國立中正大學
114學年度碩士班招生考試
試 題

［第4節］

科目名稱	管理資訊系統
系所組別	資訊管理學系-甲組

－作答注意事項－

※作答前請先核對「試題」、「試卷」與「准考證」之系所組別、科目名稱是否相符。

1.預備鈴響時即可入場，但至考試開始鈴響前，不得翻閱試題，並不得書寫、畫記、作答。

2.考試開始鈴響時，即可開始作答；考試結束鈴響畢，應即停止作答。

3.入場後於考試開始40分鐘內不得離場。

4.全部答題均須在試卷（答案卷）作答區內完成。

5.試卷作答限用藍色或黑色筆（含鉛筆）書寫。

6.試題須隨試卷繳還。

Multiple choice questions (60%, 3 points per question)

1. What process involves creating a detailed specification of the tasks a new information system is expected to perform?

   A) Feasibility study

   B) Systems design

   C) Test plan development

   D) PERT chart

   E) Requirements analysis

2. Which decision-making tool would be most useful for building a recommendation engine for a website with over a million visitors each month?

   A) Big Data analytics

   B) Sensitivity analysis

   C) Goal seeking

   D) Forecasting

   E) Simulation

3. As the CEO of a national clothing retail chain planning to open three new locations, which tool would be most helpful for identifying the most profitable sites?

   A) Pivot tables

   B) Sensitivity analysis

   C) GIS

   D) Prediction analytics

   E) Intelligent agent

4. Which of the following statements about machine learning is *incorrect*?

   A) Spotify utilizes machine learning to tailor playlists for its users.

   B) Expert systems are a type of machine learning.

   C) Machine learning primarily focuses on identifying patterns in data and classifying inputs into known and unknown outputs.

   D) Many Big Data analytics tools employ machine learning.

   E) Most current machine learning involves supervised learning methods.

5. What method is primarily used for uncovering patterns in data when no specific instructions are provided about what to look for?

   A) Genetic algorithm

   B) Intelligent agent

   C) Deep learning neural network

   D) Supervised learning neural network

   E) Computer vision system

6. In the context of digital marketplaces:

   A) Search costs tend to be higher.

   B) Menu costs are generally lower.

C) Disintermediation is less common.

D) Network effects are less significant.

E) Information asymmetry increases.

7. Compared to traditional physical goods, digital goods typically have:

   A) Lower per-unit marginal production costs.

   B) Higher delivery expenses.

   C) Greater ongoing production expenses.

   D) Increased inventory costs.

   E) Higher marginal costs overall.

8. How do *personalization* and *customization* differ in the context of e-commerce technologies?

   A) Customization occurs when the user adjusts a product, while personalization is when a business adapts a product or service for the user.

   B) Personalization occurs when the user adjusts a product, while customization is when a business adapts a product or service for the user.

   C) Customization involves tailoring marketing messages for a consumer, while personalization adapts a product or service to user preferences.

   D) Personalization involves tailoring marketing messages for a consumer, while customization adapts a product or service to user preferences.

   E) There is no distinction; both terms involve modifying a product or communication for the consumer.

9. Which of the following exemplifies the advertising revenue model?

   A) eBay earns a fee from a seller only if the item is sold.

   B) Yelp receives a payment after directing a customer to a partner website where a purchase is made.

   C) Facebook provides a free social platform but includes sponsored content in users' feeds.

   D) Apple collects a fee for movie downloads.

   E) Netflix charges a subscription fee for access to its movie library.

10. Leveraging the Internet to target niche audiences with products of low demand is an example of:

    A) Clickstream advertising.

    B) Behavioral targeting.

    C) Online profiling.

    D) Long-tail marketing.

    E) Crowdsourcing.

11. BMW engaged its customers in designing a future urban vehicle for 2025. This strategy exemplifies:

    A) Prediction markets.

    B) Behavioral targeting.

    C) Long-tail marketing.

    D) Social shopping.

    E) Crowdsourcing.

12. Enterprise systems improve management decision-making in many ways *except*:

    A) Offering real-time data on sales, inventory, and production.

B) Providing more precise sales and production forecasts.

C) Enhancing predictions about customer behavior.

D) Standardizing data definitions and formats globally.

E) Evaluating the profitability of various products.

13. Uncertainty in supply chain management may arise from all of the following *except*:

A) Delayed deliveries from suppliers.

B) Rising inventory levels across tiers.

C) Faulty raw materials or components.

D) Disruptions in the manufacturing process.

E) Variations in customer demand.

14. A supply chain strategy based on predicted consumer demand aligns with which model?

A) Pull-based

B) Build-to-stock

C) Push-based

D) Replenishment-driven

E) Optimized

15. The bullwhip effect can be minimized by:

A) Embracing globalization.

B) Eliminating intermediaries.

C) Adopting CRM systems.

D) Reducing uncertainty in shared information.

E) Differentiating products.

16. The measurement of the percentage of customers who discontinue using or purchasing a company's products or services is known as:

A) Switching costs.

B) Churn rate.

C) CLTV.

D) Switch rate.

E) Turnover percentage.

17. Which of the following statements regarding Big Data is *incorrect*?

A) Big Data exclusively refers to datasets in the petabyte range.

B) Big Data enables the discovery of more patterns and relationships compared to smaller datasets.

C) Big Data is generated at a faster pace and in much larger volumes than traditional datasets.

D) Big Data is increasingly utilized in the public sector.

E) The characteristics of Big Data are often summarized by the 3Vs: volume, variety, and velocity.

18. In data mining, which process involves identifying patterns that determine an item's group by analyzing existing items and deriving rules?

   A) Associations

   B) Sequences

   C) Classifications

   D) Clustering

   E) Forecasting

19. A website that uses cookies to monitor its visitors does so by:

   A) Saving the cookie on the website's server.

   B) Storing the cookie on the user's device.

   C) Keeping the cookie on the ISP's servers.

   D) Saving the cookie in the browser's settings.

   E) Discarding the cookie once the visitor exits the site.

20. When retailers are forced to compete directly against manufacturers on price and inventory availability, it is referred to as:

   A) Disintermediation

   B) Localization

   C) Channel conflict

   D) Hypermediation

   E) Product standardization

Short-answer questions (40%)

1. Big Data and Artificial Intelligence are reshaping the way modern businesses operate and develop competitive strategies. Generative AI (e.g., ChatGPT, DALL·E) has become a key focus of recent technological applications:

(1) Please explain how businesses can integrate data analytics technologies (e.g., machine learning, deep learning) and AI systems to improve *decision-making quality* and *operational efficiency* in the following two areas. Support your arguments with specific *examples*:

 (a) Customer Relationship Management (CRM) (10%)

 (b) Supply Chain Management (SCM) (10%)

(2) Generative AI is rapidly being applied to marketing, content creation, and customer interactions. Please address the following questions:

 (a) Provide examples of how generative AI (e.g., text generation, image generation) can be utilized in *business marketing*. (10%)

 (b) What *challenges* might generative AI applications bring to businesses? Explain how these challenges can be mitigated through technology or policy. (10%)