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BUSN 315: Management Information Systems

Problem Set #1: Suggested Solutions

Spring 2026

Problem 1. Definitions

Select FOUR items from the list below, and provide a definition for each item you choose.

- Sociotechnical Approach to MIS
- Business Process
- Complementary Assets
- Enterprise Resource Planning (ERP) System
- Decision Support System (DSS)
- Tacit Knowledge

- **Sociotechnical Approach to MIS:**

The sociotechnical approach to MIS emphasizes that information systems include both technical and organizational elements. Effective systems require alignment between technology, people, and processes. Technology alone does not determine outcomes.

- **Business Process:**

A business process is a set of related activities organized to produce a specific outcome. It describes how work is performed and how information flows among participants. Well-designed processes improve efficiency and coordination.

- **Complementary Assets:**

Complementary assets are organizational and managerial factors that must accompany information technology for it to create value. Examples include effective management, business processes, and organizational culture. Without these assets, IT investments may perform poorly.

- **Enterprise Resource Planning (ERP) System:**

An ERP system integrates core internal business processes into a single system. It enables data sharing across functional areas using a common database. This integration improves coordination and consistency.

- **Decision Support System (DSS):**

A Decision Support System supports nonroutine decision making through flexible analysis. It is designed to answer what-if questions using data and models. DSS assist managers rather than replacing judgment.

- **Tacit Knowledge:**

Tacit knowledge is experience-based knowledge that is difficult to document. It is often shared through practice and interaction rather than written instructions. Organizations find it challenging to capture.

Problem 2. True / False

Determine whether each statement is TRUE or FALSE. If FALSE, justify your answer briefly.

2.A. Information system literacy focuses only on understanding computer hardware and software.

- FALSE
- Information system literacy is broader than computer literacy and includes understanding the organizational, managerial, and technical aspects of information systems, not just hardware and software.

2.B. Transaction Processing Systems (TPS) are primarily designed to support routine, day-to-day business operations.

- TRUE

2.C. Business processes that are poorly designed can become liabilities rather than assets for an organization.

- TRUE

2.D. An information system transforms raw data into useful information through input, processing, output, and feedback.

- TRUE

Problem 3. Multiple Choice

3.A. What is the primary purpose of an information system?

- a) To replace managers in organizational decision making
- b) To collect data and distribute useful information to users**
- c) To eliminate the need for business processes
- d) To store data for long-term archival purposes

3.B. Which group is primarily supported by Transaction Processing Systems (TPS)?

- a) External stakeholders
- b) Middle management
- c) Senior management
- d) Operational management and staff**

3.C. A payroll system that records employee hours and updates pay records is an example of a:

- a) Transaction Processing System (TPS)**
- b) Decision Support System (DSS)
- c) Management Information System (MIS)
- d) Executive Support System (ESS)

3.D. Which system is designed to answer “what-if” questions?

- a) Executive Support System (ESS)
- b) Decision Support System (DSS)**
- c) Transaction Processing System (TPS)
- d) Management Information System (MIS)

Problem 3. Multiple Choice (continued)

3.E. Which feature is most characteristic of an Executive Support System?

- a) **Dashboards displaying summarized key performance indicators**
- b) Flexible analytical modeling for middle managers
- c) Detailed transaction-level data for operational staff
- d) Automated processing of routine business transactions

3.F. Why do managers care about business processes?

- a) Because they affect only senior executives
- b) Because they eliminate the need for information systems
- c) **Because they determine how work is organized and how information is used**
- d) Because they cannot be redesigned once implemented

3.G. Knowledge Management Systems (KMS) are designed to:

- a) Replace human judgment with automated decision rules
- b) **Capture, store, and share organizational knowledge and expertise**
- c) Process routine day-to-day business transactions
- d) Generate standardized performance reports for middle management

3.H. The sociotechnical approach to MIS emphasizes that:

- a) **Systems consist of both technical and social elements**
- b) Technology alone determines organizational outcomes
- c) Human behavior is irrelevant to system performance
- d) Information systems are purely technical tools

Problem 4. Short Answers

A customer places an online order for a product. The sales department receives the order, accounting verifies the customer's payment status, production assembles the product, and logistics arranges shipment. Once the product ships, both the customer and the sales department are automatically notified. Management notices that delays often occur when information is not shared promptly across departments.

4.A. Explain why order fulfillment in this scenario is considered a business process.

- Order fulfillment is a business process because it is a structured set of coordinated activities designed to produce a specific outcome, delivering a product to the customer. It involves multiple steps and participants that must work together in an organized way to complete the task.

4.B. Why does this process require coordination across multiple functional areas?

- The process requires coordination because each functional area performs an interdependent role. Sales initiates the order, accounting verifies payment, production assembles the product, and logistics handles shipment. A delay or failure in any one area affects the entire process.

4.C. How can information systems improve this process by changing the flow of information rather than automating tasks?

- Information systems can improve the process by ensuring timely and accurate sharing of information across departments. For example, automatic notifications and shared order status reduce delays and miscommunication. This improves coordination without replacing human decision-making or tasks.