SOLUTION – BUSINESS INFORMATION SYSTEMS MAY 2010

QUESTION 1

(a) During the end of the month and a few days into the subsequent month, customers are always eager to make new purchases to replenish stocks. This calls for an increased volume of requests and enquiries on the system.

Another point is that customers may want to know their account balances for the purpose of settling them in anticipation of further credit purchases.

Both situations tend to increase the traffic on the network, resulting in many searches that have the potential of slowing down the system.

(b) Advantages of the company's client – server networks include:

- Sharing of peripheral devices – Several users on network are able to share printers, scanners and disk drives connected to the networks in order to keep cost down.
- Sharing of programms and data – Network users are able to share a common database, as well as common software. It is much easier to update files when these are stored on a server than when they are stored on separate computers.
- Better and fast communications – On the network, information may be shared in real time.
- Security of information …… more readily backed up on networked storage media just as data integrity is easily ensured when a central database is used.
- Access to database – It is possible to tap into other external databases, private or public provided there is a linkage.

(c) Feasibility study is a formal detailed study to decide what type of system can be developed to meet the needs of the organisation. Feasibility may also be defined as the measure of how beneficial or practical the development of an information system will be to an organisation, ie cost benefit analysis.

The goal of a feasibility study is to identify as quickly as possible whether the benefits of a proposed project appear to outweigh its expected cost and disruption based on what is already known.

(d) It was good the company embarked on a feasibility study for the following reasons:

- The study would make it possible to make a thorough investigation into the existing facilities and their requirements, in order to establish whether or not the requirements are being met.
- It would enable the team to identify as quickly as possible whether the benefits of the proposed solution appear to outweigh its expected cost.

- Feasibility study is about the only sure way to convince any stakeholder that as solution being sought is a viable one.
- Embarking on feasibility will most likely help the firm to make an informed choice from among alternatives.

QUESTION 2

(a) Computer hardware is the physical component of the computer. Examples include the monitor and the keyboard.

On the other hand, computer software is a general term primarily used for digitally stored data such as computer programs and other kinds of information read and written by computers.

(b) Application software is designed to help the user to perform specific tasks. Typical examples are word [processing, spreadsheet and database. Systems software is the software that handles the resources to use the operating system. It helps to use the operating system.

It is made up of the operating system, language translators, utility programs, etc.

(c) Examples of commonly used accounting software

- SUN Accounting
- Tally
- SAGES
- TOPAZ
- GLOBUS
- FELEXICUBE
- Bankmaster
- Microbanker
- Acpac

QUESTION 3

a) Management Information System (MIS) is an interrelated set of activities that provide information to all levels of Management. MIS is designed to combine data from individual departments. It allows top management to compare the performance of individual departments and to analyse data according to specific views, eg Department, Unit, and Profit centre, etc.

b) ***Why should an organisation use MIS***

Power : The quick answer is that your whole reputation as an organisation as well as your actual profit and loss profile is directly dependent on your actual field activities and the power of your Information System Tools.

Expertise: Proven record of working installations and is frequently considered to be the '***industry leading***' information system for field management in any business operation. The software is developed and maintained by experienced experts, businessmen and scientist with a high and long-standing reputation is Software Engineering Techniques.

Costs and profits: MIS comes with a fair price tag and a proven quick return on your investment. We know that implementation costs for MIS are only a fraction compared to the development costs of similar modules within a specific custom made 'integrated' information system.

System integration: MIS is designed with an open data interface and can be linked directly with other existing information systems and data sources. For instance, data may be imported from the payroll module of an existing accounting program. MIS supports as well the export of all its data in all standard database formats.

Quality and Sustainability: MIS is capable of keeping historic records of you field conditions, activities, inputs, impacts and performance results.

QUESTION 4

a) A data warehouse is a **repository** of an organisation's electronically stored data. It is a database used for analyzing overall business strategy rather than routine operations.

b) Four Roles of Data Warehouse:

1. Data warehouse are designed to facilitate reporting and analysis.

2. It reorganises the data from all systems in a massive database to produce the company-wide information management required. ie it pulls data from multiple systems together to obtain an integrated view of its customers and services.

3. Management can find out the performance of each Branch, Store and point-of-sale campaign, consumer reaction to new products and services, and customer attrition rates.

4. A data warehouse provides data for monitoring customer transactions and the revenue generated by each customer.

QUESTION 5

a) Project management is the process of scoping, planning, staffing, organizing, directing and controlling a project to develop a system at minimum cost, within a specified time frame and with acceptable quality.

QUESTION 6

a) The Systems Approach to Problems

Systems theory provides a methodology for looking analytically at how organizations operate. It highlights how systems break down into sub-systems, and affords management an analytical view of how these sub-systems interact and how they relate to the environment.

In order to break a problem down using systems theory, management will take three basic steps:

i. Identify what the system is, its boundaries, and how it related to its environment.

ii. Analyse and describe the objectives of the system.

iii. Plan how these objectives might be achieved.

This final step is likely to involve individual sub-systems being analysed in the same way that the overall system is analysed.

b) The system boundary is the limit of the system. Within the boundary is the system; outside the boundary is the external environment.

For instance, if the system under consideration is a company, then within the boundary will be found the various parts of the system which are the sub-systems, personnel and procedures contained within departments such as production, purchasing, sales and finance. (These departments themselves have the characteristics of systems and finance referred to as sub-systems).

Outside the boundary are customers, suppliers, the labour market, shareholders, lenders, competitors and the local community as well as more abstract and indirect influences such as the law and the economy.

QUESTION 7

a) (i) Office automation refers to the varied computer machinery and software used to digitally create, collect, store, manipulate, and relay office information needed for accomplishing basic tasks and goals. Raw data storage, electronic transfer, and the management of electronic business information comprise the basic activities of an office automation system. Office automation helps in optimizing and automating existing office procedures.

The backbone of office automation is a LAN, which allows users to transmit data, mail and even voice across the network. All office functions, including dictation,

typing, filling, copying, fax, telex, microfilm and records management, telephone and telephone switchboard operations, fall into this category.

(ii) Electronic (e-business) is the use of the Internet to conduct and support day-to-day business activities.

The most obvious impact on many businesses will be the addition of anew channel for marketing and distributing products. The internet provides a readymade world wide distribution channel for information or digitized products and a show window to display products that can be seen world wide. The internet has the ability to create a seamlessly integrated value chain linking primary sources of goods to consumers. This reduces transaction costs and allows faster output and better information to all members of the chain. Distance becomes less of a barrier to business.

Since a Web page is accessible to anyone with access to the internet, e-business greatly extends the market reach of firms. The global reach of e-business combined with a reduction in transaction costs also enables an aggregation of demand, creating a market that can sustain new niche products.

b) Business areas where e-business make some impact include the following:

- Letter delivery: E-mail complements existing letter mail but to some extent some substitution is inevitable. The greatest impact is in business-to-business mail.

- Publishing: Many publishers have gone on-line, but the impact of e-business varies according to the product. The profitability of traditional newspapers could be threatened by the migration of classified ads to the internet.

- Financial services: On-line banking and share dealing are changing the face of the industry.

- Education: Distance learning via the internet may compete with local education provision.