

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

一、選擇題 (60 分，每題 4 分)

1. The concern that data values of an information source fall within a defined range reflects which quality dimension of information?
  - (A) consistency
  - (B) accuracy
  - (C) validity
  - (D) integrity
2. Which types of decisions are automated for high-velocity decision making?
  - (A) unstructured financial decisions
  - (B) highly-structured decisions
  - (C) semi-structured financial decisions
  - (D) all of the above
3. Which of the following statements best describes the term *business intelligence*?
  - (A) the tools and techniques used to analyze and understand business data
  - (B) the infrastructure for collecting and managing business data
  - (C) software developed exclusively for business management
  - (D) information systems involved in business decision making
4. The management methodology of using a firm's strategy to generate operational targets for the business and measuring progress towards them using the firm's enterprise systems is called
  - (A) the balanced scorecard method
  - (B) benchmarks
  - (C) KPIs
  - (D) BPM
5. Which of the following decisions requires knowledge based on collaboration and interaction?
  - (A) How long will it take to manufacture this product?
  - (B) In which geographical locations are our products garnering the most sales?
  - (C) Should we work with outside vendors on new products and services?
  - (D) Which product design is the most efficient for the user in terms of energy use?
6. Which of the following statements about trade secrets is *not* true?
  - (A) Trade secret law protects the actual ideas in a product
  - (B) Trade secret protections vary from state to state
  - (C) Software that contains unique elements can be claimed as a trade secret
  - (D) Any intellectual product, regardless of its purpose, can be classified as a trade secret
7. Which model can be used to analyze the direct and indirect costs to help firms determine the actual cost of specific technology implementations?

- (A) total cost of ownership
- (B) cost-benefit analysis
- (C) breakeven point
- (D) return on investment

## 8. The Sarbanes-Oxley Act

- (A) imposes responsibility on companies and management to safeguard the accuracy of financial information
- (B) requires financial institutions to ensure the security of customer data
- (C) outlines medical security and privacy rules.
- (D) specifies best practices in information systems security and control

9. Which of the following is *not* true about enterprise systems?

- (A) Enterprise systems help firms respond rapidly to customer requests for information or products.
- (B) Enterprise software includes analytical tools to evaluate overall organizational performance
- (C) Enterprise software is expressly built to allow companies to mimic their unique business practices
- (D) Enterprise system data have standardized definitions and formats that are accepted by the entire organization.

## 10. Which of the following best describes why small world theory is important to e-commerce?

- (A) Global products create a global community
- (B) You do not need to attract a large consumer base to become profitable
- (C) The products bought online by one individual will influence purchases by others.
- (D) The greater the number of people using your product, the more valuable it becomes

## 11. Which of the following best illustrates the sales revenue model?

- (A) eBay receives a small fee from a seller if a seller is successful in selling an item.
- (B) Apple accepts micropayments for single music track downloads.
- (C) Epinions receives a fee after steering a customer to a participating Web site where he or she makes a purchase
- (D) Flickr provides basic services for free, but charges a premium for advanced services.

## 12. Netflix's public announcement of a reward for a technology solution to its movie recommendation system is an example of

- (A) long-tail marketing
- (B) crowdsourcing
- (C) behavioral targeting.
- (D) prediction markets

## 13. Which of the following describes a difference between neural networks and genetic algorithms?

- (A) Neural networks are programmed to "learn."
- (B) Genetic algorithms are a type of knowledge discovery, while neural networks are an intelligent technique

(C) Genetic algorithms are designed to process large amounts of information

(D) all of the above

14. Which of the following statements best describes the effect that project structure has on overall project risk?

(A) Highly structured projects tend to be larger, affecting more organizational units, and run both the risk of out-of-control costs and becoming too difficult to control.

(B) Highly structured projects are more complex, and run a higher risk of programmers and users misunderstanding the ultimate goals.

(C) Less structured projects are more able to be quickly developed, tested, and implemented using cutting-edge RAD and JAD development techniques, and pose less risk of running up unforeseen costs

(D) Projects with relatively undefined goals are more likely to be subjected to users changing requirements and to run a higher risk of not satisfying project goals

15. Which of the following is *not* a characteristic of AI technologies worth investing in?

(A) Eliminate dull tasks

(B) Focus diffuse problems

(C) Distribute data

(D) Solve static data

## 二、問答題 (40 分)

1. How does the use of electronic voting machines act as a "double-edged sword?" (6%) What moral dimensions are raised by this use of information technology? (6%)

2. Define a fault-tolerant computer system and a high-availability computer system. (6%) How do they differ? (6%)

3. Please explain the following terms:

(A) Network neutrality (2%)

(B) Industry 4.0 (2%)

(C) KRACK (key reinstallation attacks) (2%)

(D) Reinforcement Learning (2%)

(E) Blockchain (2%)

(F) IoT (Internet of Things) (2%)

(G) Digital certificate (2%)

(H) FinTech (Financial Technology) (2%)