



Association of Accounting Technicians of Sri Lanka

Level II Examination - July 2026

Question Paper and Suggested Answers

**(2802) DIGITAL TRANSFORMATION & INFORMATION
SYSTEMS (DTI)**

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THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

Level II Examination - July 2026

(2802) DIGITAL TRANSFORMATION & INFORMATION SYSTEMS (DTI)

SUGGESTED ANSWERS

Fifteen (15) Compulsory Questions
(Total 25 Marks)

SECTION - A

Suggested Answers to Question One:

1.1 (2)	1.6 (2)	1.11 True
1.2 (4)	1.7 (2)	1.12 False
1.3 (3)	1.8 (2)	1.13 True
1.4 (2)	1.9 (3)	1.14 False
1.5 (1)	1.10 (3)	1.15 True

(02 marks each, 20 marks)

(01 mark each, 05 marks)

(Total 25 marks)

End of Section A

Suggested Answer for Question Two:

Chapter 01 : Concepts of Information Systems and Impact of Information Systems

(a)

1. Hardware

- Used to process data and produce information
- Hardware controlled by software

2. Software

- Software consists of the programs and applications used to process pharmacy operations such as sales, inventory management, supplier orders, and customer prescriptions.
- It automates business processes, improves efficiency, and reduces manual errors.

3. Data

- Data is the raw facts, figures and details collected by information system.
- It's processed and stored to produce meaningful information.

4. Procedures

- The rules, processes, guidelines, methods and instructions that explain how tasks should be performed.
- They help to maintain consistency, efficiency and accuracy.

5. Communication

- Communication refers to the process of exchanging data and information between different users and systems.
- It helps to connect different devices, systems and databases so that information can be shared effectively.

6. People

- People include managers, pharmacists, cashiers, and system users who operate and manage the information system.
- Their knowledge, training, and correct use of the system are essential for accurate data entry and effective decision-making.

(04 marks)

(b)

1. Improved Inventory Management / Automated Inventory Management System

- The system monitors stock levels in real time and alerts staff when medicines are running low.
- This reduces stock shortages and ensures medicines are available for customers.
- Reduce manual errors.
- Improve customer satisfaction.

2. Faster and Better Decision-Making

- Computerized reports on sales, inventory, and customer purchases can be generated quickly.
- Management can make timely decisions regarding ordering stock, identifying popular medicines, and improving customer service.

(3) Barcode Scanning System:

- Speeds up the billing process.
- Reduces human errors.

(3) POS System Integration:

- Records sales instantly.
- Improves reporting accuracy.

(4) Faster and more accurate reporting:

With manual record-keeping, generating reports can be slow and prone to errors. An information system can quickly produce daily, weekly, or monthly sales reports with high accuracy. This allows management to make better decisions based on reliable data, such as identifying best-selling products or monitoring business performance more effectively.

(5) Better customer service and record management:

A computerized system can store customer prescription history and purchase records in an organized database. This makes it easy to retrieve information when needed, helping staff provide faster service and personalized care. It also reduces the risk of losing important records and improves the overall efficiency of handling customer information.

(04 marks)

(c)

- Understandable
- Relevant
- Complete
- Available
- Reliable
- Concise
- Timely
- Cost Effective

(02 marks)

(Total 10 marks)

Suggested Answer for Question Three:

Chapter 02: Information Technology Infrastructure
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(a)

- 1) **Structure of data:** The structure of the data decides how we need to store and retrieve it. Selecting the right database allows to work with different varieties of data formats. This allows to select the right data structures for storing and retrieving the data.
- 2) **Size of data to be stored:** This factor decides the amount of data needs to be store and retrieve from an application. The amount of data needs store and retrieve vary depending on the data structure selected, the ability of the database to handle data across multiple file systems.
- 3) **Speed and scalability:** This decides the speed required for retrieving data from the database and writing the data to the database. It addresses the time taken to serve all incoming reads and writes to user application. Some databases are designed to optimize read-heavy applications, while others are designed in a way to support write-heavy solutions. Selecting a correct database that caters application's input/output needs can increase the overall efficiency.
- 4) **Accessibility of data:** The number of users simultaneously accessing the database and the level of computation involved in accessing any specific data are also important factors to consider when selecting a database. The application processing speeds will affect, if not considered.
- 5) **Data modeling:** This helps to map application's features and its data requirements into the data structure and will need to implement the same within the database.
- 6) **Scope for multiple databases:** During the modeling process, it may realize that it needs to store data in a specific data structure and without it, some queries cannot be optimized fully.
- 7) **Safety and security of data:** This is an important aspect to check the level of security that the database provides to the data stored in it. In situations where stored data is highly confidential, it has to be stored in a protected database.

(06 marks)

(b)

(1) **Cost:**

Cost of the connection is an important factor to be consider where, it needs to have a good balance between speed, price and services it offers.

(2) Speed:

Business organizations must consider the amount of speeds offer to run business functions during off and peak hours during the day. Some consider, speed is the most important factor when determining an ISP.

(3) Business or Residential:

ISPs usually categorizes services they offer to business users and to residential use. Business-class connections provide more reliability, greater upload speeds, and other advantages important to some organizations with higher charges.

(4) Availability:

This is the key deciding factor in rural areas. A high-speed cable or fiber connection is worthless to the business if, the provider doesn't provide service around the required area.

(5) Security & VAS-Value Added Services:

Service providers are capable of giving enhanced security features like firewalls, DDoS attack protection. These features may offer free of charge or may have to get as VAS based on the package selected. Protecting organizational system and data at the ISP level is more successful rather preventing attacks at the organizational infrastructure level.

(6) How reliable? Are there Service Level Agreements?

Most business level Internet connections come with assurances regarding uptime, latency and other metrics.

(7) What are the terms of the contract?

Some ISP contracts restrict what users can do using the Internet connection. For example, some ISPs specifically restrict customers under residential service contracts from hosting websites or other online services.

(8) What is the upload and download speeds?

It is important to consider upload and download speeds, as the provided service does not offer the same speeds for both. This is essential businesses running online services or make frequent access of cloud-based services such as file storage and online backup over the Internet.

(9) Does the ISP offer integrated voice and data service?

Many business organizations to obtain both voice and data services from the same vendor, over the same lines, sharing much of the same equipment. Integrated services can be less expensive and less complicated to manage than separate voice and data services from different ISPs.

(10) What are the redundancy options?

Reliability is likely the biggest factor, especially for business organizations. Having unreliable internet is a risk and unproductive to the organizations. If the company in an industry that cannot afford to risk internet service interruptions, it's wise to consider an ISP that offers a Service Level Agreement (SLA)

(04 marks)
(Total 10 marks)

Suggested Answer for Question Four:

Chapter 03 : Information Systems in Organizations

(a)

(1) Drill down capability:

The investigation of information in detail. For example, an executive may notice a drop in corporate sales by region or by years or by months.

(2) Critical Success Factors (CSFs):

The factors are most serious to the success of an organization. Such factors can be found from any management level (strategic, managerial, or operational).

(3) Better access to information:

Fast access to current information, provided by a computer system. It may require daily or even hourly operational tracking and reporting. Example, real-time access and reporting facilities.

(4) Analysis:

Analytical capabilities in EIS that use mathematical formulae to obtain an optimum solution directly or to predict results, mainly in solving structured problems.

(5) Exception reporting:

In which user's attention is only needed in cases with very poor or good performance situations.

(6) User-friendly interface:

Some systems are equipped with audio / visual components to alert the user.

(7) Better communication facilities:

Better modes of communication are available such as e-mail, a transfer of files over the network and other internet-based communication facilities.

(04 marks)

(b)

Any **two** of the following are acceptable:

- Data visualization tools
- Business intelligence reporting tools
- Self-service analytics platforms
- Statistical analysis tools
- Big data platforms.

(02 marks)

(c)

- (1) Financial benefits.
- (2) Flexibility.
- (3) Competitive advantage.
- (4) Higher quality and better performance.
- (5) Innovation and Technology.
- (6) Faster Turnaround Times.
- (7) Scalability.
- (8) Compliance with Regulations.
- (9) Data Insights and Analytics.
- (10) 24/7 Operations

(04 marks)
(Total 10 marks)

Suggested Answer for Question Five:

Chapter 04: Cybersecurity & Data Protection

(a)

1. Protects patients' confidential personal and medical information from unauthorized access.
2. Builds patient trust and confidence in the hospital's digital healthcare services.
3. Ensures compliance with legal and regulatory requirements, such as the Personal Data Protection Act (PDPA).
4. Reduces the risk of identity theft, data breaches, and financial or reputational damage.
5. Protect Freedom and prevent surveillance abuse.
6. Prevents cybersecurity threats and attacks.
7. Prevent financial fraud and integrity threat.

(04 marks)

(b)

(1) **Data Encryption:** Data encryption is the process of converting normal data (like text, files, or messages) into a coded format that is unreadable without a special key. It's like locking your data in a box and only giving trusted people the key to open it.

(2) **Implement Strong Authentication Methods:** Use of two-factor (2FA) or multi-factor authentication (MFA) to ensure only authorized users can access sensitive data and systems.

(3) **Use Strong Passwords:** Passwords should be easy to remember and difficult to guess. It is best not to use words such as child's name, pet's name or favorite sports team as this type of information might be easily guessed. Use random words to create a strong passwords, numbers and symbols can still be used.

(4) **Regular Software Updates and Patch Management:** Ensures systems are up to date, protecting against vulnerabilities that could be exploited by cybercriminals. This is when the supplier no longer updates software e.g. operating systems such as Windows, apps, web browsers, etc. Although the software will continue to operate, it will no longer protect against online threats through updates or patching.

(5) Network Separation and Firewalls: Divides the network into smaller parts to limit the impact of a potential breach and uses firewalls to filter malicious traffic.

(6) Use of Security Tools and Software - Antivirus, anti-malware, and intrusion detection systems (IDS) to detect and prevent cyber threats. Computers, tablets and smart phones can easily become infected by small pieces of software known as malware.

(7) Continuous Monitoring and Threat Intelligence: Tools and systems that monitor and analyze network activity in real-time to identify emerging threats.

(04 marks)

(c)

- (1) Applicability.
- (2) Rights of Data Subjects.
- (3) Data Controllers and Processors.
- (4) Data Retention & Purpose.
- (5) Consent.
- (6) Data Security and Breach Management.
- (7) Cross Border Data Transfers.
- (8) Penalties and Enforcement..

(02 marks)
(Total 10 marks)

Suggested Answer for Question Six:

Chapter 05 : Technology Trends Impacting on Information Systems

(a)

- Increased customer convenience
- Expanded customer base and financial inclusion
- Higher Security
- Lower operating cost
- Increase transaction speed
- Attract customers who prefer to use less cash in hand
- Better data analytics.

(02 marks)

(b)

(1) Increased Efficiency:

Automation and AI reduce the time and effort needed for repetitive tasks, leading to faster processes and higher productivity.

(2) Improved Decision-Making:

AI and machine learning help analyze large amounts of data, providing insights that lead to better decision-making and more targeted strategies.

(3) Cost Reduction: Technologies like 3D printing lower manufacturing costs by enabling faster prototyping, customizations, and on-demand production.

(4) Innovation: Emerging technologies drive new product development and service offerings, giving businesses a chance to attract customers with unique solutions.

(5) Enhanced Customer Experience: Technologies such as AR/VR provide immersive experiences, improving how customers interact with products and services.

(6) Competitive Differentiation: Early adoption of cutting-edge technologies can help businesses stand out from competitors and establish themselves as industry leaders.

(7) Improved Collaboration: With tools like cloud-based platforms, remote work tools, and collaborative software, teams can work more efficiently from different locations.

(8) Future-Readiness: By adopting new technologies, companies position themselves for long-term growth, ensuring they stay relevant in a rapidly changing market.

(04 marks)

(c)

1. Use clear and specific instructions in the prompt.
2. Provide relevant context or background information.
3. Specify the desired output format (e.g., list, table, step-by-step explanation).
4. Assign a role or persona to the AI (e.g., "Act as a financial advisor").
5. Break down complex tasks.
6. Use examples into prompt.
7. Ask AI To think from a specific perspective.
8. Use context for better result.
9. Use step-by-step instructions.
10. Experiment and adjust

(04 marks)

(Total 10 marks)

Suggested Answer for Question Seven:

Chapter 06 : Ethical, Social and Legal Environment for Information Systems

(a)

(1) Computer Hardware Platform:

Examples:

- Servers (physical or cloud-based).
- Desktop.
- Data centres.
- Laptop.
- Client devices.
- Printers.
- High-performance processing for analytics.
- Data storage devices.
- Backup services.
- Barcode scanners.

(2) Data Management and Storage including Cloud-based platforms:

Examples:

- Oracle database.
- Microsoft SQL server.
- MySQL.
- Postgre SQL.
- Mongo DB.
- IBM Db2.
- Use of enterprise DBMS to manage farmers' records, orders, pricing, and delivery schedules.
- Adoption of cloud computing architecture.
- Use of centralized storage (NAS / SAN / Cloud Data Centres).
- Enables data sharing across regions.
- Supports scalability and remote access.
- Improves data consistency and integration.

(3) Networking / Telecommunications Platform:

Examples:

- Connectivity between regional offices. Wide area networking, enterprise network, routers, switchers, firewall, Wi-Fi access, points internet connections, VPN for remote workers.

- Internet platform integration.
- Supports real-time dashboards.
- Enables cloud access.
- Secure communication with farmers and retailers.

(4) Operating System Platforms:

Examples:

- Server OS (Windows Server / Linux / Ubuntu / Oracle / Microsoft excel)
- Supports database & enterprise apps
- Cloud server OS compatibility

(5) Enterprise Software Solutions:

Examples:

SAP ERP, Oracle ERP cloud, Sales force CRM, Microsoft Dynamics, 365, Odoo.

(6) Internet Platform:

Examples:

- Webservers, Cloud Services, E commerce systems.
- Farmer mobile app, retailer ordering portal, Supplier Portal, Real time dash board, online payment gateway.

(7) Consulting and systems Integration Services:

Examples:

- ERP implementation consulting.
- Cloud migration services.
- Database integration services.

(04 marks)

(b)

Management Level	Information System	Decision Type
Operational Level	Transaction Processing System (TPS)	Routine/Structureded decisions/ Operational / Short term
Tactical (Middle) Level	Management Information System (MIS)	Semi-structured decisions/ Management decision / Technical decision
Strategic (Top) Level	Executive Information System (EIS) or Decision Support System (DSS) Business Expert System	Strategic/Unstructured decisions / Long term

(06 marks)

(c)

(1) **Automation of Processes:** Digital tools and software automate repetitive tasks, reducing human error and freeing up employees for higher-value work. For example, automating inventory management or customer support improves operational speed.

(2) **Data-Driven Decision Making:** By analyzing data in real time, organizations can identify inefficiencies, predict potential challenges, and respond quickly to changing market conditions. This not only improves overall efficiency but also enhances agility, empowering companies to stay competitive in a fast-paced and ever-evolving business landscape.

(3) **Enhanced Communication and Collaboration:** Cloud-based platforms and digital communication tools enable teams to collaborate seamlessly, regardless of location, by providing real-time sharing of information and centralized access to resources. These tools reduce delays, streamline workflows through automation, and ensure smooth project management. The result is improved efficiency, enhanced productivity, and a more connected workforce.

(4) **Cost Reduction:** Digital tools help to streamline business processes. It reduces the need for physical human/ devices (resources) and minimizes operational costs. Finally, contributing to a leaner and more cost-efficient organization.

(05 marks)

(d)

1) Data Privacy / Security

Farmers' and retailers' personal and business information must be collected, stored, and processed securely with proper consent to prevent unauthorized access or misuse.

2) Algorithmic Bias and Fairness

AI-based pricing or decision systems may unintentionally disadvantage certain farmers if algorithms are biased or based on incomplete data. Decisions should be transparent and regularly reviewed.

3) Intellectual Property Rights

Data such as farming methods, pricing strategies, and market insights may belong to farmers or retailers. **AgroLink** might use or share this data for profit without proper permission. It is important to respect ownership of data and knowledge and not exploit users' information unfairly.

4) **Ethics of Artificial Intelligence (AI)**

Digital transformation offers significant benefits, including automation, data-driven decision-making, and improved collaboration, all of which contribute to increased operational efficiency and cost reduction. However, these advancements bring critical ethical and security challenges, such as privacy concerns, data security risks, and potential digital exclusion for rural farmers who lack access to technology. To operate responsibly, organizations must ensure transparency and accountability in AI systems to prevent bias or manipulation, while also committing to environmental sustainability through the "Reduce, Reuse, and Recycle" approach to managing electronic waste

(04 marks)

(e)

Reduce: Reduce means minimizing electronic waste by making smart purchasing and usage decisions. This includes buying only necessary devices, maintaining and repairing them to extend their lifespan, choosing durable and upgradeable products, and opting for energy-efficient technology.

Reuse: An old computer should continue to be used if it meets the user requirements. Otherwise, it can be given to someone who needs it or the functional components may be used from a retired product. By using the hardware for a longer period of time, the total environmental footprint caused by computer manufacturing and disposal will be reduced greatly.

Recycle: When computers cannot be reused, even after considering the prospects of refurbishing, they must be disposed properly in environmentally friendly ways. Old electronic systems should be recycled by taking component material and reprocessing it into the same material or breaking it down into constituent materials for reuse.

(06 marks)

(Total 25 marks)

End of Section C

Notice:

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