FEEDBACK TUTORIAL LETTER

1st SEMESTER 2019

ASSIGNMENT 1 & 2
INFORMATION TECHNOLOGY IN LOGISTICS
ITL611S
ASSIGNMENT 1 MEMO

Question 1:

i. Describe the different types of computers you are familiar with that are used in organizations. For each type explain using an example how its use can benefit the organization [16 marks]

Answer

Mainframe:
These are computers used primarily by large organizations for critical applications; bulk data processing, such as census, industry and consumer statistics, enterprise resource planning; and transaction processing.

**Minicomputer:**
This is a type of computer that possesses most of the features and capabilities of a large computer but is smaller in physical size. It fills the space between the mainframe and microcomputer and is smaller than the former but larger than the latter.

**Super computer:**
It is a computer that performs at or near the currently highest operational rate for computers. Traditionally, supercomputers have been used for scientific and engineering applications that must handle very large databases or do a great amount of computation (or both).

**Desktop computer:**
It is a personal computer that fits on or under a desk. They usually consist of a monitor, keyboard, mouse and either a horizontal or vertical (tower) form factor. Unlike a laptop, which is portable, a desktop computer is meant to stay at one location.

ii. **Define the term emerging technologies**

*Answer:*
These are modern technologies that were recently introduced such as mobile phones, RFIDs etc.

iii. **State and explain any FIVE emerging technologies tools and applications in Supply Chain Management.**

*Answer:*
Accept any discussion on the following concepts.
- Electronic Data Interchange (EDI).
- Bar coding and Scanner.
iv. What do you understand by the term “bring your own device”. [2 Marks]

Answer:
Employees can bring their own laptops and computers to a work place and use such technologies to access company information resources.

v. Do you think “bring your own device” concept is good for modern organisation? explain your answer. [5 marks]

Answer

Accept any reasonable argument that focus on the following issues
- Security
- Compatibility
- Control
- Monitoring
- Privacy

Question 2:

Cloud computing is a technology that isn’t widely known by many SMEs business directors. However, it’s use in this sector is quite significant. Discuss cloud computing under the following headings [20 marks]

i. What is cloud computing?
ii. Different Cloud Computing Deployment Models or Architecture
iii. Importance of cloud computing
iv. Security in cloud computing

What is cloud computing?
In the simplest terms, cloud computing is a paradigm of the information technology which allows the individuals to ubiquitously access the shared pools of the configurable resources of the systems. Cloud computing works mainly over the internet, and it constitutes a group of...
networked elements that are destined to provide different types of services. Various concepts of cloud computing are used predominantly in the industrial sector.

**Cloud Computing Deployment Models**

There are numerous different types of cloud computing deployment models available such as the following:

**Community Cloud**

The community cloud is easily accessible to only a limited community of a certain consumers. The community cloud is necessarily owned by an assembly of members of a community or by a third-party owner of the cloud who possesses a limited access. It cannot be accessed by a party which is outside the community without the permission of the community.

**Private Cloud**

The private kind of cloud is owned just by a single party privately. As it is implemented and used only in a secured environment, it is named as internal cloud. Only the authorized users can access the private cloud.

**Public Cloud**

The public cloud can be accessed publicly by everyone, but the owner is a single person or party. The public type of cloud is usually paid, and the consumers are asked to pay a certain amount for accessing it.

**Cloud computing implement the following architectures**

**Infrastructure As A Service (IAAS)**

IaaS is an extremely important concept in the field of cloud computing. It is one of the most important types of cloud computing and is used extensively by people. “IaaS represents a self-contained IT environment that comprises of infrastructure centric IT resources that can be accessed via tools and interfaces”. It allows consumer to store, do processing of the network and various types of fundamental resources related to computing. It even allows the consumers to run different types of arbitrary software like the operating systems and other applications. The consumers in this type of cloud computing are not allowed to control the infrastructure of the cloud, they can however, select the given networking components, storage, operating systems and deployed applications.

**Platform As A Service (PAAS)**

PaaS is also one of the very important types of cloud computing. “PaaS represents a ready to use environment’ that comprised of already deployed and configured IT resources”. Platform as a service cloud allows the consumers to deploy the infrastructure of the cloud either by using tools, services, programming languages or the library and the services that are supported by the consumer. The users are not allowed to manage or control the given infrastructure of the cloud in the platform as a service cloud computing type. Although, the customer is not allowed to
control servers, storage, operating systems, but, the customer can control the deployed applications.

**Software as a service (SAAS)**
Software as a service (SaaS) is yet another extremely important type of cloud computing. Apart from being a type of cloud computing, software as a service is also an extremely important model in cloud computing. This model helps in creating a cloud service which is reusable and can be used in a commercial way by large population of consumers. According to our cloud computing assignment help experts, SaaS is mainly used to provide “the capability to the consumer to use the applications on a cloud infrastructure. These applications are accessible from various client devices through a thin client interface, such as a program interface or a web browser (for example: web-based email)”. In the SaaS model consumers are not allowed to control the infrastructure of the cloud. The cloud infrastructure mainly consists of the individual application capabilities, storage, operating systems and more.

**Importance of Cloud Computing**
Cloud computing is an extremely important discipline of computer science and it is evident from the high demand of cloud computing experts in the industries today. Below mentioned are some of the important points relating to the importance of cloud computing: -
1. It is extremely cost effective as it possesses reduced expenses of the capital along with a minimalistic amount of investment in the infrastructure.
2. It is extremely easy to use and easier to access even. It can be accessed and used effectively even by the newbies in the field.
3. A very evident point of importance is that it can be used anywhere anytime with the help of internet.

**Cloud Computing Security**
Cloud security encompasses a broad range of security constraints from an end-user and cloud provider's perspective, where the end-user will primarily be concerned with the provider's security policy, how and where their data is stored and who has access to that data. For a cloud provider, on the other hand, cloud computer security issues can range from the physical security of the infrastructure and the access control mechanism of cloud assets, to the execution and maintenance of security policy. Cloud security is important because it is probably the biggest reason why organizations fear the cloud.
ASSIGNMENT 2 MEMORANDUM

Figure 1: Supply Chain Management Scope (Gruat La Forme et. al., 2007)

In the era of globalization, business organisations cannot ignore the economic trends, competitive situations and/or technology innovations happening in other countries and competitors, regardless of their primary market or current location. Helping them deliver in such activities is an efficient supply chain strategy that is supported by various technological innovations. Figure shows a typical Supply Chain Management Scope of EC Enterprises, a modern retail business organisation operating in Namibia. Carefully analyse figure 1 and answer question 1 and 2.

(a) Explain in your own understanding what is meant by Supply Chain Management?

[2 marks]

SCM is the broad range of activities required to plan, control and execute a product's flow, from acquiring raw materials and production through distribution to the final customer, in the most streamlined and cost-effective way possible.
(b) Using examples, discuss the role of technology in Supply Chain Management in modern business organisations.

Supply chain requires management of different interconnected businesses that help in the delivery of product to its end destination. This calls for efficient flow of information from one end to another which is where technology plays a crucial role. Technology is more than just computers and includes varied aspects such as factory automation, advanced communication devices, automated hardware and services and data recognition equipment.

The various technologies being implemented by companies these days include speech recognition, digital imaging, real-time location systems and electronic data interchange, all these helping to provide a boost to their overall business output.

Most of these technologies are used in transaction processing, supply chain planning and collaboration, or order tracking and confirmation. In transaction processing, process like tracking delivery status, billing, generating order quotes are helped by use of technology, while in order tracking and delivery coordination companies can now easily monitor and coordinate individual shipments with the use of these technologies, ensuring that the product reaches its intended destination without any errors.

[8 marks]

Question 2:

Outline how the following key technological tools can enhance the Supply Chain Management of EC Enterprises. Use examples to express your ideas.

i. Bar coding and Scanner. [5 marks]
ii. Enterprise Resource Planning (ERP) Systems. [5 marks]
v. Inventory Management Systems (IMS). [5 marks]
viii. Electronic Commerce (e-commerce). [5 marks]
i. **Bar coding and Scanner.**
   They are used throughout the supply chain to identify and track goods at all stages in the process, refer to unit 4 of ITL in Logistics module for more details.

ii. **Enterprise Resource Planning (ERP) Systems.**
    They are used to capture data for the whole business into a single computer package which give a single source for all the key business information activities, such as customer orders, inventory and financials. Refer to unit 2 of ITL in Logistics module for more details.

iii. **Warehouse Management Systems (WMS).**
    WMS are systems that regulate all the traditional activities of warehouse operations. They include mostly receipt of goods, allocation or recording of storage locations, replenishment of picking locations, production of picking instructions or lists, order picking, order assembly and stock rotation. Some of the WMS are used in combination with radio frequency communication kit for communication purposes. For example, when picking stock, it will provide the tasks to be performed and once the task is complete it updates the main system on stock inventory.

iv. **Transportation Management Systems (TMS).**
    TMS Transportation Management Systems provide more visibility into shipments and orders. Scheduling issues are also addressed on time. Multiple transportation options can be explored because of earlier visibility into the supply chain. Timely communication and status reports can also be obtained. By having control on its supply chain, businesses can make efficient routing decisions.

v. **Inventory Management Systems (IMS).**
    During the mid to late 1990s, sellers began applying modern inventory management systems, made likely in huge part by advances in computer and software technology. The IMS work in a round process, from purchase tracking to inventory one-to-one care to re-ordering and back everywhere again. It ensures that customers always have enough of what they want and balance that goal against a retailer's financial need to maintain as little stock as possible. Mismanaged inventory means disappointed customers, too much cash tied up in warehouses and slower sales. Factors such as quicker production cycles, a proliferation of products, multi-national production contracts and the nature of the big-box store make them a necessity.

    Modern IMS can track sales and available inventory, communicate with suppliers in near real-time, receive and incorporate other data, such as seasonal demand. They are as well flexible enough to allow a merchant's intuition. Large retail stores like Wal-Mart use IMS.
to stocks and track items made in more than 70 countries according to its corporate Website.

**vi. Radio Frequency Identification (RFID).**

The RFID is used in SCM to uniquely identify the specific product such as when its manufacture date, the batch number and its expiry date. Refer to unit 4 for more details.

**vii. Decision Support Systems (DSS).**

DSS are an exact class of computerized information systems that supports business and organizational decision-making activities. A correctly designed DSS is an interactive software-based system planned to help decision makers accumulate useful information from raw data, documents, personal knowledge, and/or business models to recognize and solve problems and make decisions on behalf of managers. Typical information that a decision support application might gather and present would be, an inventory of all of present information resources, reasonable sales figures between a specified period and predictable income figures based on new product sales assumptions.

**viii. Electronic Commerce (e-commerce).**

e-commerce refers to the wide diversity of tools and methods used to conduct business in a paperless environment. Electronic commerce consequently includes electronic data interchange, e-mail, electronic fund transfers, electronic publishing, image processing, electronic bulletin boards, shared databases and magnetic/optical data capture. Companies can automate the procedure of moving documents electronically between suppliers and customers. This system delivers access to customers all over the globe and thus eliminates geographic limitations. Some of the e-commerce applications in B2C (Business to Consumer) and B2B (Business to Business) space, which are changing the dynamics of SCM are e-tailing, e-procurement and e-auctions.

**General comments:**

Generally, the students performed well in both assignments serve for a few who seem not to dedicate enough time to do their assignments. It was evident in some cases that the students did their assignments in a last-minute rush. Again, there are few cases of plagiarism as evidenced by turnitin reports, but I applied a benefit of doubt given that some students were repeating assignment questions and copying & pasting the standard assignment cover page which resulted in high plagiarism percentages. However, in assignment 2 there was a case where two students had identical assignment
documents. I treated it as cheating hence both students obtained a zero mark in the assignment. This should send a clear message that cheating has no place in academics and hopefully it’s a lesson learnt.

END OF MEMO