ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

LEVEL II EXAMINATION - JANUARY 2024

(202) INFORMATION SYSTEMS IN DIGITAL ENVIRONMENT

- **Instructions to candidates** (Please Read Carefully)**:**

   (1) ***Time Allowed:***   *Reading   :   15 minutes.*

   Writing   :   03 hours.

   (2) ***All questions should be answered.***

   (3) ***Answers*** *should be in the **medium** applied for, in the **booklets** provided.*

   (4) *State clearly assumptions made by you, if any.*

   (5) ***Action Verb Check List*** *with definitions is attached. Each question will begin with an **action verb** excluding OTQ's. Candidates should answer the questions based on the **definition** of the verb given in the Action Verb Check List.*

   (6) *100 Marks.*

SECTION A
Objective Test Questions (OTQs)
(Total 25 marks)

Question 01

*Select the most correct answer for question No. **1.1** to **1.10**. Write the number of the selected answer in your answer booklet with the number assigned to the question.*

1.1 The fundamental re-thinking, re-direct and re-design of business processes to bring about dramatic improvements in performance is known as:

   (1)   Database Management.

   (2)   Business Process Re-engineering.

   (3)   Business Process Outsourcing.

   (4)   Data Mining.

1.2 Which one of the following is **not** a part of IT infrastructure in an organization?

   (1)   Data management and storage.

   (2)   Computer hardware and operating system platforms.

   (3)   Consulting and system integration services.

   (4)   Marketing awareness and knowledge about impact of IT.

1.3 A company which opened their operations recently is analyzing the benefits of moving to cloud computing services through different aspects. The following statements are extracted from their report which is prepared to analyze the available cloud solutions:

(a) Cloud solutions can be scalable easily to facilitate the growing needs of the business.

(b) Cloud services do not facilitate higher security since everyone can access the same services from any geographical location in the world.

(c) Cloud computing facilitates businesses to restore their data and applications in a fast and reliable way.

(d) Cloud computing offers private cloud, public cloud, and hybrid cloud solutions with different features.

Of the above, the correct statements are:

(1)	**(a), (b)** and **(c)** only.	(2)	**(a), (c)** and **(d)** only.
(3)	**(a), (b)** and **(d)** only.	(4)	All of the above.

1.4 Consider the following statements with reference to the Business Process Outsourcing (BPO):

(a) It is solely used by manufacturing companies.

(b) It gives competitive advantages to companies.

(c) There is a security risk of using BPO due to sharing sensitive information of the businesses.

Of the above, select the correct statement/s:

(1)	**(b)** only.	(2)	**(a)** and **(b)** only.
(3)	**(b)** and **(c)** only.	(4)	**(a)** and **(c)** only.

1.5 Which one of the following is considered as an intentional and malicious information security threats to IT systems and data?

(1)	Malware.	(2)	Keystroke Loggers.
(3)	Back door access to IT System.	(4)	All of the above.

1.6 Consider the following reasons which are influencing the popularity of Enterprise Resource Planning (ERP) systems:

(a) Small companies can start with a basic ERP system and expand it as they expand.

(b) Having an ERP system in place provides a competitive edge, whether for a small business looking to grow or for a multinational corporation looking to maintain its position in the market.

(c) Initial investment in ERP systems cannot be significant.

(d) ERP systems help businesses to automate and integrate various processes.

Of the above, the correct statements are:

(1) **(a), (b)** and **(c)** only.   (2) **(a), (c)** and **(d)** only.

(3) **(a), (b)** and **(d)** only.   (4) All of the above.

1.7 Which one of the following is **not** a positive impact of social media and network on businesses?

(1) The ability to uncover industry trends in real-time.

(2) Lack of control over content.

(3) Positioning power over competitors.

(4) Provide better customer service and customer satisfaction.

1.8 Management Information System (MIS) is a broad term that incorporates many specific systems. Which one of the following is **not** a main type of system included in MIS?

(1) Marketing Information System.   (2) Financial Accounting System.

(3) Business Intelligence System.   (4) Transaction Processing System.

1.9 The Act introduced to facilitate electronic filing of any form, application or any other document with any ministry, department, Provincial Council, Provincial Ministry and department or local authority or office body or agency owned or controlled by the government or a statutory body in a particular manner and to promote efficient delivery of public service by means of reliable forms of electronic communication is:

(1) Information and Communication Technology Act No.27 of 2003.

(2) Electronic Transactions (Amendment) Act No. 25 of 2017.

(3) Payment and Settlement Systems Act No. 28 of 2005.

(4) Computer Crimes Act No. 24 of 2007.

1.10 Indiegogo is an example for:

    (1)   Blockchain.   (2)   Crowdfunding.

    (3)   Operating System.   (4)   Database Management System.

<div align="right">(02 marks each, 20 marks)</div>

*State whether each of the following statements from **1.11** to **1.15** is **True** or **False**. Write the answer (True/False) in your answer booklet with the number assigned to the question.*

1.11   Personal Information Management software can synchronize and integrate with other devices and platforms, allowing users to access their information from multiple sources.

1.12   Mobile devices are commonly used for productivity tasks such as email, document editing and scheduling and they are not capable of running complex applications or software.

1.13   Market trends and patterns of the business cannot be identified using the business intelligence programs.

1.14   Information system privacy refers to the protection of sensitive data from unauthorized access or disclosure.

1.15   Crowdfunding platforms always guarantee a return on investment for investors.

<div align="right">(01 mark each, 05 marks)</div>
<div align="right">(Total 25marks)</div>

———————————————————— *End of Section A* ————————————————————

SECTION B
<div align="center">(Total 50 marks)</div>

Question 02

An information system is a set of interconnected components that work together to collect, process, store and distribute information for a specific purpose.

You are required to:

(a) **Identify** three(03) components of an information system.   (03 marks)

(b) **Explain** two(02) impacts of Information Systems and Information Technology on overall performance of business organizations.   (04 marks)

(c) **Explain** the relationship between "Information Technology (IT)" and "Information Systems (IS)".   (03 marks)

<div align="right">(Total 10 marks)</div>

Question 03

Imagine you are the IT manager of a company with employees spread across various locations in the country. The company has recently implemented a mobile computing strategy, providing employees with enhanced productivity. The company has identified some of the software needs that have to be acquired.

You are required to:

(a) **List** two(02) mobile devices that can be used by the employees of the company to facilitate efficient communication and collaboration among employees. (02 marks)

(b) **Identify** a network connectivity option and an operating system available for each of the mobile devices identified above. (04 marks)

(c) **Identify** the appropriate application software category for each of the following requirements and a suitable software package for each category:

(i) The company needs efficient creation, editing, and formatting of textual documents. This tool should facilitate collaborative efforts among team members, ensuring version control and easy sharing of documents. Additionally, it offers a range of formatting options to meet various document requirements from basic memos to detailed reports.

(ii) The company needs to design and produce marketing collateral such as brochures, flyers, posters, banners, and advertisements. This software allows for precise control over layout, graphics, etc. ensuring that marketing materials are visually appealing and effectively convey the intended message. (04 marks)

(Total 10 marks)

Question 04

A business organization intends to implement a new Enterprise Resource Planning (ERP) system that will facilitate e-commerce and mobile commerce transactions for a diverse clientele, encompassing both local and international markets.

You are required to:

(a) **Explain** two(02) factors to be considered when selecting and implementing of the IT system. (04 marks)

(b) **State** three(03) advantages of e-commerce to customers. (03 marks)

(c) **Explain** the difference between Enterprise Resource Planning Systems (ERP) and Functional Information Systems by considering the "Scope and Purpose" of information systems. (03 marks)

(Total 10 marks)

Question 05

Nexus Solutions, a leading technology company, is planning to leverage social media platforms to enhance its brand presence to engage with customers and to generate leads. However, they are aware of the importance of privacy and IS Security including cyber security. Moreover, the company is resolute in its pursuit of sustainable business practices, placing a strong emphasis on green computing to minimize its carbon footprint.

You are required to:

(a) **List** suitable social media features for the following requirements:

    (i)   Product Promotion.

    (ii) After Sales Services. (02 marks)

(b) **Explain** two(02) factors to be considered by **Nexus Solutions** to adapt the green computing practices. (04 marks)

(c) **Explain** two(02) steps that can be taken to protect users and business data against cyber security threats. (04 marks)

(Total 10 marks)

Question 06

You are the senior consultant hired by a prominent taxi service, **TechRide**, to evaluate and recommend advancements in their technological infrastructure. You involve providing comprehensive guidance, with a primary focus on leveraging financial technology, harnessing the potential of artificial intelligence and optimizing the adoption of M-Learning for staff training initiatives.

You are required to:

(a) **Identify** three (03) primary areas where **TechRide** taxi service incorporates financial technologies into its operations. (03 marks)

(b) **State** three(03) advantages of developing an M-learning app by the **TechRide** taxi service. (03 marks)

(c) **Explain** how Artificial Intelligence (AI) can be built within **TechRide** taxi system. (04 marks)

(Total 10 marks)

———— *End of Section B* ————

SECTION C
(Total 25 marks)

Question 07

Super Drug Mart Ltd., which is a multi-location pharmacy network, comprises of ten branches in the western province. The head office is located in Borella and the company purchases drugs from a reputed company in Sri Lanka and sells through their pharmacy network. However the company has faced challenges in coordinating inventory levels, prescription processing, and customer interactions in their pharmacies. This led to inefficiencies of operation, occasional stockouts and delays in service delivery. To address these issues, the pharmacy network sought to implement a centralized information system capable of unifying operations. They expected the commencement of the online pharmaceutical retailing feature through the newly implemented system connecting all their pharmacies and commence promotional activities on various social media platforms.

Super Drug Mart Ltd. is actively seeking to establish a secure internet connection to integrate all branches with the new information system. In addition to that, the company is planning to establish their own website to attract stakeholders.

You are required to:

(a) **Identify** four(04) factors that **Super Drug Mart Ltd.** should take into consideration when choosing an Internet Service Provider (ISP). (04 marks)

(b) **Explain** an Information System that can be used by each of the three (3) management levels of **Super Drug Mart Ltd.** (06 marks)

(c) **State** four(04) areas where **Super Drug Mart Ltd.** could employ data mining techniques. (04 marks)

(d) **Explain** two(02) benefits that **Super Drug Mart Ltd.** may gain from the implementation of a website. (04 marks)

(e) **Explain** two(02) ways by which the efficiency of business operation is achieved through a Cloud-based Solution. (04 marks)

(f) **Identify** three(03) privacy concerns that may arise from the utilization of social media by **Super Drug Mart Ltd.** (03 marks)

(Total 25 marks)

End of Section C

ACTION VERBS CHECK LIST

Level of Competency	Description	Action Verbs	Verb Definitions
Knowledge (1)	Recall Facts and Basic Concepts.	**Draw**	Produce a picture or diagram.
		Relate	Establish logical or causal connections.
		State	Express details definitely or clearly.
		Identify	Recognize, establish or select after consideration.
		List	Write the connected items.

Level of Competency	Description	Action Verbs	Verb Definitions
Comprehension (2)	Explain & Elucidates Ideas and Information.	**Recognize**	Show validity or otherwise, using knowledge or contextual experience.
		Interpret	Translate into understandable or familiar terms.
		Describe	Write and communicate the key features.
		Explain	Make a clear description in detail using relevant facts.
		Define	Give the exact nature, scope or meaning.

Level of Competency	Description	Action Verbs	Verb Definitions
Application (3)	Use and Adapt Knowledge in New Situations.	**Reconcile**	Make consistent / compatible with another.
		Graph	Represent by graphs.
		Assess	Determine the value, nature, ability or quality.
		Solve	Find solutions through calculations and/or explanation.
		Prepare	Make or get ready for a particular purpose.
		Demonstrate	Prove or exhibit with examples.
		Calculate	Ascertain or reckon with mathematical computation.
		Apply	Put to practical use.

Level of Competency	Description	Action Verbs	Verb Definitions
Analysis (4)	Draw Connections Among Ideas and Solve Problems.	**Communicate**	Share or exchange information.
		Outline	Make a summary of significant features.
		Contrast	Examine to show differences.
		Compare	Examine to discover similarities.
		Discuss	Examine in detail by arguments.
		Differentiate	Constitute a difference that distinguishes something.
		Analyze	Examine in details to find the solution or outcome.