Unit 1: Foundations of Information Systems (IS) in Business

Q: What is an information system (IS) in the context of a business?
A: An IS in business refers to a combination of technology, people, and processes that manage and distribute information to support decision-making and control.

Q: What are the three fundamental roles of information systems in business?
A: The three fundamental roles are: supporting business processes and operations, supporting decision-making, and supporting competitive advantage.

Q: How does e-business differ from traditional business?
A: E-business involves conducting business processes on the internet, enabling more efficient operations, wider reach, and real-time interactions compared to traditional business methods.

Q: What is an operations support system (OSS)?
A: An OSS is a type of information system that helps run the day-to-day operations of a business, such as transaction processing systems and process control systems.

Q: What is a management support system (MSS)?
A: An MSS is a type of information system designed to support managerial decision-making by providing relevant information and analytical tools, including management information systems (MIS) and decision support systems (DSS).

Q: What are some other classifications of information systems?
A: Other classifications include expert systems, executive information systems (EIS), and knowledge management systems (KMS).

Q: What are some common challenges managers face with information technology (IT)?
A: Common challenges include ensuring successful implementation of IT projects, developing effective IS solutions, managing ethical issues related to IT, and navigating IT career paths.

Q: What is a key factor in determining the success or failure of an IT project?
A: A key factor is effective project management, including clear objectives, stakeholder involvement, and rigorous planning and execution.

Q: Why is developing information system solutions considered challenging?
A: Developing IS solutions is challenging due to the need for precise requirements gathering, integration with existing systems, user training, and ongoing maintenance.

Q: What is the role of the IS function in a business?
A: The IS function involves planning, developing, managing, and supporting the technology infrastructure and applications that support business processes and decision-making.

Unit 2: Foundation concepts: The components of IS

Q: What is a system in the context of information systems?
A: A system is a set of interrelated components that work together to achieve a common goal by accepting inputs, processing them, and producing outputs.

Q: What is the role of feedback in an information system?
A: Feedback provides information about the output of a system, which is used to make adjustments and maintain control over the system's processes.

Q: Name two key characteristics of a system.
A: Two key characteristics are interdependence (components depend on each other) and synergy (the whole is greater than the sum of its parts).

Q: What are the main components of an information system?
A: The main components are hardware, software, data, people, and network.

Q: Who are considered the 'people' component in an information system?
A: The 'people' component includes all the individuals who interact with the IS, such as end users, IT professionals, and managers.

Q: What does the hardware component of an IS include?
A: The hardware component includes physical devices like computers, servers, storage devices, and networking equipment.

Q: Describe the 'input' activity in an information system.
A: The 'input' activity involves capturing and gathering raw data from within the organization or from its external environment.

Q: What is meant by 'processing' in the context of IS activities?
A: 'Processing' refers to the conversion of raw input into a meaningful form, such as calculations, comparisons, and decision-making processes.

Q: What is the purpose of 'storage' in an information system?
A: 'Storage' is the activity of saving data and information for use at a later time, ensuring it is available for processing and retrieval.

Q: How can one recognize an information system in an organization?
A: An information system can be recognized by identifying the presence of hardware, software, data, people, and network components that work together to perform input, processing, storage, output, and control activities.

Unit 3: Competing with Information Technology

Q: What is a fundamental goal of gaining a strategic advantage in business?
A: The fundamental goal is to achieve a competitive edge over competitors by providing unique value to customers or operating more efficiently.

Q: How does strategic IT contribute to a business's success?
A: Strategic IT enhances business operations, improves decision-making, fosters innovation, and creates new opportunities, thereby supporting long-term business goals and competitive advantage.

Q: Name one of Porter's five competitive forces.
A: One of Porter's competitive forces is the threat of new entrants.

Q: What is a common strategy businesses use to compete effectively using IT?
A: A common strategy is differentiation, where businesses use IT to create unique products or services that stand out from competitors.

Q: How can information technology be used strategically to build a customer-focused business?
A: IT can be used to personalize customer interactions, improve customer service, and enhance customer relationship management (CRM) systems.

Q: What is the value chain model?
A: The value chain model describes a series of activities that an organization performs to deliver a valuable product or service to the market.

Q: Give an example of a primary activity in the value chain.
A: An example of a primary activity is inbound logistics, which involves receiving, storing, and distributing raw materials.

Q: How can strategic information systems enhance the value chain?
A: Strategic IS can enhance the value chain by optimizing processes, reducing costs, improving quality, and speeding up the delivery of products or services.

Q: What role does IT play in improving supply chain management?
A: IT improves supply chain management by providing real-time data, enhancing coordination among supply chain partners, and optimizing inventory levels.

Q: Provide an example of a company using IT for a strategic advantage in its value chain.
A: Amazon uses IT for a strategic advantage by leveraging advanced logistics and inventory management systems to offer fast and reliable delivery services, enhancing customer satisfaction.

Unit 4: Using Information Technology for strategic Advantage

Q: What does the strategic use of IT involve?
A: The strategic use of IT involves leveraging technology to support business strategies, improve efficiency, create new opportunities, and gain a competitive edge.

Q: What is business process reengineering (BPR)?
A: BPR is the radical redesign of business processes to achieve significant improvements in critical aspects like cost, quality, service, and speed.

Q: How does IT play a role in business process reengineering?
A: IT enables BPR by automating workflows, facilitating communication, integrating systems, and providing data for informed decision-making.

Q: What characterizes an agile company?
A: An agile company is flexible, responsive to market changes, capable of rapid innovation, and focused on meeting customer needs effectively.

Q: How can IT help a company become more agile?
A: IT helps a company become more agile by enabling real-time communication, improving collaboration, providing data analytics, and supporting scalable and adaptable systems.

Q: What is a virtual company?
A: A virtual company operates primarily through electronic means, often with a decentralized structure, relying on the internet and IT to conduct business activities.

Q: Give an example of how a virtual company uses IT.
A: A virtual company like Airbnb uses IT to connect hosts and guests through an online platform, facilitating bookings, payments, and communication without owning physical properties.

Q: What does it mean to build a knowledge-creating company?
A: Building a knowledge-creating company means fostering an environment where knowledge is continuously generated, shared, and utilized to drive innovation and improve business processes.

Q: What are knowledge management systems (KMS)?
A: KMS are IT systems that support the creation, storage, retrieval, and dissemination of knowledge within an organization.

Q: How can a knowledge management system provide strategic advantage?
A: A KMS can provide strategic advantage by enabling better decision-making, fostering innovation, improving efficiency, and enhancing the organization's ability to respond to market changes.

Unit 5: Managing Data Resources

Q: What is data resource management?
A: Data resource management involves the practices, procedures, and tools used to manage and ensure the quality, accessibility, and reliability of data within an organization.

Q: What is an operational database?
A: An operational database is used for managing day-to-day operations and transactions of an organization, providing real-time data for various business processes.

Q: What is a distributed database?
A: A distributed database is spread across multiple physical locations, connected by a network, allowing data to be stored and processed closer to where it is needed.

Q: What is an external database?
A: An external database contains data that is collected, stored, and maintained outside an organization, often by third parties, and is accessed via the internet or other networks.

Q: What is a hypermedia database?
A: A hypermedia database includes multimedia elements like text, images, audio, and video, linked together in a way that allows users to navigate through related information easily.

Q: What is a data warehouse?
A: A data warehouse is a centralized repository that stores large volumes of data from multiple sources, designed for query and analysis rather than transaction processing.

Q: What is data mining?
A: Data mining is the process of analyzing large datasets to discover patterns, trends, and relationships that can inform business decisions.

Q: What is the purpose of a database management system (DBMS)?
A: A DBMS is software that provides tools to create, manage, and manipulate databases, ensuring data integrity, security, and efficient retrieval.

Q: What is database interrogation?
A: Database interrogation involves querying a database to extract specific information, often using languages like SQL to perform searches and generate reports.

Q: What are the key activities involved in database maintenance?
A: Key activities in database maintenance include updating data, ensuring data integrity, backing up data, and optimizing database performance to keep it running efficiently.

Unit 6: e-business Systems

Q: What is an e-business system?
A: An e-business system refers to the use of information technology to support and automate business processes, transactions, and operations over the internet.

Q: What are cross-functional enterprise applications?
A: Cross-functional enterprise applications are integrated software systems that support business processes across various functional areas within an organization, such as ERP (Enterprise Resource Planning) systems.

Q: What is enterprise application integration (EAI)?
A: EAI is the process of linking together different software applications and systems within an organization to ensure they work seamlessly and share data efficiently.

Q: What is a transaction processing system (TPS)?
A: A TPS is an information system that captures and processes data resulting from business transactions, supporting day-to-day operations.

Q: What are the main steps in the transaction processing cycle?
A: The main steps are data entry, transaction processing, database maintenance, document and report generation, and query processing.

Q: What are enterprise collaboration systems?
A: Enterprise collaboration systems are tools and platforms that facilitate communication, collaboration, and information sharing among employees within an organization, such as intranets and collaboration software.

Q: What is the role of IT in marketing systems?
A: IT in marketing systems supports activities like interactive marketing, targeted marketing, and sales force automation, helping to reach and engage customers more effectively.

Q: How does computer-integrated manufacturing (CIM) benefit manufacturing systems?
A: CIM integrates various manufacturing processes through computer technology, enhancing efficiency, reducing production costs, and improving product quality.

Q: How do human resource systems utilize the internet and corporate intranets?
A: Human resource systems use the internet and corporate intranets to streamline HR processes such as recruitment, training, payroll, and employee management, improving efficiency and accessibility.

Q: What is the purpose of online accounting systems?
A: Online accounting systems allow businesses to manage financial transactions, track expenses, generate financial reports, and ensure compliance, all through internet-based platforms.

Unit 7: Supporting Decision Making

Q: What is the role of decision support in business?
A: The role of decision support in business is to provide managers and executives with the information and tools needed to make informed, data-driven decisions that enhance business performance.

Q: How does information quality affect decision-making?
A: High-quality information that is accurate, timely, relevant, and complete improves decision-making by providing reliable data, while poor-quality information can lead to flawed decisions.

Q: What is the difference between structured and unstructured decisions?
A: Structured decisions are routine and repetitive with clear procedures, while unstructured decisions are complex, involve judgment, and lack clear guidelines.

Q: What are some key trends in decision support systems (DSS)?
A: Key trends include the integration of big data analytics, artificial intelligence, real-time data processing, mobile decision support, and user-friendly interfaces.

Q: What is online analytical processing (OLAP)?
A: OLAP is a category of software tools that provide analysis of data stored in a database, enabling users to perform multidimensional analysis, such as viewing data from different perspectives and summarizing information.

Q: Give an example of how OLAP can be used in business.
A: OLAP can be used in retail to analyze sales data by various dimensions such as time, geography, and product categories to identify trends and make strategic decisions.

Q: What is what-if analysis in the context of decision support systems?
A: What-if analysis involves changing variables in a model to see how those changes will affect the outcome, helping decision-makers predict the impact of different scenarios.

Q: What is sensitivity analysis?
A: Sensitivity analysis examines how changes in one or more input variables affect the output of a decision model, highlighting the most influential variables.

Q: What is goal-seeking analysis?
A: Goal-seeking analysis works backward from a desired outcome to determine the necessary inputs needed to achieve that goal.

Q: How does data mining support decision-making? A: Data mining supports decision-making by discovering patterns, correlations, and trends in large datasets, which can provide valuable insights and inform strategic decisions.