared to the self-hosting websites. Web hosting provides faster speed and reduces the load times which is why these should be preferred over self-hosting websites.

**Q9**

Cloud allows users to store their huge amount of data through the internet and access that data anywhere at any time. It makes it easy for users to access their data anywhere without carrying storage devices with them. The advantage of the cloud is that it lowers the cost of storage devices and are less expensive as compared to storage devices. Cloud provides flexibility to organizations and is environmentally friendly. However, it requires good internet connectivity and if any company is using a cloud platform, they require stable internet with good speed to maintain a consistent connection for the cloud. There are a lot of security concerns in the cloud which is a major issue for any organization as every organization wants to secure their confidential data from unauthorized people.

**Q10**

Browsers are those which allows a user to browse different stuff with the help of the internet and different search engines. It is basically a program for displaying HTML files. There are different types of browsers which include Google Chrome, Internet Explorer, Mozilla Firefox, etc. Search engines allow a user to search for different items from a database using different keywords, sentences, and characters. It allows a user to search the content via the world wide web by just entering a phrase or keywords. Different type of search engines includes google.com, bing.com, yahoo.com, etc.

Works Cited

Elmasri, Ramez. Fundamentals of database systems. Pearson Education India, 2008.

MacCormack, Alan, John Rusnak, and Carliss Y. Baldwin. "Exploring the structure of complex software designs: An empirical study of open source and proprietary code." Management Science 52.7 (2006): 1015-1030.