University of Colombo, Sri Lanka

University of Colombo School of Computing

BIT

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2024 — 1st Year Examination — Semester 1

IT1106 — Information Systems

Multiple Choice Question Paper
(2 Hours)

Important Instructions

- The duration of the paper is **2 Hours**.

- The medium of instructions and questions is English.

- This paper has **40 questions** on **10 pages**. Answer **all** questions.

- All questions are of the **MCQ** (Multiple Choice Questions) type.

- Each question will have **5 (five)** choices with **ONLY ONE** correct answer.

- This paper consists of 100 marks and all the questions will carry equal marks.

- Answers should be marked on the **special answer sheet** provided.

- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator immediately.

- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**

- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.

- Calculators are **not** allowed.

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1) Which of the following is NOT a "computer hardware"?

(a) Mouse	(b) Disk Drive	(c) Operating System
(d) Solid State Driver	(e) Random Access Memory	

2) Which of the following is NOT a unit of measurement for data?

(a) Kilobyte	(b) Terabyte	(c) Youbyte
(d) Megabyte	(e) Zettabyte	

3) The following statement refers to a definition of an information system.

"A system is a set of interrelated _____, with a clearly defined _____, working together to achieve a common set of _____."

Which of the following options correctly completes the blanks in the above statement?

(a) devices, architecture, work	(b) systems, purpose, functions
(c) functions, objective, activity	(d) software, functionality, targets
(e) components, boundary, objectives	

4) Which of the following is NOT a component of an information system?

(a) users	(b) hardware	(c) data resources
(d) marketing strategy	(e) communications networks	

5) Consider the following list of four major areas of information system knowledge needed by business professionals and the list of descriptions.

Area	Description
A. Information Technologies	I. It focuses on how business professionals and information specialists plan, develop, and implement systems to address business needs.
B. Business Applications	II. It covers the major uses of information systems for operations, management, and to gain competitive advantage within a business environment.
C. Development Processes	III. It deals with the hardware, software, networks, data management, internet-technologies, and related concepts, developments, and management issues.
D. Management Challenges	IV. It addresses the challenges of effectively and ethically managing information technology, especially across the enterprise, at the end-user level, and on a global scale.

Which of the following correctly matches the above listed areas with the descriptions?

(a) A-I, B-II, C-III, D-IV	(b) A-II, B-III, C-IV, D-I
(c) A-III, B-IV, C-I, D-II	(d) A-IV, B-I, C-II, D-III
(e) A-III, B-II, C-I, D-IV	

6) Consider the following scenario.

"By utilizing customer data and analytics, businesses can better understand customer preferences, adapt pricing strategies, and enhance product offerings. Information systems can help firms maintain a competitive edge by influencing customer purchasing decisions, reducing the power customers have in driving prices too low."

Which of Porter's Five Forces is being addressed in the above scenario?

(a) Industry Rivalry	(b) Threat of Substitutes
(c) Threat of New Entrants	(d) Bargaining Power of Buyers
(e) Bargaining Power of Suppliers	

7) Which of the following statements **best** describes how information systems can be used to increase switching costs and strengthen a company's competitive position?

(a) Information systems provide tools to monitor market trends, making it easier for companies to switch between products and services in response to consumer demand.

(b) Information systems allow firms to monitor customer behavior and adjust service offerings, making it easier for customers to switch to competitors by offering lower prices.

(c) Information systems help companies set up exclusive contracts and pricing structures that incentivize customers to switch to competitors more frequently by offering short-term promotions.

(d) By creating new business models supported by information systems, companies can introduce additional features that encourage customers to switch frequently between service providers.

(e) Through technological investments, firms can create systems that make customers and suppliers highly reliant on their services, increasing the effort, time, and cost required for them to switch to other providers.

8) Consider the following statement.

"A company investing in advanced computer-based information systems to improve the efficiency of its own business processes can _____ in IT by developing new products and services that would not be possible without a strong IT capability."

Which of the following is the **most** appropriate term to fill in the blank in the above statement?

(a) add customer value	(b) leverage investment	(c) learn to survive
(d) raise barriers to entry	(e) adapt the changes	

9) A firm in the garment industry is interested in introducing an information system to improve the performance of their inbound logistics. Which of the following systems would **best** meet this requirement?

(a) Targeted Marketing System

(b) Customer Relationship Management System

(c) Automated Just-in-Time Warehousing System

(d) Computer- Aided Flexible Manufacturing System

(e) Online Point-of-Sale and Order Processing System

10) Which of the following is an example of a complementary asset necessary for maximizing the value of an information system (IS) in an organization?

> (a) Employee training programs to help staff utilize the IS effectively
>
> (b) A company's existing IT infrastructure such as server to run the IS
>
> (c) A software application to manage inventory and track orders via the IS
>
> (d) An advanced database management system to store and retrieve data of the IS
>
> (e) The development of custom software code to implement a core function in the system

11) Which of the following **best** describes a key difference between electronic commerce (e-commerce) and mobile commerce (m-commerce)?

> (a) M-commerce transactions are always slower than e-commerce transactions.
>
> (b) E-Commerce exclusively involves online transactions, while m-commerce can occur offline.
>
> (c) E-commerce is limited to B2B transactions, while m-commerce is limited to B2C transactions.
>
> (d) E-commerce is primarily used for digital products, while m-commerce is used only for physical product sales.
>
> (e) M-commerce transactions are conducted through mobile devices, while e-commerce transactions are typically conducted on desktop computers or laptops.

12) What type of e-commerce is directly supported by the online tax payment platform (https://www.ird.gov.lk/) of Sr Lanka?

> (a) B2B   (b) B2C   (c) C2B
>
> (d) C2C   (e) G2B

13) Which of the following is CORRECT regarding "premium networks" in mobile advertising?

> (a) The typical pricing model used is Cost Per Click (CPC).
>
> (b) Most advertising is done blindly, without targeting specific users.
>
> (c) The advertiser cannot choose specific websites to display the advertisement.
>
> (d) Advertisements are automatically placed on an available free space on all web sites.
>
> (e) Advertisements are placed on a highly visible area of top-tier websites or destinations.

14) Some firm owners prefer m-commerce over e-commerce because it,

> (a) provides a better user experience on a larger screen.
>
> (b) is better suited for handling multiple complex transactions.
>
> (c) offers location-based services and push notifications to enhance customer engagement.
>
> (d) can securely integrate with the firm's complex business systems like inventory management and analytics more easily.
>
> (e) is accessed via more stable internet connections, enabling a smoother and more efficient online shopping experience with rich media content.

15) HTML tags hidden in the code of a webpage, containing website-related keywords that are used by search engines to index and rank the website, are called:

(a) Alt tags   (b) Href tags   (c) Key tags

(d) Link tags   (e) Meta tags

16) Which of the following systems provides the **least** support for decision-making and is relatively **less** sophisticated in terms of data processing and analysis?

(a) Decision Support System   (b) Executive Support System

(c) Management Information System   (d) Knowledge Management System

(e) Transaction Processing System

17) Which of the following is a characteristic of batch processing in transaction processing systems?

(a) Transactions are processed one at a time as they arrive in real-time.

(b) Processing happens instantly with immediate interactions from the customers.

(c) Processing occurs in discrete groups or batches, often at scheduled intervals.

(d) Transactions are processed manually by human operators, often at points of sale.

(e) Only high-priority transactions are processed immediately, requiring executive attention.

18) The main requirement of using a Management Information System (MIS) in an organization is to:

(a) reduce the amount of data it collects.

(b) eliminate the need for human decision-making.

(c) replace all manual processes within the organization.

(d) provide real-time data to support quick decision-making.

(e) focus mainly on financial data analysis and representation.

19) Which of the following is NOT a key component of a Decision Support System (DSS)?

(a) Database   (b) Knowledge base   (c) Model base

(d) Strategic plan   (e) User interface

20) Web-based Customer Relationship Management (CRM) systems can enhance the relationship between a business and its customers through the three main phases:

(a) Search, Edit, Save

(b) Extract, Transform, Load

(c) Acquire, Enhance, Retain

(d) Develop, Implement, Evaluate

(e) Upload, Translate, Download

21) Consider the following lists of applications and the descriptions.

Application		Description
A. Interactive Marketing	I.	This enables offering personalized solutions to customers and build stronger relationships and trust with them.
B. Targeted Marketing	II.	This aims to speed up capturing and analyzing of sales data from the customers to marketing managers.
C. Sales Force Automation	III.	This encourages customers to get involved in product development, delivery, and service improvement.

Which of the following correctly matches the above-listed applications with the descriptions?

(a) A-I, B-II, C-III	(b) A-II, B-III, C-I
(c) A-III, B-I, C-II	(d) A-I, B-III, C-II
(e) A-III, B-II, C-I	

22) Which of the following is NOT a core function of a Supply Chain Management (SCM) System?

(a) Logistics Management	(b) Warehouse Management
(c) Inventory Management	(d) Human Resource Management
(e) Demand and Supply Forecasting	

23) The sensitivity analysis in Decision Support Systems (DSS),

(a) observes how changes to selected variables affect other variables.

(b) finds an optimum value for selected variables, given certain constraints.

(c) observes how repeated changes to a single variable affect other variables.

(d) makes repeated changes to selected variables until a chosen variable reaches a target value.

(e) helps to determine the highest possible level of profits that could be achieved by varying the values for selected revenue sources and expenses.

24) The key purpose of using a word cloud as a data visualization tool in a Business Information System (BIS) is to,

(a) identify patterns and trends in sales and returns.

(b) show where visitors to a website are dropping off from the successful sales path.

(c) depict the steps a consumer takes in making the decision to buy your product and become a custom

(d) provide an effective visual summary of conversations, reviews, and user feedback about a new product.

(e) easily identify which steps are causing confusion or trouble for customers during the purchase process.

25) The Cross-Industry Process for Data Mining (CRISP-DM) provides a six-phase structured approach for planning and executing data mining projects. The six phases are listed below, although they are not in the correct order.

   A. Modeling
   B. Evaluation
   C. Deployment
   D. Data preparation
   E. Data understanding
   F. Business understanding

What is the CORRECT order of phases?

(a) A, B, D, E, F, C	(b) A, D, F, E, C, B	(c) F, E, D, C, A, B
(d) F, E, D, A, B, C	(e) D, A, E, C, B, F	

26) Genetic algorithms are primarily used to,

(a) design machines that can perform physical tasks autonomously.

(b) develop systems that learn and improve based on data and experience.

(c) enable computers to understand, interpret, and respond to human language.

(d) simulate the process of natural evolution in computers to find optimal solutions to complex problems.

(e) demonstrate intelligent behavior enabling machines to make decisions, solve problems, and learn from experience.

27) Which of the following is the **primary** factor when valuing the acquisition of an Information System?

(a) The complexity of the system's user interface.

(b) The initial cost of the system's purchase or licensing fee.

(c) The number of employees required to manage the system.

(d) The amount of hardware required to support the new system.

(e) The system's ability to provide a return on investment over time.

28) What is the **most** important thing to consider when assessing the value of acquiring a new information system?

(a) The number of user interfaces it offers.

(b) The popularity of the software in the market.

(c) The system's compliance with the latest technological trends.

(d) The length of time it will take to acquire and implement the system.

(e) The system's ability to integrate seamlessly with existing business processes.

29) Which of the following **best** describes the concept of systems thinking?

(a) Focusing on individual components of a system and developing them step-by-step.

(b) Solving problems by using a linear, step-by-step approach and reviewing each step.

(c) Applying mathematical models to predict the behavior of systems in isolation or silos.

(d) Understanding how a system works by studying its elements independently and systematically.

(e) Analyzing a problem by understanding the system as a whole and how its parts are interconnected.

30) The following list of steps in the system development life cycle (SDLC) are not in the correct order. What is the CORRECT order of these steps?

A. Analysis
B. Design
C. Implementation
D. Investigation
E. Maintenance

(a) A, C, E, B, D	(b) B, D, A, C, E	(c) C, A, B, E, D
(d) D, A, B, C, E	(e) E, B, A, D, C	

31) Which of the following should be considered in an "economic feasibility study" conducted during an information system development project?

(a) Patent, copyright, and licensing.

(b) Decreased investment requirements.

(c) Employee, customer, and supplier acceptance.

(d) Affected stakeholders and reporting authority.

(e) Hardware, software, and network capability including reliability and availability.

32) Which of the following is **crucial** for ensuring the success of outsourced software development?

(a) The selected software development process

(b) The internal availability of project resources

(c) A clear understanding of company goals and objectives

(d) The geographical location of the software development team

(e) The total estimated cost of the software development project

33) The **main** reason for offshoring software development activities of an organization is to,

(a) expand its market share and increase revenue

(b) reduce operational costs and increase profitability

(c) foster innovation and creativity within the organization

(d) improve morale and retention of its internal employees

(e) enhance the organization's public image and brand reputation

34) Consider the following scenario.

"Students in a computer laboratory started watching video lectures and engaged in chatting with their friends for hours without learning."

Which of the following is the **most** relevant to the issue mentioned in the above scenario?

(a) Privacy	(b) Computer waste	(c) Security threats
(d) Computer mistakes	(e) Copyright infringement	

35) Consider the following paragraph with three blanks.

When using computers and digital technologies, it is important to consider both the legal requirements and the ethical implications of one's actions. _____ refers to the rules and regulations established by governments to govern how computers and data are used, such as copyright laws and data protection regulations. _____, on the other hand, involves the moral principles that guide individuals in determining right from wrong, like respecting others' privacy and avoiding harm. Finally, _____ pertains to personal beliefs and values that influence one's decisions regarding responsible and fair use of technology, ensuring fairness, integrity, and honesty in the digital world.

Which of the following completes the blanks in the above paragraph in the **correct** order?

(a) Right, Ethics, rules	(b) Protocol, Law, ethics
(c) Law, Morale, privacy	(d) Law, Ethics, morale
(e) Copyrights, Law, religion	

36) Which of the following is NOT an "ethical principle" to consider when evaluating the potential harms of using new technologies?

(a) Justice	(b) Gender Equality	(c) Proportionality
(d) Minimized Risk	(e) Informed Consent	

37) Which of the following is NOT an example for "computer crime"?

(a) Obtaining written consent to gather data from staff for a survey.

(b) Unauthorized copying and distributing of software via social media platforms.

(c) Accessing software, data, or network resources using another person's login details.

(d) Sharing secured information belonging to an organization without proper permission.

(e) Denying an end user accessing his/her own hardware, software, data, or network resources.

38) What is the term used for an individual who excessively uses computers or gains unauthorized access to networked systems to steal or damage data, programs, or systems?

(a) Bomber	(b) Black Hat Hacker	(c) Cracker
(d) Sniffer	(e) White Hat Hacker	

39) What does "Dumpster Diving" refer to in relation to information technology?

   (a) Cleaning computers and accessories using damp cloths and paper towels

   (b) Solving issues with computers and networks to reduce their disposal

   (c) Sifting through a company's garbage to find sensitive information such as passwords

   (d) Gaining access to computer systems by making employees reveal valuable information, such as passwords

   (e) Faking an email address or web page to trick users into passing along critical information like passwords

40) Which of the following is INCORRECT or IRRELEVANT when determining whether you are properly seated, and your computer accessories are correctly positioned?

   (a) Your wrists are nearly straight.

   (b) The top of the monitor is at your eye level.

   (c) You are seated leaning on a comfortable chair.

   (d) Your arms are nearly perpendicular to the floor.

   (e) The monitor is positioned about one arm's length (20 to 26 inches) away.

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