



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2021 – 1st Year Examination – Semester 1

IT1106 – Information Systems
Multiple Choice Question Paper

(TWO HOURS)

Important Instructions:

- The duration of the paper is **2 (two) hours**.
- The medium of instruction and questions is English.
- The paper has **40 questions** and **10 pages**.
- All questions are of the **MCQ** (Multiple Choice Questions) type.
- All questions should be answered.
- Each question will have 5 (five) choices with **one or more** correct choices. Select all correct choices to score the full marks.
- All questions will carry **equal** marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from 0 (*All the incorrect choices are marked & no correct choices are marked*) to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- Answers should be marked on the special answer sheet provided.
- Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor 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.**
- Calculators are **not** allowed.
- *All Rights Reserved.*

1) Which of the following statements is/are CORRECT regarding computer hardware?

- (a) They are used to perform input, process, storage and output activities.
- (b) Very-low resolution display units are used to show extremely detailed graphical information.
- (c) Smartphones cannot be considered computer hardware.
- (d) Embedded cameras on laptop computers are output devices.
- (e) A tablet's screen can be considered both as an input and output device.

2) Which of the following statements is/are CORRECT regarding computer software?

- (a) Application software and program software are the two main types of computer software.
- (b) A custom application software is developed with the intention of selling the software in multiple copies.
- (c) Microsoft office is an example of application software.
- (d) Microsoft Windows is the default software installed by computer manufacturers.
- (e) To install a software, download the software that works with the operating system installed in the computer.

3) The database in a computer-based information system is a/an,

- | | | |
|----------------------|----------------------------|---|
| (a) hardware | (b) essential component | (c) organized collection of facts and information |
| (d) utility software | (e) data storage component | |

4) The intranet of a company allows its employees to,

- (a) communicate with business partners and customers.
- (b) order products from the suppliers.
- (c) share authorized resources of the company with outsiders.
- (d) track shipped goods.
- (e) collaborate with other employees in the company.

5) IoE is a network that encompasses,

- (a) machine-to-machine connections
- (b) machine-to-people connections
- (c) people-to-machine connections
- (d) people-to-people connections.
- (e) network-to-network connections

- 6) A strategic information system of an organization,
- (a) should support or shape the organization's competitive position in the industry.
 - (b) can be a system of any type, such as a management information system and a transaction processing system.
 - (c) should support meeting the strategic objectives of the organization.
 - (d) helps to reduce the competitive advantage.
 - (e) is a website having several web pages for sharing information strategically.
- 7) Which of the following can be considered an example of "innovation strategy" to deal with the competitive forces that a supermarket can encounter in the marketplace?
- (a) Publishing newspaper advertisements regarding discounts and new arrivals
 - (b) Informing customers about special discounts, offers and new arrivals via WhatsApp and SMS services
 - (c) Introducing an online sales centre with a delivery service
 - (d) Increasing the number and variety of items in the supermarket.
 - (e) Offering special discounts to loyal customers.
- 8) Innovative use of information technology (IT) in strategic information systems usually attempts to,
- (a) expel unproductive staff members and hire experts.
 - (b) raise barriers to entry against industry competitors or outsiders.
 - (c) reduce the workload and allow employees to relax during the workday.
 - (d) leverage previous IT investments from operational uses into strategic applications.
 - (e) create switching costs in the relationships between a firm and its customers or suppliers.
- 9) "The driving force behind world economic growth has changed from manufacturing volume to improving customer value." To create customer value, the relevant information systems of a company should be able to;
- (a) reduce the cost of production
 - (b) increase the sales by reducing the price.
 - (c) keep track of customers' individual preferences.
 - (d) provide customer services to meet their individual requirements.
 - (e) compare prices in the market to maintain the prices at the lowest level.
- 10) A customer relationship management system of a product manufacturing company supports its customers to,
- (a) publicize complaints
 - (b) sell their used items
 - (c) make announcements
 - (d) make and track their purchases
 - (e) compare prices of products in other companies

11) DEF is an e-commerce application allowing its customers to buy and sell products from and to each other. What type of e-commerce does DEF support?

- | | |
|--------------------------|--------------------------|
| (a) Business-to-Business | (b) Consumer-to-Consumer |
| (c) Business-to-Consumer | (d) Public-to-Business |
| (e) Consumer-to-Public | |

12) The term “Web-influenced sales” can be **best** defined as,

- | |
|---|
| (a) sales in an e-commerce application to promote online sales. |
| (b) online sales centre to conduct seasonal sales. |
| (c) sales done through a web site announcing sales and promotional campaigns. |
| (d) sales at local stores stimulated through online marketing and research. |
| (e) sales in an information system influencing customers to purchase products online. |

13) Which of the following statements is/are TRUE regarding B2C e-commerce?

- | |
|--|
| (a) Sales process usually takes days to weeks. |
| (b) Buying process is highly complex. |
| (c) Motivation for sale is usually driven by an individual consumer’s need or emotion. |
| (d) Usually, a single product is offered, one of a kind. |
| (e) Sales are done directly to customers from a business website, marketplace, or even social media. |

14) Organizations adopt e-Commerce or m-commerce systems mainly to,

- | |
|---|
| (a) reduce the buying prices of stock items. |
| (b) reach the customers of their competitors. |
| (c) speed the flow of goods and information. |
| (d) increase the accuracy of order processing and order fulfilment. |
| (e) demotivate the customers visiting their physical sales stores. |

15) ELECTO is a company dealing with buying and selling electrical appliances. They have an online information system to support customers to search and select the necessary appliances and make payments online. Once the order is placed, the company couriers the products to the customer. However, the current system does not support after-sales services. To provide after-sales services, what kind of customer data should be captured and stored in the information system database?

- | | | |
|------------|----------------------|-----------------|
| (a) Age | (b) Telephone number | (c) Preferences |
| (d) Height | (e) Delivery address | |

- 16) Which of the following statements is/are CORRECT regarding batch vs online transaction processing systems?
- (a) Batch processing systems accumulate transactions over a long period, while online transaction processing systems accumulate data only for a short time.
 - (b) Batch processing systems are integrated systems, while online processing systems are individual stand-alone systems.
 - (c) Comparatively, a batch processing system takes a long time for processing the data accumulated at transactions.
 - (d) Unlike in batch processing systems, the data in online transaction processing systems reflect the current status at any time.
 - (e) Batch processing systems are using innovative technologies, while online transaction processing systems are often considered outdated systems.
- 17) Transaction processing systems are implemented to meet objectives such as,
- (a) avoiding processing fraudulent transactions
 - (b) supporting users to store their valuable data
 - (c) producing timely reports
 - (d) allowing customers to get employee data
 - (e) reducing labour requirements
- 18) Which of the following statements is/are CORRECT regarding management information systems?
- (a) They produce managerial reports periodically.
 - (b) They receive data from executive support systems.
 - (c) They capture and process routine data.
 - (d) Enterprise resource planning systems can be replaced with management information systems.
 - (e) Payroll system is an example of a management information system.
- 19) Decision support systems generally use,
- (a) analytical models.
 - (b) a computer-based modelling process
 - (c) databases.
 - (d) a decision maker's insights
 - (e) predictive models that are more complex than in any other system.
- 20) An exception report of a management information system is **best** described as a report,
- (a) used to push information to the networked personal computers of the company managers.
 - (b) that can be generated whenever required.
 - (c) used to capture and process routine data.
 - (d) that can reduce the amount of information provided to the managers.
 - (e) meeting the immediate requirement of information.

Read the following description and answer questions 21-25.

SUNPaa is a footwear manufacturing company that produces slippers and shoes for special needs customers. They have an e-business system to support customers ordering and purchasing footwear online. However, as many people today are working from home due to the pandemic, the demand for new footwear has gone down significantly. The company is investigating ways to increase its online sales.

21) What type of an e-business system is this?

- | | | |
|---------|---------|---------|
| (a) CRM | (b) HRM | (c) SCM |
| (d) ERP | (e) KMS | |

22) Which of the following measurements is/are appropriate to be taken to evaluate the customer retention performance?

- | |
|--|
| (a) Percentage of customers monthly accessing the system |
| (b) Percentage of customers sending emails from Gmail accounts |
| (c) The number of people who visited their stores physically during the last month |
| (d) The total number of items purchased by each customer |
| (e) The number of user profiles in the system |

23) A newly appointed Chief Technical Officer recommends SUNPaa to use Business Analytics (BA) to increase their profits and keep customers coming back. Which of the following is/are CORRECT regarding BA?

- | |
|---|
| (a) An investigation of a business's historical performance to gain insight |
| (b) An analysis of business data to drive the strategic business planning process |
| (c) An observation of current business performance |
| (d) A set of skills, technologies and applications used in business |
| (e) Measuring business performance using only a consistent set of metrics |

24) The top-level management of SUNPaa needs to expand the decision support functionalities of their e-business system. Which of the following is/are (a) major component(s) of a typical decision support system?

- | | | |
|----------------|---------------------|------------------|
| (a) Model base | (b) Internet | (c) Proxy server |
| (d) Database | (e) User interfaces | |

25) SUNPaa's e-business system can use Business Analytics and data visualization techniques to,

- | |
|--|
| (a) immediately reveal patterns or relationships in the underlying data. |
| (b) provide a visual summary of customer information. |
| (c) monitor customers accessing and leaving the company. |
| (d) present the data in a pictorial or graphical format. |
| (e) represent the employees following the recommended health and safety rules. |

26) Which of the following is/are (a) major component(s) of an expert system?

- | | |
|----------------------|--------------------------|
| (a) Inference engine | (b) Rule bank |
| (c) Case bank | (d) Explanation facility |
| (e) Knowledge base | |

27) Which of the following provides the **best** option to meet a specific set of user needs for a scalable and secured information system?

- | | |
|--|-----------------------------|
| (a) Use an open-source software | (b) Build a custom software |
| (c) Buy off-the-shelf | (d) Copy from a friend |
| (e) Get from a software service provider | |

28) Consider the following types of software testing and testing purposes listed under column A and column B, respectively.

A (Testing type)	B (Testing Purpose)
I. Integration	I. Recognize the problems that may be created with a large amount of data.
II. System	II. Validate that the system meets all specified requirements.
III. Volume	III. Identify any defects between individual components of the information system.

Which of the following correctly matches the testing type in column A with the testing purpose in column B?

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

29) The process of switching from an old information system to a replacement system is known as,

- | | | |
|------------------|----------------------|----------------|
| (a) Replacement | (b) Site preparation | (c) Conversion |
| (d) Installation | (e) Cutover | |

30) A company dealing with buying and selling agricultural products needs to develop an information system to support their business. Even though the company started recently, they have an IT department with experienced software developers who can take responsibility for system development. However, when they started gathering user requirements, they understood that the requirements were evolving and could not be fully identified.

Which of the following is the **most appropriate** software development approach for the above-stated software development project?

- | | | |
|-----------------|---------------|-----------|
| (a) Waterfall | (b) Spiral | (c) Agile |
| (d) Incremental | (e) Iterative | |

31) When an existing information system becomes obsolete, uneconomical to operate and/or maintain, or unrepairable, then it needs to be disposed. Following is the list of steps involved in the system disposal process.

- A. Communicate intent
- B. Terminate contracts
- C. Delete sensitive data
- D. Make backups of data
- E. Dispose of hardware

Which of the following lists the correct order of the steps involved in system disposal?

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

32) Which of the following is/are (a) common reason(s) for outsourcing information technology/system functions?

- | |
|--|
| (a) Give a break to the company staff. |
| (b) Focus more on the company's core competencies. |
| (c) Reengineer legacy systems of the company. |
| (d) Reduce and control operating costs. |
| (e) Gain access to world-class capabilities. |

33) Which of the following is/are (a) solution(s) for the computer-related wastes and mistakes?

- | |
|--|
| (a) Introduce new garbage bins to handle trash. |
| (b) Allow only senior executives to enter all data into the systems. |
| (c) Conduct training on the use and maintenance of information systems. |
| (d) Promote the employees who visit non-work-related Web sites during working hours. |
| (e) Establish policies and procedures regarding the acquisition and use of computer hardware and software. |

34) "Cyberloafing" means,

- | |
|---|
| (a) using Internet and Web resources for learning. |
| (b) sharing Web resources in social media as their content. |
| (c) copying questions in the BITVLE and sharing them on social media for discussions. |
| (d) downloading Web resources and saving them in an information system for easy access. |
| (e) using the Internet during working time for personal use while pretending to do legitimate work. |

- 35) Due to heavy use of the Internet for education, many children can become vulnerable to privacy issues. As a solution, many parents have installed filtering software on their children's computers.

What should these filtering software do?

- (a) Help children to decide what content should be blocked and allowed.
- (b) Prevent children from sending personal information over email.
- (c) Stop children broadcasting their personal information over the Internet.
- (d) Block sharing information such as name, address, and phone numbers in chat groups or instant messaging apps.
- (e) Teach children about Web sites with offensive or obscene information.

- 36) Individuals are responsible of taking necessary steps to protect their privacy. To protect your privacy, you should,

- (a) stop sharing personal information with anybody for any reason.
- (b) stop using the Web sites and information systems requesting your details.
- (c) not share your credit card information and contact information when purchasing products online.
- (d) find out what is stored about you in existing databases of information systems that you used/use.
- (e) inform the individuals and organizations who keep records of your personal data not to share your information without your written consent.

- 37) The term "Computer Ergonomics" can be **best** defined as,

- (a) the study of privacy issues related to computer use.
- (b) best practices of designing and developing information systems.
- (c) set of guidelines to follow when designing and developing computer systems.
- (d) the science of designing computers and setting up the workspace to minimize physical stress and injuries and increase work efficiency.
- (e) the knowledge on information systems and information technology infrastructure required to work more effectively and bring more benefits to the workplace.

- 38) Which of the following is/are (an) important security measure(s) that can be taken to manage the security of an information system?

- | | | |
|--------------------|---------------------|----------------|
| (a) Access control | (b) Authentication | (c) Encryption |
| (d) Flaming | (e) Personalization | |

39) Which of the following is/are CORRECT regarding a network firewall?

- (a) It consists of both hardware and software.
- (b) It can completely prevent unauthorized access to the computer network.
- (c) It is a device to protect all the computing devices connected to the network from fire and lightning.
- (d) It monitors all incoming and outgoing network traffic and only allows authorized transmissions.
- (e) It is a device used to monitor and control the surroundings to ensure that there are no security threats to anybody working in the network room.

40) To prevent computer failures or minimize the effects of computer failures, organizations are advised to,

- (a) configure automatic updates and remote maintenance facilities.
- (b) replace all legacy systems immediately with new information systems.
- (c) use fault-tolerant capabilities in the computer systems and networks.
- (d) schedule and implement major hardware or software changes carefully to avoid problems.
- (e) use performance and security management software to help keeping the company's computer system and networks working properly.
