Association of Accounting Technicians of Sri Lanka

Level II Examination - January 2025

Suggested Answers

(202) INFORMATION SYSTEMS IN DIGITAL ENVIRONMENT (ISD)

Association of Accounting Technicians of Sri Lanka
No. 540, Ven. Muruththettuve Ananda Nahimi Mawatha, Narahenpita,
Colombo 05.
Tel : 011-2-559 669

A publication of the Education and Training Division

THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

Level II Examination - January 2025

(202) INFORMATION SYSTEMS IN DIGITAL ENVIRONMENT

SUGGESTED ANSWERS

Fifteen (15) Compulsory Questions.
(Total 25 Marks)

SECTION - A

Suggested Answers to Question One:

1.1	*(2)*	1.6	*(4)*	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	*(4)*	1.14	*False.*
1.5	*(1)*	1.10	*(4)*	1.15	*False.*

(02 marks each, 20 marks) ***(01 mark each, 05 marks)***

(Total 25 marks)

End of Section A

Five (05) Compulsory Questions.
(Total 50 Marks)

SECTION - B

Suggested Answer for Question Two:

Chapter 01 - Concepts of Information Systems and Impact of Information Systems
Chapter 02 - Information Technology Infrastructure

(a) (i) & (ii) Elements of an information system.

1. **Hardware** – It provides the necessary infrastructure to run software applications, store data, and facilitate communication between different components of the system. The hardware ensures that the system can process and store large volumes of data and support the operational requirements of the organization.
2. **Software** – The applications and programs that run on hardware, including operating systems, database management systems, and business applications that process and manage data. It enables the automation of business processes, data analysis, and decision-making. The software is essential for managing, processing, and analyzing the data collected through hardware, ensuring the system performs as required to support operational tasks, enhance productivity, and ensure security.
3. **Data** – It serves as the system's core input, essential for decision-making, business intelligence, and operational processes, making it a crucial component of any information system.
4. **People** – They ensure the system operates efficiently and securely, playing a key role in its success or failure. The people who design and operate the software and hardware (end users) are probably the most important part of any information system.
5. **Procedures –** Similar to how software complements hardware, procedures ensure the system operates smoothly, offering essential directions, such as user manuals for software and data use.
6. **Communication –** Communication involves systems and devices like the internet, intranets, and extranets that enable data and resource sharing. It facilitates interaction between users, systems, and locations, allowing hardware, software, and pople to communicate effectively and disseminate information.

(02 marks)

(b) Explaining 02 reasons provided below adequately covers the requirements for achieving a score of 04 marks.

1. **Improved decision making –** Information systems provide timely and accurate data that help managers and executives make informed decisions. With data analysis tools, businesses can analyze trends, customer behavior, and operational efficiency, which leads to better strategic decisions.

2. **Enhance Operational efficiency** – Information systems streamline business processes by automating tasks, improving communication, and reducing errors. This enhances productivity, reduces costs, and increases the speed at which tasks are completed, providing a competitive edge.

3. **Improved communication and Collaboration** – Information systems Facilitate better communication and collaboration both within the organization and with external stakeholders. Ex: email, instant messaging, video conferencing and project management platforms.

4. **Competitive Advantage** - Organizations leverage information systems to gain a competitive edge by improving efficiency, enhancing customer service and streamlining operations. Information systems enable better decision making, faster innovation and the ability to stay ahead of competitors.
5. **To improve service delivery to customer** - Generally, today's modern businesses pride themselves on being customer focused and consumer oriented, and many have invested in ensuring that their frontline staffs are versed in customer service.

6. **To improve organization's responsiveness to new developments** – Processing data generated from a diverse range of channels (e.g. sales, web, analytics, inventory controls, customer feedback, industry data, etc.) which if handled correctly can flag developing issues and be the impetus for important strategic decisions and facilitating the implementation of the decisions that have been made, through innovative and (hopefully) cost-effective options some of which it might be possible to build in house.

7. **To change the basis of competition in industry** – Frequently in industry, a degree of complacency can occur when individual business no longer strive to distinguish themselves from their competitors. A certain equilibrium has been obtained and the businesses might be doing "okay". However, for organizations that aim to grow market share; improve visibility; or wish to become the preferred vendor or service provider, ICT/ technology can help them achieve those goals.

8. **To improve your organization's overall performance** – ICT can introduce a paradigm shift in organizations by helping them to re-evaluate, among other things, what might be possible, how they can raise the bar and perform better, and what new services and quality standards should be introduced.

(04 marks)

(c)

Listing 02 common features mentioned below adequately covers the requirements for achieving a score of 02 marks.

Common features of Personal Information Management (PIM) software.

- Calendar management
- Contact management
- Reminders and Notes
- Location Tracking
- Expense Management
- Health and Wellbeing Management

(02 marks)

(Total 10 marks)

Suggested Answer for Question Three:

Chapter 02 - Information Technology Infrastructure

(a)

(i) A Wide Area Network (WAN) is the most suitable type of network for Trans Globe (Pvt) Ltd. Because the company requires connectivity across multiple locations, including its office(s) and remote client sites.

(01 mark)

(ii) Benefits of using a WAN.

Stating 02 benefits mentioned below adequately covers the requirements for achieving a score of 02 marks.

1. **Enable communication across multiple locations (Geographical connectivity) & enable sharing data seamlessly.**
2. **Centralized data management**
3. **Improved communication**
4. **Scalability**
5. **Business Continuity**
6. **Cost Efficiency**

(02 marks)

(b)

Mentioning 02 devices mentioned below adequately covers the requirements for achieving a score of 04 marks.

1. Smartphone

Smartphones are the new breed of mobile phones that have multiple functions similar to those expected from a regular computer. Almost every mobile phone available in the market now will have some sort of smartphone capability. It offers greater communication, supports many general purpose tasks to app enables "anytime. Anywhere" productivity, and provides faster Internet access on the go.

2. Tablet

A tablet computer is a mobile computing device designed to be handheld. Tablets come with a touchscreen facility and are available in a variety of sizes. Tablets perform almost the same functions as a traditional PC does. It provides facilities to access the internet, connect to social network apps, and support multimedia content to play.

3. Laptop

Enables detailed data entry, report generation, and access to the company's information system from anywhere. Laptops are the most common portable computers because they are designed to do almost everything a desktop PC can do, without being stationary.

4. Portable scanner

Helps in scanning and digitizing documents such as invoices, contracts, and client records while visiting client sites.

5. Netbooks

Netbooks are more compact, with about 10-inch screen sizes or smaller and a weight of only two pounds. Netbooks are inexpensive, have a long battery life and can perform common tasks such as surfing the web, checking email, and running less process intense general-purpose applications.

6. Ultra-Mobile PCs

Ultra-mobile PCs provide the same desktop PC computing experience in the smallest size physically. They are very small in size with touch screen, stylus, and keyboard facilities. These devices are more compatible with general-purpose applications than smartphones and physically smaller in the than laptops or netbooks.

7. PDAs

Personal Digital Assistants work like a pocket computer and it has processor, Ram, ROM, operating system and applications loaded and running on the device. The device has integrated field platforms with GPS, cellular, and camera.

(04 marks)

(c)

(i) Perform accounting related operations

QuickBooks, SAP Business One, Freshbooks, Xero, Zoho Books, Peachtree, CashManager, Declaree etc.

(ii) Remotely communicate with stakeholders

Microsoft Teams, Zoom,Syoe for business, Google Meets etc.

(iii) Sketch the designs of products

AutoCAD, SolidWorks, CorelDraw, Adobe Fireworks, adobe photoshop

.

(03 marks)
(Total 10 marks)

Suggested Answer for Question Four:

Chapter 03 - Information Systems in Organizations

(a)

(i) Mentioning any 02 types of information systems mentioned below adequately covers the requirements for achieving a score of 02 marks.

1. Transaction Processing System (TPS)
2. Business Expert System (BES)
3. Process Control System (PCS)
4. Office Automation system (OAS)
5. Management Information System (MIS)
6. Decision Support System (DSS)
7. Executive Information System (EIS)

(02 marks)

(ii) Roles of each information system.

1. Transaction Processing System (TPS)

Records and processes daily business transactions such as sales, payroll, and inventory management. Ensures data accuracy and consistency by automating transaction processing in real-time. It requires a stables, secure, and scalable system with strict data integrity and backup protocols, along with well-defined workflow for accurate and timely data processing.

2. Business Expert System (BES)

Simulates human expert decision-making skills by using artificial intelligence and rule-based logic. Provides recommendations, diagnoses, or solutions in specialized domains like medical diagnosis and fraud detection. Mimics the decision-making ability of a human expert by using a knowledge base and inference rules. Organizations must ensure the systems is updated with relevant domain knowledge, and staff should have technical expertise to maintain and refine the system for accurate decision support.

3. Process Control System (PCS)

Monitors and controls industrial processes in real-time, such as manufacturing, chemical processing, or energy management. Enhances efficiency and safety by automatically adjusting system parameters based on sensor inputs.

4. Office Automation System (OAS)

Automates routine clerical tasks such as document management, email, scheduling and data entry to improve communication and productivity. Organizational requirements include proper training, standardized software and reliable IT infrastructure to ensure smooth implementation and use.

5. Management Information System (MIS)

Provides managers with reports and summaries to assist in planning, controlling, and decision-making. The organization needs structured data collection processes, clear reporting standards and a culture that values data-driven decision-making.

6. Decision Support System (DSS)

Aids in complex decision-making by analyzing data and presenting it in a user-friendly format. Successful implementation requires access to large datasets, analytical tools, and integration with other systems like TPS and MIS to provide relevant information.

7. Executive Information System (EIS)

Provides top executives with easy access to key performance indicators and high-level summaries for strategic decisions. The systems must be user-friendly, customizable and supported by reliable, real-time date sources to meet executives' specific informational needs.

(04 marks)

(b)

Organizations can leverage Business Intelligence (BI) and Business Analytics (BA) to transform large amounts of transactional data into actionable insights, improving efficiency and competitiveness. BI focuses on historic and present data, enabling real-time monitoring of business performance through dashboards, reports, and key performance indicators (KPIs). This helps organizations track trends, patterns, hidden relationships of data and information, detect inefficiencies, and enhance decision-making at operational and strategic levels.

On the other hand, BA focuses on future trends by utilizing advanced techniques such as predictive analytics, machine learning, and statistical modeling to analyze patterns and

make forecasts. By applying BA, businesses can optimize supply chains, personalize customer experiences, and enhance risk management through data-driven strategies. The integration of BI and BA enables organizations to make informed decisions, reduce costs, improve productivity, and gain a competitive advantage in the market.

(04 marks)

(Total 10 marks)

Suggested Answer for Question Five:

Chapter 04 - Ethical, Social and Legal Environment for Information Systems

(a)

How Maleesha can use social networking platforms to commercialize her business.

Explaining ways provided below adequately covers the requirements for achieving a score of 04 marks.

1. **Creating a business page or profile**

Maleesha can set up a professional page on platforms like Facebook, Instagram, and TikTok, showcasing her dress designs, customer testimonials, and behind-the-scenes work. This helps build brand awareness and attract potential customers.

2. **Using paid advertisements**

Social media platforms allow targeted advertising based on different customer groups, interests, and location. She can invest in paid promotions to reach a specific audience interested in fashion and customized dresses.

3. **Engaging with customers**

She can interact with her audience through comments, messages, and live sessions to answer queries, offer styling tips, and build a loyal customer base. User-generated content, such as customer reviews and photos, can enhance credibility.

4. **Selling through social commerce**

Platforms like Facebook marketplace, Instagram shopping, and TikTok shop allow businesses to sell directly through social media platforms. She can set up an online catalog, integrate payment methods, and manage orders efficiently.

5. **Utilizing Social Media Analytic Tools**

Social Media can be used to conduct a more insightful and comprehensive analysis to understand the competition.

(04 marks)

(b) Providing 2 practices provided below adequately covers the requirements for achieving a score of 02 marks.

Practices to improve online security.

1. Using strong passwords and multi-factor authentication (MFA)
2. Being aware of phishing-attacks
3. Regularly updating software and security Settings
4. Restricting access and managing permissions
5. Using up-to-date antivirus software
6. Backing up data
7. Training staff to be cyber aware
8. Managing security relationships with suppliers and partners
9. Move away from unsupported software.

(02 marks)

(c) Explaining 2 legal regulations provided below adequately covers the requirements for achieving a score of 04 marks.

1. Computer Crimes Act, No. 24 of 2007

This law criminalizes unauthorized access to computer systems, modification or deletion of data, hacking, data theft, and cyber-related offenses, ensuring the protection of business data.

2. Electronic Transactions Act, No. 19 of 2006

It provides legal framework & recognition for electronic communications, electronic records, digital signatures, and online transactions, helping businesses to operate legally in the digital space.

3. Intellectual Property Act, No. 36 of 2003

Its main objective is protect intellectual properties such as trademarks, copyrights, and designs, patents, trade names.

4. Payment and settlement Systems Act No. 28 of 2005

Regulates electronic payment systems and ensures the safety and efficiency of electronic funds transfers. Organizations dealing with financial transactions must follow stringent protocols to secure customer data during electronic payments, preventing fraud and date misuse.

5. Data Protection Act No. 9 of 2022

Sri Lanka's first comprehensive data protection law, it outlines guidelines for the collection, processing and storage of personal data, aiming to safeguard individuals' privacy. Organizations are required to obtain consent for data collection, implement data security practices and ensure transparency in data usage.

6. Information and communication Technology Act No. 27 of 2003

Under the ICT Act No. 27 of 2003 ICTA was empowered to formulate and implement strategies and programs in both the government and the private sector and pursuant thereto ICTA prepared programs and strategies on information and Communication technology, which are presently embodied in the "e- Sri Lanka Development Project".

7. Payment Device Fraud Act No. 30 of 2006

Provisions of payment devices fraud act No. 30 of 2006 help to prevent the possession and use of unauthorized or counterfeit payment devices, to create offence connected with the possession or use of unauthorized payment devises, to protect persons lawfully issuing and using such payment devices.

8. Right to Information Act No. 12 of 2016

Right to information Act No 12 of 2016, guarantees the right of access to information and there exists a need to foster a culture of transparency and accountability in public authorities by giving effect to the right of access to information.

(04 marks)
(Total 10 marks)

Suggested Answer for Question Six:

Chapter 05 – Technology Trends Impacting on Information Systems

(a)

Driving forces of the 4th Industrial Revolution for Retail Max.

Explaining 2 driving forces provided below adequately covers the requirements for achieving a score of 04 marks.

1. **Big-data**

Retail Max can use big data analytics to understand customer preferences, predict trends, competitor strategies and make data-driven decisions on product offerings, pricing strategies and supply chain management.

2. **Data visualization tools**

These tools can help managers quickly interpret sales patterns, stock levels, and customer behavior, leading to better business strategies.

3. **Mobile and micro payment technologies**

With the rise of digital wallets like FriMi and Dialog eZ Cash in Sri Lanka, Retail Max can offer fast and convenient mobile payment options. This improves customer experience by reducing checkout times and supporting cashless transactions.

4. **Internet of Things (IoT)**

Smart shelves, RFID-based inventory tracking, and IoT-enabled warehouses can help Retail Max to monitor stock levels in real time, prevent theft, and automate supply chain management, improving operational efficiency.

5. **Artificial Intelligence (AI)**

AI-powered chatbots can assist customers with inquiries, while AI-driven recommendation systems can suggest products based on shopping history.

6. **Robotics and Automation**

Robotics can help in warehouse automation, speeding up logistics and reducing manual workload. It can be used for inventory management, such as automated restocking systems

and robotics in warehouse for sorting and packaging products. Autonomous Delivery vehicles drones could also be explored for last mile delivery.

7. **Cloud Computing**

Retail Max can leverage cloud computing to store and process large amounts of data, enabling real-time updates and collaboration across different branches. Cloud platforms also offer scalable solutions for managing e-commerce operations.

8. **Blockchain**

Blockchain can enhance supply chain transparency and security. Retail Max can trance product origins, verify authenticity, and ensure ethical sourcing, which is especially important for eco-conscious consumers.

9. **Augmented Reality (AR) & Virtual Reality (VR)**

AR and VR can be used to enhance customer experiences. For examples, Retail MAx cloud introduces virtual fitting rooms, allowing customers to try on products virtually before purchase.

10. **3D Printing Application**

Retail Max could use 3D printing o create customized products or prototypes quickly, reducing the time to market for new products. It can also be used for personalized product offerings.

(04 marks)

(b) Digital learning technologies for employee capacity building.

Stating 02 Digital Learning Technologies provided below adequately covers the requirements for achieving a score of 02 marks.

1. E-learning
2. Mobile learning (M-learning)
3. Augmented Reality (AR) and Virtual Reality (VR)
4. Massive Open Online Courses (MOOCs)

(02 marks)

(c) Potential impacts of Fintech on Retail Max's operations.

Explaining two potential impacts provided below adequately covers the requirements for achieving a score of 04 marks.

1. **Faster and Easier Payments**

FinTech solutions, like mobile wallets and QR code payments, allow customers to pay quickly without needing cash or physical cards. This makes the checkout process smoother, reducing waiting times and improving the overall shopping experience.

2. **Improved financial management capabilities**

With FinTech tools, Retail Max can automatically track sales and expenses. These tools help keep accurate records and generate reports, making it easier for the business to manage its finances and plan budgets.

3. **Enhanced customer loyalty**

Many FinTech payment platforms offer features like rewards, discounts, or cashback. Retail Max can use these features to encourage customers to shop more often. When customers earn rewards or get discounts, they are more likely to return to the store.

4. **Stronger security and fraud prevention**

FinTech uses advanced technologies like encryption and real-time fraud detection to secure transactions. This means both the business and its customers benefit from safer payment processes, reducing the risk of financial scams and data breaches.

5. **Integration of Multiple Payment Options**

Fintech allows seamless integration of various payment methods, giving customers flexibility and enhancing the overall shopping experience.

6. **Automated accounting and reconciliation**

FinTech solutions can automatically reconcile payment with accounting systems, reducing manual errors and providing real-time financial data, which aids in more efficient financial decision- making.

7. **Reduced Transaction Fees**

FinTech solutions often bypass traditional banking systems, lowering transaction fees and enabling faster settlements, which can improve operational efficiency and reduce costs.

8. **Automated financial services**

Retail Max can leverage automated loan processing, dynamic pricing and credit services for their customers and suppliers, providing better financial options without added administrative overhead.

(04 marks)

(Total 10 marks)

End of Section B

Suggested Answer for Question Seven:

(a)

Chapter 03 - Information Systems in Organizations

Key factors in selecting a database for *TechnoGro.*

Explaining two key factors provided below adequately covers the requirements for achieving a score of 04 marks.

1. **Scalability and performance**

The database must support growth, handling increasing volumes of data as TechnoGro expands its operations across multiple regions and deliver fast query response times. This is essential for real-time operations like inventory tracking and order processing.

2. **Data security and reliability**

Robust security features (such as encryption, user access control, and regular backups) are crucial to protect sensitive information (for example, customer orders and inventory data). In addition, the system should offer reliable disaster recovery options to minimize downtime.

3. **Integration and interoperability**

Since TechnoGro plans to launch an e-commerce platform and integrate an ERP system, the selected database must easily interface with these systems. Seamless integration ensures data consistency across customer service, sales, and branch operations.

4. **Cost and vendor support**

Evaluate both upfront and ongoing costs (licensing fees, maintenance, and support). A cost-effective solution with strong vendor support will help manage long-term operational expenses and ensure system updates and troubleshooting are handled on time.

5. **Structure of date**

The structure of the data decides how we need to store and retrieve it. Selecting the right database allows us to work with different varieties of data formats. This allows TechnoGro

to work with different varieties of data formats. This allows to selection of the right data structures for storing and retrieving the data.

6. **Size of data to be stored**

This factor decides the amount of data that needs to be store and retrieved from an application. The amount of data that needs to be stored and retried varies depending on the data structure selected.

7. **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. It addresses the time taken to serve all incoming reads and writes to the user application.

8. **Data modeling**

This helps to map to the application's features and its data requirements into the data structure and will need to implement the same within the database. Being with a conceptual model and identify the entities involved within the systems and their associated attributes and relationships exists.

9. **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, same queries cannot be optimized fully. This is due to various reasons such as some complex search requirements or for reporting purposes, data needs to be accessed from more than one type of database for required data for the application.

(04 marks)

(b)

Chapter 03 - Information Systems in Organizations

Database users at *TechnoGro* and their roles.

Mentioning two database users along with their roles explained as provided below adequately covers the requirements for achieving a score of 04 marks.

1. Database Administrators (DBAs)

- Manage installation, configuration, and daily maintenance.
- Secure data with encryption, backups, and access controls.
- Optimize performance and ensure disaster recovery.

2. Application Developers

- Build and maintain applications interfacing with the database.
- Write efficient queries to ensure data integrity and speed.
- Integrate database functions seamlessly into business applications.

3. Ordinary Users

- Interact with user-friendly, pre-built applications for daily tasks.
- Input, view, and update data without technical expertise.
- Rely on simplified interfaces that hide underlying complexity.

4. Sophisticated Users

- Execute advanced, ad-hoc queries using built-in analytical tools.
- Develop custom reports and dashboards for deeper insights.
- Possess enhanced technical skills to explore data beyond basic functions.

5. Specialized Users

- Use custom interfaces tailored to specific domain requirements.
- Analyze data/information for strategic, decision-support insights.

(04 marks)

(c)

Chapter 03 - Information Systems in Organizations

Business functions and examples of different Information Systems (IS)

Providing three business functions with an example below adequately covers the requirements for achieving a score of 06 marks.

1. **Inventory management**
   Example: An Inventory Management System (IMS)
2. **Order processing and sales**
   Example: A robust e-commerce platform combined with an Order Management System (OMS)
3. **Marketing, Sales and Customer Relationship Management**
   Example: Customer Relationship Management (CRM) system, Point of Sales System, Sales Order Information System
4. **Human Resource Management**
   Example: Payroll System, Employee Appraisal System
5. **Accounting and Finance**
   Example: An Enterprise Resource Planning (ERP) system, Financial Information System, Accounting Information System
6. **Operations Management**
   Example: Inventory Management System, Quality Control System

(06 marks)

(d)

Chapter 03 - Information Systems in Organizations

Benefits of implementing an ERP System.

Explaining two benefits mentioned below adequately covers the requirements for achieving a score of 04 marks.

1. **Integrated data management**

ERP systems centralize data from disparate departments, ensuring that everyone works with the same up-to-date information, which reduces errors and duplication.

2. **Enhanced operational efficiency**

By automating routine processes (like order entry and inventory updates), ERP reduces manual work, minimizes errors, and accelerates business operations.

3. **Improved decision making**

Real-time analytics and reporting provided by ERP systems enable managers to monitor performance metrics, identify trends, and make informed strategic decisions quickly.

4. **Better co-ordination and communication / Department Collaboration**

ERP systems link the gap between various branches and departments, fostering smoother collaboration and ensuring that operational changes in one area are communicated and reflected across the organization.

5. **Competitive advantage**

ERP software helps to keep businesses ahead of the competition because businesses no longer run the risk of making costly mistakes, which could place the company behind the others. Companies cannot afford not to have an ERP in their organization, while their competitors invest in ERP and start securing many benefits.

6. **Accurate forecasting**

ERP software provide tools to make more accurate forecasts. This helps users and businesses as a whole, think ahead and properly plan activities sales to financials and even customer services. With stronger forecasting facilities, businesses an effectively decrease business costs.

7. **Scalable Resource**

ERP systems allows to add new users and functions to expand the initially implemented solution over time. No matter how big or small a business is ERP grows with it, being able to occupy new users and data whenever the business needs to expand.

8. **Cost savings**

Handling financials in a business is very important and avoid making costly mistakes that finally, could damage the business. With a single source of accurate, real-time information, enterprise resource planning software reduces administrative and operations cost and allows business to utilize money in other needed areas.

9. **Streamlined Processes**

As businesses expand, their operations become more complex, which unfortunately increases the opportunity for costly mistakes to be made. For example, a manufacturing module automates business operations across departments, providing accurate, real-time information to everyone, while eliminating manual duty, possibly leading to errors.

10. **Mobility**

Another advantage of ERP software is its ability to make users connect to the systems wherever they are, providing deployment styles that will give even on-the-road sales representatives provided with the same opportunities as in-office users to use ERP whenever and wherever they need.

11. **Customized Reporting**

ERP software helps make reporting easier and more customizable, fit to meet the needs of all businesses improved reporting capability and functions, the company can respond to complex data requests more easily, which improves productivity.

12. **Increased Productivity**

Save time and increase productivity levels with ERP software automation and streamlining capabilities, often, when tedious tasks take up much-needed business time, there can be delays in production and these delays can affect business and even customer service.

13. **Flexible Systems**

Modern ERP software systems are robust, flexible and configurable. They are not generally developed for everyone but can be tailored to the unique needs of a business situation. ERP systems also can adapt to the ever changing needs of a growing business needs.

14. **Customer Service**

Provide high-quality customer service using an enterprise solution, especially when a company is well-equipped with ERP. Sales and customer service personnel can interact with customers better and improve relationships with them through faster, more accurate access to customers, information and history.

15. **Data Reliability**

ERP provides reliable data that can be accessed from different locations (if implemented in the cloud) and through multiple devices including mobile devices. With real-time update capabilities, ERP improves data accuracy and consistency.

(04 marks)

(e)

Chapter 03 - Information Systems in Organizations

Providing three types of BPOs mentioned below adequately covers the requirements for achieving a score of 03 marks.

Types of Business Process Outsourcing (BPO) for TechnoGro.

1. Offshore outsourcing
2. Onshore outsourcing
3. Near-shore outsourcing
4. Information Technology enabled service BPD
5. Knowledge process outsourcing
6. Legal process outsourcing
7. Research process outsourcing

(03 marks)

(f)

Chapter 04 – Ethical, Social and Legal Environment for Information Systems

Explaining two ways as mentioned below adequately covers the requirements for achieving a score of 04 marks

Ways to reduce the environmental effects of computing.

1. **Adopt energy efficient hardware and green data centers**

Invest in servers and storage systems that are designed for low power consumption and use data centers that rely on renewable energy sources. This helps to reduce the carbon footprint of the IT infrastructure.

2. **Adopt cloud-computing and virtualization**

Migrating to cloud-based platforms and using virtualized environments can reduce the need for on-premises hardware, thereby lowering energy use and physical space requirements.

3. **Implement green IT practices**

Optimize software applications and use power management settings to minimize energy consumption. Encourage a shift to digital work environments (ex: electronic document management) to reduce paper usage and overall waste.

4. **Enabling power management features**

Without sacrificing performance, computers can be programmed to automatically power down to an energy-saving state when idle. Because PCs are widely used across any given organization, it is very difficult for the IT staff of any organization to manage their organization's PC power consumption prudently.

5. **Using thin client computers**

Users can choose to deploy thin-client computers, which draw about a fifth of the power of a desktop PC.

6. **Using screen servers**

A blank screensaver conserves more power than a screensaver that displays moving images (animations), which continually interacts with the CPU. But even that reduces the monitor's energy expenditure by only a small percentage. The end user may also follow the following tips for reducing energy consumption.

7. **Printing only the necessary documents**

Printing should be done carefully and only those pages should be printed that are indispensable. Apart from electricity, consequently lower cutting down of trees

8. **Refilling the print cartridges**

Refilling of ink cartridges and laser toners are cheaper and does not add to landfill. Hence should be carried out.

9. **Switching off the devices when not in use**

IT hardware devices should be turned off when not in use.

10. **Reuse of computers**

Old discarded computers and monitors shouldn't be thrown away, as they will then end up in landfills causing serious environmental problems. Instead, they should be refurbished and reused or recycled in environmentally friendly ways.

11. **Refurbish**

Old computers and servers can be refurbished to meet new requirements. An old computer and other IT hardware can be made almost new again by reconditioning and replacing their parts. Rather than buying a new computer, refurbished IT hardware can be bought from the market.

12. **Recycle**

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.

13. **Energy Conservation**

IT industry is investing lot of time and money to devise new and effective ways to conserve energy. Companies like IBM, Hewlett Packard, and SprayCool are working on technologies such as liquid cooling, nano-fluid cooling systems, and in-server, in-rack, and in-row cooling.

14. **Eco-friendly design of data centers**

Eco-friendly data center designs and use of environmentally friendly materials for constructions. Eco-designs make use of both natural light as well as green power, which is basically electricity generated from solar or wind energy, to run the data center.

15. **Virtualization**

Virtualization is a major strategy to reduce data center power consumption. In virtualization, one physical server hosts multiple virtual servers.

(04 marks)
(Total 25 marks)

End of Section C

Notice:

These answers compiled and issued by the Education and Training Division of AAT Sri Lanka constitute part and parcel of study material for AAT students.
These should be understood as Suggested Answers to question set at AAT Examinations and should not be construed as the "Only" answers, or, for that matter even as "Model Answers". The fundamental objective of this publication is to add completeness to its series of study texts, designs especially for the benefit of those students who are engaged in self-studies. These are intended to assist them with the exploration of the relevant subject matter and further enhance their understanding as well as stay relevant in the art of answering questions at examination level.