

# Quizzes

IS 466 (Decision Support Systems) Quiz # 1 Version 2  
Spring 2023-2024 – Abdulrahman Mirza

Name (Arabic): [REDACTED]  
Student ID #: [REDACTED]

## Important Instructions:

- ONLY put a circle on the letter of your answer choice.
- If you change your answer, make sure you put a CLEAR X on your first choice.

1. Why is there a big need for decision support systems:

- ☒ A) All following options are true
- ☐ B) Decisions with big impact and potential high risks
- ☐ C) Sudden unanticipated issues
- ☐ D) Issues that require collaboration across different departments

2. Which of the following is a step among the decision making process:

- ☒ A) All following options are true
- ☒ B) Understand the exact problem you are dealing with
- ☐ C) Preview previous records and related files
- ☐ D) Analyze the potential negatives and positives of you potential decision

3. An example of a factor that may result in the need for the company's upper management to make an important strategic decision:

- ☒ A) All following options are true
- ☐ B) Company's CEO has decided to leave to work for another company
- ☐ C) Sales have been declining on a monthly basis for the last 6 months.
- ☒ D) Company's main competitor has released a new line of trendy products

4. An example of a global factor that may impact a company's production cost:

- ☐ A) All following options are true
- ☐ B) The decrease in the number of local male customers
- ☐ C) The rise of unemployment rate in a neighboring country.
- ☒ D) The increase in overseas shipping costs

5. Which of the following is a type of decision that can be easily and fully dealt with using typical information systems:

- ☐ A) All following options are true
- ☐ B) Unstructured decisions
- ☐ C) Semi-structured decisions
- ☒ D) Structured decisions

✓ 1. Which of the following is NOT a key characteristic or capability of a DSS:

- X
- A) Enables easy data access.
  - ☒ B) Enables daily functional transaction processing.
  - C) Enables dealing with unstructured problems.
  - ☒ D) May be developed as a web-based tool.

2. Which of the following is NOT a component of a DSS:

- X
- ☒ E) Enterprise Resource Planning system.
  - F) Knowledge-based subsystems.
  - G) Database management system.
  - ☒ H) User interface.

✓ 3. Which is NOT a component of a model management subsystem:

- A) Model execution, integration, and command processor.
- ☒ B) External models subsystem.
- C) Model directory.
- D) Model base management system.

✓ 4. Which of the following is a problem that ERP systems solved:

- X
- A) Inability to run queries on the database.
  - B) Inability to create daily reports.
  - ☒ C) Inability to access data from different departments.
  - ☒ D) All of the options are true.

✓ 5. Which of the following describes advantages of software as a service (SAAS):

- ✓
- A) Relieves a company from the need to own a software.
  - B) Is very suitable for small and medium enterprises (SMEs).
  - C) IS accessed through the cloud.
  - ☒ D) All of the options are true.

1. Which of the following is one of the major AI technologies?  
  - A) Cloud computing
  - ☒ B) Machine learning
  - C) Parallel processing
  - D) ERP
2. Which of the following is NOT a major goal of AI?  
  - A) Be able to speak and respond to humans
  - B) Be able to think like humans
  - ☒ C) Be able to retrieve data from database quickly
  - D) Improve processing capabilities over time.
3. Which of the following is NOT one of the known AI applications:  
  - A) Recommender systems
  - ☒ B) Sensors
  - C) Language translation
  - D) Autonomous vehicles
4. Alexa and Siri are examples of what type of AI?  
  - A) Knowledge-based systems
  - B) Personalized services
  - C) Voice recognition
  - ☒ D) All options are true
5. Which of the following is NOT a biometric related AI technology:  
  - A) Voice recognition.
  - ☒ B) Industrial (manufacturing) robotics.
  - C) Natural language processing.
  - D) Face recognition.

Q1

**Which of the following AI technology is MOST likely to use a camera?**

☒ Robotics

None of the options

Expert Systems

Natural language processing

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Q2

**Which of the following AI technologies is likely to enable communication with people in their native language?**

Robotics

Natural language processing

☒ All options are true

Chatbots

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Q3

**The e-commerce "Hive" (one of the examples viewed through YouTube in the classroom) is MOST closely associated with which AI technology?**

Deep learning

Knowledge based systems

☒ Robotics

Machine learning

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Q4

**In knowledge-based systems, the process of getting this knowledge is referred to as:**

☒ Knowledge acquisition

Knowledge organization and representation

Knowledge refining

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Q5

**Natural language understanding**

**Which of the following is NOT a major AI technology**

Robotic systems

Video Analytics

All options given are considered ☒ major AI technologies



1. Supervised learning is used mainly with which data mining tasks:

- A) Association.
- ☒ B) Prediction.
- C) Clustering.
- D) Segmentation.

2. In data mining, finding a relationship between two or more persons on a social media platform, or two or more websites would be done through:

- A) Market-basket analysis.
- ☒ B) Link analysis.
- C) Sequence analysis.
- D) Segmentation.

3. Which of the following is the **first** step of the CRISP-DM process?

- A) Data understanding
- B) Data preparation
- ☒ C) Business understanding
- D) Model Building

4. In the simple split test estimation methodology, what percent of the data should be used for training the model:

- A) 1/2.
- B) 1/3.
- C) 1/4.
- ☒ D) 2/3.

E) If  $k=5$  in a K-fold cross-validation methodology, what percent of the data is used as testing data in each run:

- ☒ A) 10%.
- B) 80%.
- C) 20%.
- D) 5%.

# Midterms

IS 466 (Decision Support Systems) Midterm 1  
Monday Feb. 12, 2024  
Spring 2023-2024 Prof. Abdulrahman Mirza

V1 Student ID: \_\_\_\_\_

Name (Arabic): \_\_\_\_\_

## Important Instructions:

- Place a **circle ONLY** on the **letter** (i.e., A, B, C, or D) of your answer choice.
- If you change your answer, make sure you put a clear **X** on your first choice.

- ✓ 1. What makes DSS an important requirement for companies?  
☒ A) Greater expansion of cloud services for both storage and software as a service.  
☐ B) Greater competition between companies in a fast-paced business world.  
☐ C) Greater hardware and network capabilities.  
☐ D) Greater speed and availability of the Internet.
- ✓ 2. Which is the third step in the 4-step managerial decision making process?  
☐ A) Determine possible solutions and evaluate them.  
☒ B) Recommend the best solution to the problem.  
☐ C) Understand the problem completely.  
☐ D) Create an appropriate model.
- ✓ 3. Which of the following is a factor that may impact your company decisions?  
☐ A) Change in government policies on related business regulations.  
☐ B) The great increase in overseas shipping costs.  
☐ C) The continued monthly decrease in the number of company customers.  
☒ D) All of the options are true.
- ✓ 4. During which phase of the decision-making process is data collection conducted:  
☒ A) Intelligence  
☐ B) Design  
☐ C) Choice  
☐ D) Implementation
- ✓ 5. After which phase of the decision-making process is verification and testing of the suggested solution conducted:  
☐ A) Intelligence  
☒ B) Design  
☐ C) Choice  
☐ D) Implementation
- ✓ 6. At which level of an organization is operational control carried-out:  
☒ A) Department level  
☐ B) Division level  
☐ C) Upper management level  
☐ D) All of the options are true
- ✓ 7. Planning social responsibility and research and development are considered to be:  
☐ A) Structured decisions  
☒ B) Semi-structured decisions  
☐ C) Non-structured decisions  
☐ D) None of the options are true
- X 8. A characteristic that is more associated with a DSS than typical data-based systems:  
☒ A) User-friendly interface  
☐ B) Multiple users  
☐ C) Reports generation  
☒ D) Mathematical modeling
- ✓ 9. What does ERP stand for?  
☒ A) Enterprise Records Planning  
☐ B) Enterprise Resource Planning  
☐ C) Electronic Records Planning  
☐ D) Electronic Resource Planning
- X 10. DSS has undergone several naming transformations, what is the latest popular name?  
☐ A) Executive Information systems  
☐ B) Expert systems  
☒ C) Business intelligence  
☒ D) Analytics



11. What is a main difference between an ERP system & previous functional systems?

- A) It gets its data from the company's data warehouse.
- B) It enables reports generation.
- ☒ C) It presents a single source of truth for data items in the system.
- D) All of the options are true

12. Business Intelligence systems are NOT used for:

- ☒ A) Running day to day business transactions.
- B) Enabling business performance management.
- C) Conducting analysis and producing reports based on historical data.
- D) Data warehousing processes.

13. Which of the following is an important source of data for a data warehouse:

- A) Co. website sales transactions
- B) Social media communications
- C) ERP system
- ☒ D) All of the options are true

14. What is the ETL process related to data warehousing used for?

- A) Extracting data from a data warehouse for analysis and reporting purposes
- B) Extracting data from the enterprise data warehouse and loading in into a data mart
- ☒ C) Extracting the data from ERP and other sources to be loaded into the data warehouse
- D) All of the options are true

15. What is the main purpose of a data mart?

- A) It is a staging area for data before being loaded into the data warehouse.
- ☒ B) It is a subset of a data warehouse including data for a specific functional area.
- C) It is the only data storage where data mining models can be executed.
- D) It is the only system where users may be able to generate analytics reports.

16. What is the main purpose of an operational data store (ODS)?

- ☒ A) It is a staging area for data before being loaded into the data warehouse.
- B) It is a subset of a data warehouse including data for a specific functional area.
- C) It is the only data storage where data mining models can be executed.
- D) It is the only system where users may be able to generate analytics reports.

17. An enabler for descriptive analytics includes which of the following?

- A) Data mining
- ☒ C) Data warehousing
- B) Expert systems
- D) Forecasting

18. Predictive analytics aims to accomplish which of the following?

- A) Give decision makers guidance on which action to take
- ☒ B) Gives a good idea of what to expect in the future
- C) Describes clearly the current situation at hand
- D) All of the options are true

19. In dealing with big data, the Hadoop distributed file systems (HDFS) enables the physical storage of data on which of the following?

- A) One large server
- ☒ B) Many different servers
- C) A single super data warehouse
- D) All of the options are true

20. Big data may include which of the following data?

- A) Streaming videos
- B) Image files
- C) Web logs
- ☒ D) All of the options are true

## 2<sup>Nd</sup> midterm

IS 466 (Decision Support Systems) Midterm 2 V2 Student  
Monday May 6, 2024  
Spring 2023-2024 Prof. Abdulrahman Mirza Student Name

Read very carefully:

Choose the best answer. ONLY use a small circle around the letter of the correct answer to make your choice. If you make a change, make sure to put an X on the wrong choice.

- ✓ 1. Which of the following is NOT one of the major AI technologies?  
☒ A) Parallel processing      C) Computer Vision  
B) Voice recognition      D) Machine learning
- ✓ 2. An autonomous, small computer program that acts upon changing environments as directed by stored knowledge is called:  
A) Machine learning      ☒ C) Intelligent agent  
B) ERP      D) Expert system
- ✓ 3. What type of system generates expert advice and give recommendations?  
A) Machine learning      C) Intelligent agent  
B) ERP      ☒ D) Expert system
- ✓ 4. Integration of digital information within the user environment in real time, providing people real-world interactive experience with the environment is:  
☒ A) Augmentation      C) Cognitive computing  
B) NLP      D) Deep Learning
- ✓ 5. Natural language processing (NLP) is used for which of the following?  
A) Speech generation      ☒ C) All options are true  
B) Voice understanding      D) text recognition
- ✓ 6. The ability to sit with experts and extracting (getting) their knowledge in order to develop an important DSS is called:  
☒ A) Knowledge acquisition      C) None of the options are true  
B) Knowledge collection      D) Knowledge representation
- ✓ 7. The persons who are responsible for extracting knowledge from experts are called:  
A) Knowledge developer      C) None of the options are true  
B) Knowledge collector      ☒ D) Knowledge engineer
- ✓ 8. Walmart has started using AI in some of its stores, which of the following is a main component in their data analysis  
A) Big data      ☒ C) All options are true  
B) Image recognition      D) Video analysis
- ✓ 9. For which of the following is AI used in Human resources management?  
A) Future sales forecasting      C) All options are true  
B) Detecting hackers      ☒ D) Personalized training
- ✓ 10. For which of the following is AI used in marketing and advertising?  
A) Customer segmentation      ☒ C) All options are true  
B) Website design      D) Dynamic pricing



✓ 11. The main purpose of data mining is use large sets of data to recognize:

- A) Experts in a field
- ☒ B) Patterns in the data
- C) Mathematical models
- D) Statistical models

✓ 12. How did data mining help the Miami Dade police department with unsolved cases?

- A) Show videos of criminals as the conduct the crime.
- B) Encourage people to give information to the police.
- ☒ C) Match collected clues with previous crimes
- ✓✓✓ D) All options are true.

✓ 13. What made data mining a much more important option these days for businesses?

- ☒ A) Greater use of data warehouses
- ☒ B) More data available
- ☒ C) All options are true ✓✓
- D) Lower data processing costs

✓ 14. The ability to find some relationship between different entities in DM is called?

- A) Clustering
- B) Prediction
- C) Segmentation
- ☒ D) Association

✓ 15. The ability to predict the expected value of a specific entity after some time is:

- A) Classification
- ☒ B) Time-analysis
- C) Market-basket analysis
- D) Sequence analysis

✓ 16. Which is the most commonly used data-mining process by companies?

- ☒ A) CRISP-DM
- B) SEMMA
- C) All are equal in popularity
- D) KDD

✗ 17. The step where a DM model developer needs to check if the existing data can help in creating the desired model:

- ☒ A) Data preparation
- B) Business understanding
- C) Testing and verification
- ☒ D) Data understanding

✓ 18. When using the K-means clustering algorithm, where  $K = 4$ , what is the percent of training data for each iteration of the run?

- A) 4%
- B) 40%

25%

75%

2- 2011/2

✗ 19. Which formula is used to tell us what is the percent of truly predicted classes from the overall true predictions?

- ☒ A) Precision
- ☒ B) Accuracy
- C) Recall
- ✓✓ D) True positive rate

✓ 20. In decision tree analysis, how is the best splitting attribute selected to start at the root node?

- A) The first attribute in the table of selected data attributes.
- B) The first nominal data attribute in the list of attributes.
- ☒ C) It depends on the actual decision tree algorithm being used.
- D) The first ordinal data attribute in the list of attributes.

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