CONCORDIA COLLEGE
MOORHEAD, MINNESOTA

- Name: _____
- Date: _____
- Section: _____

BUSN 315: Management Information Systems

Quiz #3

Spring 2026

INSTRUCTIONS:

- Write your name, date, and section clearly at the top of the first page.
- This is a closed-book quiz. Do not use your textbook, class notes, or electronic devices.
- The quiz consists of four parts: Definitions, True / False, Multiple Choice, and Short Answers.
- For definitions, write in complete sentences. Limit each definition to at most three sentences.
- For multiple-choice questions, circle the single best answer. Only one option is correct.
- For short-answer questions, write your responses in complete sentences. Limit each response to at most five sentences.
- You have 75 minutes to complete the quiz. Manage your time carefully.

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Problem 1. Definitions **(5 Points Each)**

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

- Program-Data Dependence
- Data Warehouse
- Big Data
- Edge Computing
- Horizontal Scalability
- Software Defined Storage

1.A. Item #1: _____

1.B. Item #2: _____

1.C. Item #3: _____

1.D. Item #4: _____

Problem 2. True / False **(4 Points Each)**

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

2.A. Each era of computing infrastructure completely replaced the technologies of the previous era.

2.B. The consumerization of IT refers to the process by which organizations prohibit employees from using consumer technologies such as smartphones and cloud apps in the workplace.

2.C. Virtualization allows multiple operating systems and applications to run on a single physical server as separate virtual machines.

2.D. Data redundancy occurs when the same data are stored in multiple locations within an organization.

Problem 3. Multiple Choice **(3 Points Each)**

Select the BEST answer for each question based on course concepts discussed in class.

3.A. Which of the following best describes a server in a client/server architecture?

a) A device that stores only backup copies of data
b) A computer that requests services from another machine
c) A computer dedicated to providing services or resources to other computers
d) A computer used exclusively for software development

3.B. Which of the following was a key feature of the personal computer era of computing?

a) Centralized computing controlled by a small number of operators
b) Affordable computing power distributed to individual employees
c) Elimination of centralized computing systems
d) Exclusive reliance on cloud-based applications

3.C. Cloud computing allows firms to:

a) Access computing resources over the Internet on demand
b) Store all data only on local hard drives
c) Eliminate the need for software applications
d) Remove the need for network connections

3.D. A startup launches a new online service but chooses not to purchase its own servers. Instead, it rents computing power and storage from a cloud provider such as Amazon Web Services and scales its resources as demand changes. This situation best illustrates:

a) Client/server computing
b) Infrastructure as a Service (IaaS)
c) Data mining
d) Data warehousing

Problem 3. Multiple Choice (continued) **(3 Points Each)**

Select the BEST answer for each question based on course concepts discussed in class.

3.E. Under the Software as a Service (SaaS) model, users typically:

a) Purchase and maintain their own servers
b) Access fully managed applications through the Internet
c) Develop custom operating systems
d) Store all data locally on personal computers

3.F. A bank stores highly sensitive financial data on its own internal servers but uses a public cloud provider for less critical applications and data storage. This approach is best described as:

a) A hybrid cloud architecture
b) A client/server system
c) A server virtualization strategy
d) A distributed database system

3.G. An employee uses a personal smartphone to access company email and internal systems. The phone is later lost at an airport. Which concern does this situation most directly illustrate?

a) Data redundancy
b) Data warehousing limitations
c) Security risks associated with BYOD
d) Server virtualization

3.H. Which of the following best describes data inconsistency?

a) Different versions of the same data appear in different systems
b) Data stored in encrypted format
c) Data stored in multiple tables within a database
d) Data stored in cloud storage

Problem 3. Multiple Choice (continued) **(3 Points Each)**

Select the BEST answer for each question based on course concepts discussed in class.

3.I. A company stores customer phone numbers in two different systems. One system lists a customer's number as `555-0123`, while another lists it as `555-0213`. This situation is an example of:

a) Data mining
b) Encryption
c) Data redundancy
d) Data inconsistency

3.J. A database contains a `CUSTOMER` table and an `ORDER` table. Each order includes a `Customer_ID` field that refers to a specific customer in the `CUSTOMER` table. In this situation, `Customer_ID` in the `ORDER` table is most likely a:

a) Primary key
b) Foreign key
c) Data mart
d) Index file

3.K. Which of the following tools allows managers to analyze data across multiple dimensions such as time, region, and product?

a) Blockchain
b) OLAP
c) Virtualization
d) Encryption

3.L. An online retailer analyzes millions of purchase records and discovers that customers who buy coffee makers often purchase coffee filters shortly afterward. This discovery is an example of:

a) Data mining
b) Data redundancy
c) Database normalization
d) Program-data dependence

Problem 4. Short Answers #1 **(7 Points Each)**

A growing e-commerce company currently runs its website and internal inventory system on servers located in its office. During major sales events, such as holiday promotions, the website often becomes slow because the servers cannot handle the sudden increase in customer traffic. The company is considering moving its systems to a cloud provider such as Amazon Web Services so that it can quickly increase computing resources when traffic rises and reduce them when demand falls.

4.A. What major change to its IT infrastructure is the company considering?

4.B. Explain one advantage this change could provide for handling periods of high customer demand.

Problem 5. Short Answers #2 **(7 Points Each)**

A large retail company has grown quickly over the past decade. Different departments adopted their own software systems and began storing their own customer information. The marketing department maintains a database of customer emails for advertising campaigns, the sales department stores customer records for transactions, and the customer support department maintains its own database for service requests. As a result, the same customer information is stored in multiple systems. Managers also notice that customer contact information is sometimes different across systems. For example, a customer's phone number may be updated in the sales system but remain outdated in the marketing database.

5.A. Identify two data management problems illustrated in this situation.

5.B. Explain how using a database management system (DBMS) could help address these problems.

- Original Score: _____
- Original Date: _____
- Recovered Score: _____
- Recovered Date: _____