

තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology

**Become a Tech-Savvy Entrepreneur with  
Sanjula Nadeeshani**

**අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2026 අගෝස්තු  
General Certificate of Education (Adv. Level) Examination, August 2026**

තොරතුරු හා සන්නිවේදන තාක්ෂණය I, II  
Information & Communication Technology I, II

**20** **E** **I, II**

**Unit Revising  
Test 02**

1. Which of the following types of software is responsible for managing hardware resources and providing essential functionalities such as memory management and device drivers?
  - (1) Application Software
  - (2) System Software
  - (3) Proprietary Software
  - (4) Open Source Software
  - (5) Freeware
2. You want to edit your vacation photos and create a digital photo album. Which category of software would be most suitable for this task?
  - (1) Application Software
  - (2) System Software
  - (3) Proprietary Software
  - (4) Open Source Software
  - (5) Shareware
3. What is the key characteristic that distinguishes Proprietary Software from Open Source Software?
  - (1) Proprietary software is free to use, while Open Source software requires payment.
  - (2) Proprietary software's source code is publicly available, while Open Source software's code is private.
  - (3) Proprietary software can be modified by anyone, while Open Source software is restricted in modification.
  - (4) Proprietary software is developed by a community of volunteers, while Open Source software is developed by corporations.
  - (5) Proprietary software is owned by a company and its source code is not publicly available, while Open Source software's source code is accessible to the public.
4. Which of the following is an example of Application Software?
  - (1) Operating System
  - (2) Device Drivers
  - (3) Microsoft Windows
  - (4) Linux
  - (5) BIOS
5. You are using a software that allows you to create and edit text documents, such as essays and reports. Which type of software are you using?
  - (1) System Software
  - (2) Open Source Software
  - (3) Proprietary Software
  - (4) Application Software
  - (5) Shareware
6. Which of the following licenses typically allows users to view, modify, and distribute the source code of a software freely?

- (1) Commercial License
  - (2) Proprietary License
  - (3) Closed Source License
  - (4) Freeware License
  - (5) Open Source License
7. You want to develop a new software application and make its source code available for other developers to contribute and improve upon. Which type of software licensing model should you choose?
- (1) Proprietary License
  - (2) Closed Source License
  - (3) Commercial License
  - (4) Open Source License
  - (5) Shareware License
8. Which software category would an operating system like Linux fall into?
- (1) Application Software
  - (2) System Software
  - (3) Proprietary Software
  - (4) Open Source Software
  - (5) Freeware
9. You have downloaded a software without paying for it and can use it indefinitely. However, it reminds you to pay a fee after a trial period. What type of software is this?
- (1) Shareware
  - (2) Freeware
  - (3) Open Source Software
  - (4) Proprietary Software
  - (5) Commercial Software
10. Which of the following best describes the concept of "vendor lock-in"?
- (1) Using software that is developed by a specific vendor.
  - (2) Using open source software exclusively.
  - (3) Using only proprietary software.
  - (4) The inability to switch to a different software vendor or product without significant cost or effort.
  - (5) Choosing software based on its popularity.

Please refer to the "Supermarket Sales Data" table to respond to questions 11 through 15.

Transaction ID	Date	Product	Quantity	Price Per Unit	Customer Age	Payment Method
101	2023-08-01	Apples	5	\$0.50	28	Credit Card
102	2023-08-02	Bananas	8	\$0.30	42	Cash
103	2023-08-03	Bread	2	\$1.50	55	Debit Card
104	2023-08-03	Milk	3	\$2.00	30	Cash
105	2023-08-04	Apples	3	\$0.50	22	Credit Card

11. Based on the given data table, what is the quantitative data represented?
- (1) Transaction ID, Date, Product
  - (2) Quantity, Price Per Unit, Customer Age
  - (3) Payment Method
  - (4) Customer Age, Payment Method
  - (5) Transaction ID, Price Per Unit, Quantity
12. From the data table, identify an example of qualitative data:
- (1) Product, Price Per Unit
  - (2) Transaction ID, Quantity

- (3) Customer Age, Payment Method
  - (4) Date, Quantity
  - (5) Payment Method, Price Per Unit
- 13.** Using the data table, what is an example of a valuable information derived from this data?
- (1) Transaction ID 101
  - (2) Date 2023-08-01
  - (3) Product Apples
  - (4) Quantity 5
  - (5) Payment Method Credit Card
- 14.** Based on the data table, what type of information could be considered quantitative, contributing to decision-making?
- (1) Customer Age
  - (2) Payment Method
  - (3) Date
  - (4) Product
  - (5) Transaction ID
- 15.** From the given data table, what is an example of data that, when processed, could turn into information?
- (1) Price Per Unit \$0.50
  - (2) Customer Age 28
  - (3) Quantity 8
  - (4) Payment Method Debit Card
  - (5) Product Milk
- 16.** Which cloud computing service model provides virtualized computing resources over the internet, including virtual machines and storage, allowing users to manage and control the underlying infrastructure?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Cloud Infrastructure Service (CIS)
  - (5) Network as a Service (NaaS)
- 17.** You are a developer who wants to focus on creating and deploying applications without worrying about managing the underlying infrastructure. Which cloud service model would best suit your needs?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Virtualization as a Service (VaaS)
  - (5) Database as a Service (DaaS)
- 18.** Which cloud service model offers fully developed software applications that are accessed over the internet, eliminating the need for users to manage installation, updates, and maintenance?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Application as a Service (AaaS)
  - (5) Platform-Infrastructure Service (PIS)
- 19.** What is a potential disadvantage of using Infrastructure as a Service (IaaS)?
- (1) Limited control over the infrastructure
  - (2) Slow application development
  - (3) High subscription fees
  - (4) Lack of scalability
  - (5) Incompatibility with legacy systems

- 20.** You want to build a web application without worrying about setting up the server, database, and runtime environment. Which cloud service model would be the most suitable choice?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Network as a Service (NaaS)
  - (5) Storage as a Service (StaaS)
- 21.** Which cloud service model offers the most flexibility and control over the underlying resources, making it suitable for businesses that need to host custom applications and manage the software stack themselves?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Managed Infrastructure Service (MIS)
  - (5) Application Hosting Service (AHS)
- 22.** What is a key advantage of Software as a Service (SaaS)?
- (1) High degree of customization
  - (2) Requires extensive IT management
  - (3) Involvement in software development
  - (4) Reduced need for software updates and maintenance
  - (5) Direct access to underlying hardware
- 23.** You want to provide your development team with a preconfigured environment where they can collaboratively build and deploy applications. Which cloud service model should you choose?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Collaboration as a Service (CaaS)
  - (5) Development as a Service (DaaS)
- 24.** Which cloud service model is characterized by easy scalability, automatic updates, and a focus on developer productivity?
- (1) Infrastructure as a Service (IaaS)
  - (2) Platform as a Service (PaaS)
  - (3) Software as a Service (SaaS)
  - (4) Development as a Service (DaaS)
  - (5) Scalability as a Service (SaaS)
- 25.** What is a potential drawback of relying heavily on Software as a Service (SaaS) applications for critical business operations?
- (1) Limited access to real-time data
  - (2) Greater need for infrastructure management
  - (3) Reduced cost-effectiveness
  - (4) Dependence on external service providers
  - (5) Increased development efforts
- 26.** You need to enter a large amount of text into a word processing software. Which input device would be most efficient for this task?
- (1) Mouse
  - (2) Keyboard
  - (3) Scanner
  - (4) Touchscreen
  - (5) Graphics Tablet
- 27.** Which output device is commonly used to print high-quality images and documents, utilizing tiny droplets of ink?

- (1) Laser Printer
  - (2) Dot Matrix Printer
  - (3) Thermal Printer
  - (4) Inkjet Printer
  - (5) Drum Printer
- 28.** You want to create a physical copy of a document quickly using a device that strikes an inked ribbon against paper. Which printer type is suitable for this purpose?
- (1) Dot Matrix Printer
  - (2) Laser Printer
  - (3) Inkjet Printer
  - (4) Drum Printer
  - (5) Line Printer
- 29.** You're designing digital artwork and need a precise, pressure-sensitive device to control various brush strokes and styles. What input device should you consider?
- (1) Joystick
  - (2) Mouse
  - (3) Trackball
  - (4) Keyboard
  - (5) Graphics Tablet
- 30.** Which scanning device is used to create high-resolution digital images of photographs, slides, and documents?
- (1) Flatbed Scanner
  - (2) Barcode Scanner
  - (3) Document Scanner
  - (4) Drum Scanner
  - (5) Handheld Scanner
- 31.** You're working on a project that requires reading data from barcodes on products in a warehouse. What device would be the most suitable for this task?
- (1) Flatbed Scanner
  - (2) Document Scanner
  - (3) Handheld Scanner
  - (4) Drum Scanner
  - (5) RFID Scanner
- 32.** You need to store a large collection of movies, music, and documents with the ability to access them quickly. What type of storage device should you use?
- (1) Hard Disk Drive (HDD)
  - (2) Solid State Drive (SSD)
  - (3) Optical Disc Drive (ODD)
  - (4) Flash Drive (USB)
  - (5) Magnetic Tape Drive
- 33.** You are designing a gaming system and need a processing device that can handle complex calculations and graphics rendering. What processing unit would you choose?
- (1) Central Processing Unit (CPU)
  - (2) Graphics Processing Unit (GPU)
  - (3) Digital Signal Processor (DSP)
  - (4) Field Programmable Gate Array (FPGA)
  - (5) Application Specific Integrated Circuit (ASIC)
- 34.** You need to make a physical copy of a document using a device that creates an image by striking a ribbon against paper. Which printer type would you consider?
- (1) Inkjet Printer
  - (2) Laser Printer

- (3) Dot Matrix Printer
  - (4) Thermal Printer
  - (5) Drum Printer
- 35.** You want to create a 3D model of a product for your engineering project. Which input device would be most appropriate for this task?
- (1) Mouse
  - (2) Keyboard
  - (3) Graphics Tablet
  - (4) Joystick
  - (5) 3D Scanner
- 36.** You are analyzing a large dataset containing customer purchase histories to identify trends. Which data processing method would be most efficient for this task?
- (1) Automatic Data Processing
  - (2) Manual Data Processing
  - (3) Semi-Automatic Data Gathering
  - (4) Manual Data Gathering
  - (5) Automatic Data Gathering
- 37.** You want to gather opinions from a diverse group of people on a new product. What method of data gathering would be most appropriate for this scenario?
- (1) Interviews
  - (2) Data Sampling
  - (3) Observation
  - (4) Questionnaires
  - (5) Automatic Data Gathering
- 38.** You need to collect data on the behavior of shoppers in a retail store. Which data gathering method would allow you to directly observe and record the actions of customers?
- (1) Interviews
  - (2) Questionnaires
  - (3) Data Sampling
  - (4) Observation
  - (5) Automatic Data Gathering
- 39.** You are conducting a study on the preferences of moviegoers. Which data gathering method would provide structured and standardized responses for analysis?
- (1) Interviews
  - (2) Data Sampling
  - (3) Observation
  - (4) Questionnaires
  - (5) Semi-Automatic Data Gathering
- 40.** You want to process a large volume of financial transaction data quickly and accurately. Which processing method is the most suitable choice?
- (1) Automatic Data Processing
  - (2) Manual Data Processing
  - (3) Semi-Automatic Data Gathering
  - (4) Manual Data Gathering
  - (5) Automatic Data Gathering
- 41.** In a remote village, you need to gather information about the residents' livelihoods. What data gathering method would be most effective considering the limited resources available?
- (1) Interviews
  - (2) Questionnaires
  - (3) Data Sampling
  - (4) Observation

- (5) Manual Data Gathering
- 42.** You are conducting a research study and need a representative subset of data from a larger population. Which data gathering method would you use to obtain this subset?
- (1) Automatic Data Processing
  - (2) Semi-Automatic Data Gathering
  - (3) Data Sampling
  - (4) Observation
  - (5) Interviews
- 43.** You're analyzing weather patterns using data collected by sensors placed at various locations. Which data gathering method is being used in this scenario?
- (1) Automatic Data Gathering
  - (2) Manual Data Gathering
  - (3) Data Sampling
  - (4) Observation
  - (5) Questionnaires
- 44.** You need to process data related to employee salaries, tax deductions, and benefits. What data processing method ensures accurate and error-free calculations?
- (1) Automatic Data Processing
  - (2) Manual Data Processing
  - (3) Semi-Automatic Data Gathering
  - (4) Manual Data Gathering
  - (5) Data Sampling
- 45.** You are creating a survey to gather information about user preferences for a new software application. What data gathering method allows you to reach a large number of respondents efficiently?
- (1) Interviews
  - (2) Data Sampling
  - (3) Observation
  - (4) Questionnaires
  - (5) Semi-Automatic Data Gathering
- 46.** In an industrial automation setting, you need to monitor the temperature of a chemical reaction in real-time to ensure safety and efficiency. Which type of sensor would you choose for this critical task?
- (1) Photodetector
  - (2) Capacitive Sensor
  - (3) Thermocouple
  - (4) Hall Effect Sensor
  - (5) Humidity Sensor
- 47.** You are designing a smart home system that can detect the presence of occupants in different rooms and adjust lighting and temperature accordingly. Which type of sensor technology would best fulfill this requirement?
- (1) Pressure Sensor
  - (2) Proximity Sensor
  - (3) Ultrasonic Sensor
  - (4) Infrared Sensor
  - (5) Gas Sensor
- 48.** In an agricultural setup, you need to monitor soil moisture levels to optimize irrigation and prevent over-watering. Which type of sensor would be most appropriate for this task?
- (1) Strain Gauge Sensor
  - (2) pH Sensor
  - (3) Force Sensor
  - (4) Capacitive Soil Moisture Sensor
  - (5) Gyroscope Sensor

49. You're developing a wearable fitness device that tracks a person's movement and provides real-time feedback on their physical activity. Which type of sensor technology is likely to be employed in this device?
- (1) Barometer Sensor
  - (2) Proximity Sensor
  - (3) Accelerometer Sensor
  - (4) Gas Sensor
  - (5) Thermocouple
50. In an automotive system, you need to measure the rotation speed of a wheel to ensure optimal performance of the vehicle's anti-lock braking system. Which type of sensor would be most suitable for this application?
- (1) Hall Effect Sensor
  - (2) Infrared Sensor
  - (3) Photodetector
  - (4) Pressure Sensor
  - (5) Optical Sensor

## Part II

(1) Choose the most appropriate answer from the list given below to fill in the blanks.

**[Operating System, Spreadsheet Software, Qualitative, Discrete, System Software, Open Source, Application Software, Software as a Service (SaaS), Information, Qualitative & Quantitative, Platform as a Service (PaaS), Platform as a Product, Infrastructure as a Service (IaaS), Open Source, Closed Source]**

- (i) System software, such as an \_\_\_\_\_, provides essential functions for managing hardware resources and running other software applications.
- (ii) Quantitative data is typically expressed in numerical values and can be measured, while \_\_\_\_\_ data represents qualities or attributes that can't be measured numerically.
- (iii) An example of Application Software is a web browser, while an example of \_\_\_\_\_ is the operating system that the browser runs on.
- (iv) A key characteristic of \_\_\_\_\_ software is that its source code is made freely available, allowing users to modify and improve it collaboratively.
- (v) In cloud computing, \_\_\_\_\_ allows users to access and use software applications over the internet, often through a subscription model.
- (vi) When data is processed, organized, and presented in a meaningful context, it becomes \_\_\_\_\_.
- (vii) \_\_\_\_\_ data is collected through interviews, surveys, and questionnaires, while \_\_\_\_\_ data is obtained through measurements and numbers.
- (viii) An advantage of \_\_\_\_\_ as a service (PaaS) is that it provides a development platform and tools without the need to manage the underlying infrastructure.
- (ix) In cloud computing, \_\_\_\_\_ allows users to rent virtualized computing resources like virtual machines and storage.
- (x) Proprietary software is often controlled and owned by a single entity, while \_\_\_\_\_ software is developed collaboratively by a community and its source code is publicly available.

(2) Read the following scenario and provide answers to the questions based on the provided scenario.

In a rapidly growing e-commerce company named "TechShop," various software systems play a crucial role in its daily operations. The company employs a range of both application software and system software to ensure smooth functioning and efficient management of its processes.

Application software is extensively utilized to handle different tasks. For instance, the company employs a web-based order management system developed in-house using proprietary software. This application helps in processing customer orders, tracking inventory, and generating invoices. Additionally, a customer



relationship management (CRM) software based on open source technology is used to maintain a comprehensive database of customer interactions and preferences.

On the other hand, the backbone of the entire operation lies in the system software. An operating system handles hardware resources and manages software applications. The company primarily relies on a proprietary operating system customized to its requirements. It ensures optimal performance and security, enhancing the overall user experience.

Furthermore, cloud computing services are integrated into TechShop's operations. The company utilizes Infrastructure as a Service (IaaS) to host its website and databases on a cloud server. Additionally, the customer support team uses a Platform as a Service (PaaS) to develop and deploy applications that enhance customer engagement.

- (i) Explain how the company uses application software in its daily operations, providing examples of the proprietary and open source software applications it employs.

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- (ii) Describe the role of the customized proprietary operating system in TechShop's operations and explain why system software is essential for the company's functioning.

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- (iii) How does cloud computing benefit TechShop? Explain the difference between Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) in the company's context.

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- (iv) Discuss the advantages and disadvantages of using both proprietary and open source software applications in TechShop's business model.
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- (v) Analyze the impact of cloud computing on TechShop's scalability, cost-effectiveness, and ability to adapt to changing customer demands.
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(3) Read the following scenario of **“CodeCrafters”** and provide answers to the questions based on the provided scenario.

In the bustling workspace of "CodeCrafters," a software development company, a symphony of technology is at play. The company's talented developers bring innovative ideas to life using an array of devices and tools that enable their creative process.

Input devices hold a significant role in this environment. Developers effortlessly glide their fingers across ergonomic keyboards, keying in complex lines of code. Precision mice with customizable buttons help navigate intricate codebases, while graphic tablets allow for precise design work. Furthermore, voice recognition software has been integrated to allow developers to input code through speech, boosting efficiency.

Output devices, too, play a crucial role. High-resolution monitors showcase code and design outputs in vivid detail, ensuring accuracy during development. For collaborative reviews, large interactive displays foster discussion and ideation. Additionally, the tactile feedback from printers’ aids in physicalizing code, as well as generating documentation and design mockups.

- (i) Describe how input devices are utilized at CodeCrafters to facilitate the development process, providing examples of devices and their functions.
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(ii) How do output devices contribute to the development environment at CodeCrafters? Give instances of how different output devices are used by the developers.

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(iii) Explain the significance of using voice recognition software as an input device in the software development context at CodeCrafters.

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(iv) How do high-resolution monitors and interactive displays enhance collaboration and the development workflow at CodeCrafters?

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(v) In what ways do printers serve the developers' needs at CodeCrafters, beyond just generating documentation and design mockups?

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(4) Read the provided statements and write "True" if the statement is accurate, or write "False" if the statement is incorrect, in the provided space.

- (i) Manual data processing involves the use of computers to perform tasks that require human intervention and decision-making. \_\_\_\_\_
- (ii) Questionnaires are a form of manual data gathering method that involves direct observation and recording of data. \_\_\_\_\_
- (iii) Automatic data processing is always faster and more accurate than manual data processing. \_\_\_\_\_
- (iv) Sensors are devices that can only detect physical properties such as temperature and light. \_\_\_\_\_
- (v) In semi-automatic data gathering, human intervention is required only during data analysis and interpretation. \_\_\_\_\_
- (vi) Gas sensors are commonly used to monitor air quality and detect pollutants indoors. \_\_\_\_\_
- (vii) Data sampling is a manual data gathering method that involves collecting data from a small subset of a larger population for analysis. \_\_\_\_\_
- (viii) Automatic data gathering involves data collection without any human intervention or control. \_\_\_\_\_
- (ix) Humidity sensors are used to measure the moisture content in the soil for agricultural applications. \_\_\_\_\_
- (x) Infrared (IR) sensors can be used to detect motion and presence, making them useful in security systems. \_\_\_\_\_