

SOLVED PAST PAPER OF INFORMATION SYSTEM

2015

Q#2. SHORT ANSWERS:

1. Discuss briefly sources of information with examples?

A: An information source is a source of information for somebody, i.e. anything that might inform a person about something or provide knowledge about it. Different types of questions require different sources of information. Information sources may be observations, people, speeches, documents, pictures, organizations, websites, etc.

TYPES:

They may be primary sources, secondary sources, tertiary sources and so on.

Empiricism regards sense data as the ultimate information sources while other epistemologies have different any thing or place from which something comes, arises, or is obtained; origin: Which foods are sources of calcium? 2. the beginning or place of origin of a stream or river. 3. a book, statement, person, etc., supplying 4. the person or business making interest or dividend payments. 5. a manufacturer or supplier views (cf., source criticism).

EXAMPLES:

Source criticism:

(or information evaluation) is the process of evaluating an information source, i.e. a document, a person, a speech, a fingerprint, a photo, an observation or anything used in order to obtain knowledge. In relation to a given purpose, a given information source may be more or less valid, reliable or relevant. Broadly, "source criticism" is the interdisciplinary study of how information sources are evaluated for given tasks.

Any system producing information or containing information intended for transmission

Examples:

- ▶ Autobiographies
- ▶ Diaries
- ▶ Documents
- ▶ Eyewitness accounts
- ▶ Film footage
- ▶ Laws
- ▶ Letters
- ▶ Video recordings of actual event
- ▶ Minutes to meetings
- ▶ E-mail messages
- ▶ Blog postings
- ▶ Coins
- ▶ Novels
- ▶ Objects from the time
- ▶ Photographs
- ▶ Poems, art, music
- ▶ Speeches
- ▶ Interviews
- ▶ Manuscripts
- ▶ Newspaper articles written at the time of event
- ▶ Maps
- ▶ Podcasts
- ▶ Voice mail messages
- ▶ Paintings

2. How are transforming business, and what is their relationship to globalized?

- ☐ Increase in wireless technology use, Web sites.
- ☐ Shifts in media and advertising.
- ☐ New federal security and accounting laws in this way business are transform.

The Internet has also drastically(extremely) reduced the costs of businesses operating on a global scale. These changes have led to the emergence of the digital firm, most of the firm's significant business relationships with customers, suppliers, and employees are digitally enabled and mediated.

3. Differentiate between MIS and ESS?

A. => The difference between the two systems lies in their functions. The main function of MIS is related to the managing the internal operations and the documents. The DSS helps employees in making decisions even for the daily tasks.

=> The MIS has the feature to be used by the intellectual group that includes the high level and middle level management, as compared to that the DSS is the only one among the two that is used at all the business levels and the information it uses is not only internal but also the external one.

* An Executive Support System (ESS)* is software that allows users to transform enterprise data into quickly accessible and executive-level reports, such as those used by billing, accounting and staffing departments. An ESS enhances decision making for executives.

*organization to provide summarized information in form of graphs or charts that is tailored for the organization's executives. *ESS is also known as Executive Information System (EIS).

MIS is generally more sophisticated reporting systems built on existing transaction processing systems.

* Often used to support structured decision making (decisions that can be described in detail before the decision is made)

* Typically will also support tactical level management, but sometimes are used at other levels.

* Examples of structured decisions supported by MIS might include deciding on stock levels or the pricing of products.

4. What ethical and social issues are raised by IS?

A: Ethical issues:

intellectual property rights, electronic monitoring of employees, data utilization, and morality in information systems usage.

Social issues in organizations represents one of the most often discussed underpinnings in information systems research throughout the tenure of the IS field. Social issues are those research topics most aligned with the human factor in terms of information systems planning, development and utilization of information systems and technologies.

Specifically, the conceptualization of specific social issues and their associated constructs, proposed designs and infrastructures, empirical validation of social models, and case studies illustrating socialization success and failures.

- ☐ Hacking
- ☐ Cyber Theft
- ☐ Unauthorized use at work
- ☐ Software Piracy
- ☐ Piracy of intellectual property
- ☐ Computer viruses and worms

5. Discuss relationship between IS and DBS?

A: System (IS) is any combination of information technology and people's activities using that technology to support operations, management, and decision-making. In a very broad sense, the term information system is frequently used to refer to the interaction between people, algorithmic processes, data and technology. In this sense, the term is used to refer not only to the information and communication technology (ICT) an organization uses, but also to the way in which people interact with this technology in support of business processes.

- A database system is a term that is typically used to encapsulate the constructs of a data model, database Management system (DBMS) and database.

A database is an organized pool of logically-related data. Data is stored within the data structures of the database.

Relationship between information system and database system:

An information system performs three sets of services: It provides for data collection, storage, and retrieval. It facilitates the transformation of data into information. It provides the tools and conditions to manage both data and information. Basically, a database is a fact (data) repository that serves an information system. If the database is designed poorly, one can hardly expect that the data/information transformation will be successful, nor is it reasonable to expect efficient and capable management of data and information. The transformation of data into information is accomplished through application programs. It is impossible to produce good information from poor data; and, no matter how sophisticated the application programs are, it is impossible to use good application programs to overcome the effects of bad database design.

In short: GOOD DATABASE DESIGN IS CRUCIAL TO THE SUCCESS OF AN INFORMATION SYSTEM.

LONG QUESTIONS:

Q#3. Define Information, System and IS, and also discuss why we need IS?

A: Information:

"Information can be recorded as signs, or transmitted as signals. Information is any kind of event that affects the state of a dynamic system that can interpret the information. Conceptually, information is the message (utterance or expression) being conveyed. Therefore, in a general sense, information is "Knowledge communicated or received, concerning a particular fact or circumstance".

"Information cannot be predicted and resolves uncertainty."

System:

A system is a set of interacting or interdependent component parts forming a complex/intricate whole. Every system is delineated by its spatial and temporal boundaries, surrounded and influenced by its environment, described by its structure and purpose and expressed in its functioning. The term system may also refer to a set of rules that governs structure or behavior. A set of things working together as parts of a mechanism or an interconnecting network, a complex whole.

Information system:

Information system is an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products. An INFORMATION SYSTEM (IS) is any organized system for the collection, organization, storage and communication of information. More specifically, it is the study of complementary networks that people and organizations use to collect, filter, process, create and distribute data.

A computer information system is a system composed of people and computers that processes or interprets information. The term is also sometimes used in more restricted senses to refer to only the software used to run a computerized database or to refer to only a computer system.

Why we need IS:

Every organization runs on information and each business entity has a particular way of gathering, recording, storing and manipulating information. Trivially, all that is needed to collect and store information is a pen and paper. However, it would be a phenomenal task, for instance, for a medical practitioner to record and store patient details using pen and paper. Information systems have completely revolutionized the collection, storage and manipulation of data.

An information system generally comprises a series of specialized computer applications and hardware that process vast amounts of data to provide useful information in processes such as decision making. Some definitions refer to the whole architecture, comprising software applications, hardware, operating systems and the network structure that supports the various computing components making up the information system.

Information systems evolve with time as technology advances and as formal rules governing information management in an organization change. For instance, if there are major structural changes in an organization, comparable **changes in the information system may be required.**

Information system is an academic study of systems with a specific reference to information and the complementary networks of hardware and software that people and organizations use to collect, filter, process, create and also distribute data. An emphasis is placed on an Information System having a definitive Boundary, Users, Processors, Stores, Inputs, Outputs and the aforementioned communication networks.

One of the main reasons why we need information systems is because they improve efficiency, which can boost productivity. They typically support data-intensive operations. In business organizations, a well-designed information system can be the difference between profit and loss.

Q#4. Discuss Capabilities of Supply Chain Management (SCM) Systems regarding planning and executions with brief description?

A: Supply chain management is classified as either software to help businesses plan their supply chains (supply chain planning) or software to help them execute the supply chain steps (supply chain execution). Supply chain planning systems enable the firm to model its existing supply chain, generate demand forecasts for products, and develop optimal sourcing and manufacturing plans. Such systems help companies make better decisions such as determining how much of a specific product to manufacture in a given time period; establishing inventory levels for raw materials, intermediate Products, and finished goods, determining where to store finished goods; and identifying the transportation mode to use for product delivery.

For example, if a large customer places a larger order than usual or changes that order on short notice, it can have a widespread impact throughout the supply chain. Additional raw materials or a different mix of raw materials may need to be ordered from suppliers. Manufacturing may have to change job scheduling. A transportation carrier may have to reschedule deliveries. Supply chain planning software makes the necessary adjustments to production and distribution plans. Information about changes is shared among the relevant supply chain members so that their work can be coordinated. One of the most important—and complex supply chain planning functions is demand planning, which determines how much product a business needs to make to satisfy all of its customers' demands. Manugistics and i2 Technologies (both acquired by JDA Software) are major supply chain management software vendors, and enterprise software vendors SAP and Oracle-PeopleSoft offer supply chain management modules. Supply chain execution systems manage the flow of products through distribution centers and warehouses to ensure that products are delivered to the right locations in the most efficient manner. They track the physical status of goods, the management of materials, warehouse and transportation operations, and financial information involving all parties.

- In commerce, supply chain management (SCM), the management of the flow of goods and services, involves the movement and storage of raw materials, of work-in-process inventory, and of finished goods from point of origin to point of consumption. Interconnected or interlinked networks, channels and node businesses combine in the provision of products and services required by end customers in a supply chain. Supply-chain management has been defined as the "design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, Synchronizing supply with demand and Measuring Performance globally.

SCM practice draws heavily from the areas of industrial engineering, systems engineering, operations management, logistics, procurement, and information technology, and strives for an integrated approach.

Q#5. Assess how information technology and systems have affected information rights, privacy and freedom?

A: The ITS Information Technology Assessment is a voluntary, collaborative effort with FSU organizations who wish to have a better understanding of how they are currently using and managing information technology. The assessment will include a review of the various aspects associated with the acquisition, distribution and management of IT resources, as well as a review of the staffing levels and positions that are required for supporting an organization's IT environment. As part of the assessment, ITS will also seek to understand the specific needs of an organization and provide recommendations or options that will help the organization achieve their goals. The assessment process will include the following:

Introduction and Executive Summary – Information Technology Services (ITS) will provide an overview of the unit and its Information Technology (IT) infrastructure as determined by the ITS assessment team. The Executive Summary notes major areas of concern and proposed solutions to issues identified as part of the IT assessment process.

Information Technology Administration and Management – ITS will review and report on how the IT environment is currently managed. This assessment will cover areas such as existing IT projects, plans, staffing, budgets and any documentation relating to current IT policies and procedures.

IT User Satisfaction Survey – ITS will conduct a survey to determine any IT related issues that the unit's IT user community may have. The results of the survey will be provided to the unit along with recommendations to address any areas of concern that have been identified based on the results of the survey.

Network Infrastructure – ITS will conduct a systematic review of the networking infrastructure necessary to support both wired and wireless networks in the unit. This includes the condition of the current network wiring and its pathways, as well as the networking equipment, such as routers and switches. Any improvements that are needed will be identified and proposal will be given to make those improvements.

Telephone/Cellular Service Survey – ITS will conduct a survey of current telephone usage, including cellular service. Suggestions and recommendations for improvements will be made, including any changes necessary to update the existing telephone system to current FSU specifications.

Network Services – ITS will evaluate the type of Directory Services used by the unit (such as Microsoft's Active Directory or the Lightweight Directory Access Protocol (LDAP)) within its network environment. Use of Domain Name Service (DNS) and Dynamic Host Configuration Protocol (DHCP) will be assessed. Password and user access policies will be evaluated for standards and configuration.

Network infrastructure needed for disaster recovery and backup services will be evaluated. The use of network-based vulnerability scans or reports will be assessed. An assessment will be made of any applications used to monitor the network, servers, and applications. Use of Virtual Private Networks (VPN) will be reviewed. The use of any third party cloud-based IT services (such as Google Apps, iCloud, Carbonite) will be evaluated for conformity to FSU standards and security standards.

Server Infrastructure and Applications – ITS will assess the back-end server infrastructure used by the unit, including server hardware, operating systems, specifications, warranty, support contract and server inventory. Data storage and protection such as backup and recovery solutions and storage technologies (such as Network Attached Storage (NAS) and Storage Area Network (SAN)) will be assessed. The team will also evaluate server operating system patch management, server –based applications such as e-mail, calendaring, instant messaging, as well as collaboration tools such as Microsoft’s SharePoint server. ITS will assess the areas where services are being deployed from (server rooms) for security, power, cooling, network and redundancy. Existing use of virtualization technologies and opportunities for virtualization will be explored. ITS will also look at any database services used (Oracle, SQL Server, MySQL, other) and any reporting tools that might be used.

Workstations, Peripherals, and Software – ITS will assess the customer’s current workstation environment including hardware (computers and peripherals) and software. ITS will evaluate life cycle management and patch management of hardware and software to ensure that they conform to computing best practices as set forth by ITS. ITS will determine the unit’s unique support needs while reviewing their existing support model including documentation, maintenance plans, and support contracts and how support requests are reported and handled.

IT Security – ITS will conduct interviews, gather documents and related literature to assess the unit’s IT Security infrastructure and safeguards for protecting the department’s network, applications, computing devices and data. Vulnerability scans will be conducted on the unit’s Web servers and all Web applications, as well as database servers/hosts for potential vulnerabilities and personally identifiable information (PII). ITS will ensure all systems and network devices have been properly tested for vulnerabilities to minimize security risks. If the organization has an IT support staff, they will be provided with access and training in the use of the vulnerability scanning tool. Compliance with industry and federal standards for IT security (such as FERPA, PCIDSS, and HIPPA) will be determined.

Specialized and/or Unique Applications – ITS will identify all specialized and/or unique applications used by the unit. Custom written applications will be assessed for compatibility with FSU systems, support, and maintainability issues. Support for 3rd party software will be evaluated.

Audio Visual Equipment and Resources – ITS will evaluate the use of audio/visual equipment to determine how the technology is utilized and managed. Recommendations for improvements will be made.

Web Services – ITS will evaluate the unit’s current websites. All aspects of the unit’s website, including where it is hosted, how it is maintained and cost of operation will be assessed.

Social Media (optional) – ITS and University Communications will provide a basic evaluation of the integrated marketing communications aspects of a unit’s present social media environment; deliver social media recommendations; and offer support to implement a strategic social media plan.

Affects

The power of information technology to store and retrieve information can have a negative effect on the right to privacy of every individual.

For example: Confidential e-mail messages by employees are monitored by many companies. Personal information is being collected about individuals every time they visit a site on the World Wide Web. Confidential information on individuals contained in centralized computer databases by credit bureaus, government agencies, and private business firms has been stolen or misused, resulting in the invasion of privacy, fraud, and other injustices. Unauthorized use of information can seriously damage the privacy of individuals. Errors in databases can seriously hurt the credit standing or reputation of individuals. Some important privacy issues being debated in business and government include the following:

Accessing individuals' private e-mail conversations and computer records, and collecting and sharing information about individuals gained from their visits to Internet websites and newsgroups (violation of privacy).

Always "knowing" where a person is, especially as mobile and paging services become more closely associated

Rights:

Providing top class health care is one of the most important policies and priorities of any country. With increased population come increased risks of health issues. The larger a population, the more a country has to spend in terms of taking care of the sick, the degree and spectrum of diseases and the immunity levels of the society by and large. When there is a dearth of manpower or resources, it is more of a necessity to club together different branches of a country to see a collective positive effort in developing the nation as a whole. The power of information technology is varied. Its applicability is tremendous, making it extremely easy to use technology and science to solve various problems faced by humanity.

Maintaining a person's health record electronically rather than storing them in multiple files is one of the many examples that can be cited in combining technology and science. It has become increasingly important to develop new equipments that could easily diagnose a disease condition or a disorder instead of going in for intrusive procedures like blood tests or surgery. The development of ECG, CT scan and X-rays are just a few of the most important machines developed with the help of information technology to process data and interpret it via computers.

The biggest advantage of clubbing information technology and medicine is the drastic decrease of human interference. This automatically would mean extremely minute or zero percent human error because machines and technology very rarely go wrong. This could solve the huge labor crisis being faced by numerous countries. Machines can be automated and require very less personnel as opposed to doing the same manually.

Freedom

Human beings value their privacy and the protection of their personal sphere of life. They value some control over who knows what about them. They certainly do not want their personal information to be accessible to just anyone at any time. But recent advances in information technology threaten privacy and have reduced the amount of control over personal data and open up the possibility of a range of negative consequences as a result of access to personal data. The 21st century has become the century of Big Data and advanced Information Technology allows for the storage and processing of Exabyte of data. The revelations of Edward Snowden have demonstrated that these worries are real and that the technical capabilities to collect, store and search large quantities of data concerning telephone conversations, internet searches and electronic payment are now in place and are routinely used by government agencies. For business firms, personal data about customers and potential customers are now also a key asset. At the same time, the meaning and value of privacy remains the subject of considerable controversy. The combination of increasing power of new technology and the

declining clarity and agreement on privacy give rise to problems concerning law, policy and ethics. The focus of this article is on exploring the relationship between information technology (IT) and privacy. We will both illustrate the specific threats that IT and innovations in IT pose for privacy, and indicate how IT itself might be able to overcome these privacy concerns by being developed in a 'privacy-sensitive way'. We will also discuss the role of emerging technologies in the debate, and account for the way in which moral debates are themselves affected by IT.