Programme Name: _________**BCS HONS**____

Course Code: __**ISYS 2400**_________

Course Name: ________**Management Information System**______________________________

Assignment / Lab Sheet / Project / Case Study No. _**1**___

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1. **Information system, an integrated set of components for collecting, storing, and processing data and for providing information and digital products. Discuss the components of information system.**

Answer: An information system is essentially made up of five components hardware, software, database, network and people. These five components integrate to perform input, process, output, feedback and control.

- **Computer Hardware**:

Computer Hardware are the physical equipment used for input, output and processing. The hardware structure depends upon the type and size of the organization. It consists of an input and an output device, operating system, processor, and media devices. This also includes computer peripheral devices.

- **Computer Software:**

The programs/ application program used to control and coordinate the hardware components. It is used for analyzing and processing of the data. These programs include a set of instruction used for processing information.

Software is further classified into 3 types:

- ✓ System Software
- ✓ Application Software
- ✓ Procedures

- **Databases:**

Data are the raw facts and figures that are unorganized that are and later processed to generate information. A database is a place where data is collected and from which it can be retrieved by querying it using one or more specific criteria. Softwares are used for organizing and serving data to the user, managing physical storage of media and virtual resources. As the hardware can't work without software the same as software needs data for processing. Data are managed using Database management system. Database software is used for efficient access for required data, and to manage knowledge bases.

- **Network:**

Networks resources refer to the telecommunication networks like the intranet, extranet and the internet. These resources facilitate the flow of information in the organization. Networks consists of both the physicals devises such as networks cards, routers, hubs and cables and software such as operating systems, web servers, data servers and application servers. Telecommunications networks consist of computers, communications processors, and other devices interconnected by communications media and controlled by software. Networks include communication media, and Network Support.

- **Human Resources:**

Human Resources are associated with the manpower required to run and manage the system. People are the end user of the information system, end-user use information produced for their own purpose, the main purpose of the information system is to benefit the end user. The end user can be accountants, engineers, salespersons, customers, clerks, or managers etc. People are also responsible to develop and operate information systems. They include systems analysts, computer operators, programmers, and other clerical IS personnel, and managerial techniques.

2. **A company can survive and succeed in the long run only if it successfully develops strategies to confront five competitive forces that shape the structure of competition on its industry. Explain competitive forces model of IT infrastructure to a business.**

Answer:

The competitive forces model can be used to determine how much to spend on IT infrastructure and where to make strategic infrastructure investments, starting out new infrastructure initiatives with small experimental pilot projects and establishing the total cost of ownership of information technology assets.

<u>The competitive forces model of IT infrastructure to a business are:</u>

- **Competition among Existing Competitors**

Established companies have competitive advantages such as loyal customers, premier locations, good supply chains and a better understanding of the market. New companies may find it difficult dealing with already-established competitors, since they need to convince their customers to switch providers. To overcome this hurdle, some firms get information about rivals from customers, suppliers and employees, and study the specific products and services they sell. They then use this to develop strategies to overcome the competition.

- **Bargaining Power of Customers**

Customers' bargaining power greatly influences a company's competitive strategy. Buyers have the power to demand lower prices in a system where their number is relatively small compared to that of sellers. In such cases, when a customer becomes dissatisfied with the quality of service or pricing in a certain store, he can easily switch to rivals. On the other hand, if your business is the lone provider of a product or service, the customer has little bargaining power and you can be more aggressive in your pricing strategy.

- **Bargaining Power of Suppliers**

Suppliers provide the inputs or raw materials for business. Their bargaining power has a direct impact on the company's profit margins, as the price at which they sell inputs to business will determine the selling prices of the finished products. Suppliers have a high bargaining power in cases where they are few, there are no substitutes for supplies or when there is no unity between buying companies. If there are two suppliers for a specific good your business needs, for example, and one goes out of business, the other supplier has the power to raise prices, which will impact your ability to keep your cost structure intact.

- **Threat of Substitute Products**

Substitute products give consumers the opportunity to choose alternatives based on price or quality. This increases competition, since a consumer can easily forgo buying a particular product in place of another. For instance, a consumer may buy almond butter in place of peanut butter because of the former's apparent health benefits. For a business to maintain superiority over rivals, it needs to invest more in developing brand loyalty based on consumers' preferences to stand out from other products in its category.

- **Threat of New Entrants**

If an industry has low barriers to entry, a business faces the risk of competition from new entrants. New entrants can introduce tactics like lower pricing and aggressive marketing strategies in an effort to attract customers. New companies also can offer suppliers better prices and terms so that they increase competition with existing players. High entry barriers, such as customer loyalty, limited distribution channels and shortage of key resources, may limit this competitive danger.

3. **Explain how can information technology support a company's business processes and decision making and give it a competitive advantage with examples.**

Answer:

Information technology impacts every aspect of a company's processes and decision making. From marketing to sales, to supply chain and inventory management, everything is impacted by technology. Ensuring your organization has the right technology is crucial to maximize efficiency and revenue. As technology has become cheaper, and access to technology solutions are now available to all organizations, finding a competitive advantage can be difficult. With more innovation in technology, new businesses are created. With more business, technology comes to the rescue by making things easier. Over the years, technology has caused an explosion in commerce and trade. Because of technology, many traditional business models and concepts were revolutionized. Technology gave us the opportunity to see things from a new perspective, and to approach what we were already doing from a new perspective. Technology also gave us greater efficiency for conducting business. Technology has just about changed every aspect of business in a big way and this has never happened this fast before in history. To be more specific, here are a few ways in which information technology support company's business and decision making.

IT systems give companies a competitive edge, enabling them to enter larger markets and expand products or service lines more efficiently, as well as keep tabs on competitors. IT has now become such a pervasive aspect of business operations that many employees and managers no longer see it as a separate function. Rather, IT has become an indispensable element of every corporate department and function, driving innovation and fostering growth throughout the entire organization. Information technology in business helps a corporation maintain a watchful eye on expenses and profits, enabling management to act more nimbly to trim costs or to change the sales team's focus when necessary. A strong IT system also helps all facets of a company work more productively. By enabling automation and digital tools, tasks that once took hours can now be performed in a matter of minutes.

Technology makes information available to decision makers, helping to improve the quality and speed of decision making. Technology also makes it easier for people to collaborate so they can execute joint business decisions. Organizations use communication technology to update employees on business decisions and ensure the right people implement those decisions. With an information system, businesses can save time and money while making smarter decisions. A company's internal departments, such as marketing and sales, can communicate better and share information more easily. For example, they can gather and process information from different sources, such as vendors, customers, warehouses and sales agents, with a few mouse clicks with which make decision making easy

The role of information technology in management decision-making is seen in tools such as **ERP software and decision support systems** that help managers see company performance data in real time so that they can make more informed decisions. Such software presents an online dashboard with information about the company's finances, customers, sales and marketing trends and inventory levels. Managers can use the data to decide which products to promote or stop selling, where to cut expenses, which customers need support and when to place supply and materials orders.

<u>Therefore, This Above paragraphs show how information technology support a company's business processes and decision making.</u>

<u>**Thank you**</u>