

ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

LEVEL II EXAMINATION - JULY 2022

(202) INFORMATION SYSTEMS IN DIGITAL ENVIRONMENT

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

- (1) **Time Allowed:** Reading : 15 minutes.
Writing : 03 hours.

21-08-2022

Morning

[08.45 – 12.00]

No. of Pages : 07

No. of Questions : 07

- (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** A Sales Manager of a supermarket requires an internet connection to connect his laptop while he is travelling from district to district. Which one of the following connectivity option best suits him?

- (1) 4G USB Dongle Connection. (2) Fiber Optic Connection.
(3) Bluetooth Connection. (4) ADSL Connection.

- 1.2** "This category of information systems permits the presentation of an overall picture of the organisation's operations by enabling data sharing among different business functions".

Which one of the following information system closely matches with this definition?

- (1) Expert System.
(2) Executive Information System.
(3) Enterprise Resource Planning (ERP) System.
(4) Manufacturing Information System.

1.3 Select from the following, the **incorrect** statement pertaining to data:

- (1) Data can be categorized as qualitative and quantitative data.
- (2) Data can be considered as raw, unrefined facts and figures.
- (3) Data can be considered as the output of data processing.
- (4) Data is not designed to serve for any specific need.

1.4 Consider the following tasks performed using a conventional smart phone using a suitable application:

- (a) Access Internet Banking offered by a Bank.
- (b) Find the time taken to travel to a given location in Sri Lanka.
- (c) Send an email using a google (Gmail) account.
- (d) Access a Facebook account.

Of the above, the correct statements are:

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

1.5 A professional educational institute is planning to introduce a database to store data of examination candidates. You are given the following factors to be considered:

- (a) Structure of the Data.
- (b) Size of Data to be stored.
- (c) Security of Data.

Factors that should be considered when selecting a database for this purpose are:

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

1.6 A bank requires a system which can assist in fraud detection. Which one of the following type of application might be useful for this purpose?

- (1) Data Mining.
- (2) Enterprise Resource Planning (ERP) System.
- (3) Media Streaming.
- (4) Payment Gateway.

1.7 Services such as mobile accounting and mobile financial information are offered by:

- (1) Mobile banking.
- (2) Blockchain.
- (3) Digital cash.
- (4) Cryptocurrencies.

1.8 “This activity takes advantage of weaknesses in an information system’s security and it may result in a breach of confidential information”.

Which one of the following term best describes this activity?

- (1) Snooping.
- (2) Encrypting.
- (3) Bullying.
- (4) Hacking.

1.9 Which one of the following is **not** an objective of payment and settlement Systems Act No. 28 of 2005?

- (1) To provide for the regulation, supervision and monitoring of providers of money services.
- (2) To provide for the disposition of securities accounts maintained at the Central Bank of Sri Lanka.
- (3) To identify computer crimes and stipulate the procedures for investigation.
- (4) To facilitate the electronic presentment of cheques.

1.10 In the Banking Industry, SWIFT is a network used for which of the following purpose?

- (1) Credit Card Transactions.
- (2) Debit Card Transactions.
- (3) Inter-Bank Fund Transfer.
- (4) Cryptocurrency Payments.

(02 marks each, 20 marks)

*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 Transactions Processing Systems (TPS) monitor, collect, store and process data generated from all business transactions.

1.12 Artificial Intelligence (AI) is required for an Executive Information System (EIS).

1.13 Dashboards are one method used for Business Intelligence.

1.14 Phishing can be used to steal user credentials.

1.15 NFT (Non Fungible Token) is an example for a popular Cryptocurrency.

(01 mark each, 05 marks)

(Total 25marks)

End of Section A

SECTION B

(Total 50 marks)

Question 02

- (a) You consider an Information System used by an Educational Institute conducting professional examinations for students by registering students for relevant examinations. After conducting examinations, the institute is releasing results within a stipulated time frame.

You are required to:

Identify two(02) examples for each of the following system elements referring to the examination process of the above Institute:

(i) Input Data.

(ii) Output Information. (02 marks each, 04 marks)

- (b) **Explain** two(02) reasons behind the widespread adoption of information systems in organisations. (04 marks)

- (c) **State** the difference between Information System and Information Technology. (02 marks)
(Total 10 marks)

Question 03

- (a) A newly opened supermarket is planning to select an application software for different purposes.

You are required to:

Identify a suitable software for each of the following requirements:

(You need to identify software which is currently available in the market.)

(i) A free spreadsheet software which does not rely on Internet Access.

(ii) An Enterprises Resource Planning (ERP) Solution from a vendor.

(iii) A software for conducting virtual meetings.

(iv) A web browser which is not from Microsoft or Google. (01 mark each, 04 marks)

- (b) **State** three(03) advantages of Database Management System (DBMS). (03 marks)

- (c) **Explain** the purpose served by Data Centers when considering Cloud Computing. (03 marks)
(Total 10 marks)

Question 04

XYZ Ltd. is setting up a new supermarket style shopping network (a chain of shops) to sell hardware items. The business plan aims to set-up one shop in each district in Sri Lanka and customers can visit a store and purchase hardware items using a shopping cart, similar to shopping at a supermarket.

You are required to:

- (a) **Explain** how “Business Analytics” would help the above company. (04 marks)
 - (b) **Explain** how “Business Intelligence” would help the above company. (04 marks)
 - (c) **Identify** two(02) information systems that can be used by **XYZ Ltd.** (02 marks)
- (Total 10 marks)

Question 05

Social media such as Facebook is widely used by younger generations throughout the world. However, there are various advantages and disadvantages attached to these usage. There are instances where, some people are posting photographs of others in social media without their permission. Therefore, access to social media such as Facebook are at times restricted by some countries.

You are required to:

- (a) **State** two(02) advantages and two(02) disadvantages of social media usage. (04 marks)
 - (b) **Explain** the possibility of bypassing such restrictions with an example. (02 marks)
 - (c) **Explain** two(02) actions that you can take, if someone else posts your photograph on social media without your permission. (04 marks)
- (Total 10 marks)

Question 06

The advent of the 4th industrial revolution has brought with it significant social and economic opportunities and challenges with emerging technologies such as Artificial Intelligence (AI), big data, blockchain, etc.

You are required to:

- (a) **Explain** the difference between “Blockchain” and “Bitcoin”. (04 marks)
- (b) **Explain** what is meant by micro-payments and its usage in relation to mobile apps. (03 marks)

- (c) A group of Sri Lankans living abroad in the United States of America are trying to collect funds to donate medical equipment to Sri Lanka.

You are required to:

Explain how crowdfunding can be used in this situation. (03 marks)

(Total 10 marks)

End of Section B

SECTION C

(Total 25 marks)

Question 07

Ceylon Spice is a company set-up recently which plans to export spices to Europe. The company originally exported dry spice under its brand name, while now they are keen to further diversify into niche markets such as cinnamon tea aimed at a healthy lifestyle. As spices from Sri Lanka such as cinnamon carry a unique value due to geographical indications, there is a high demand for those products. However, the export market is full of low quality products and hence, **Ceylon Spice** has identified the importance of building a authenticity for their products.

Spice collection centres are operated in districts, and two packaging centres are located in Horana and Galle. The management is aggressively looking for buyers beyond its European footprint and exploring direct sales to consumers both in Sri Lanka and especially abroad, considering the prevailing high exchange rate for US Dollars. **Ceylon Spice** is planning to setup a website to provide a better service.

You are required to:

- (a) **State** a possible IT strategy that the company can adopt to enable efficient management of warehouse space and stocks. (03 marks)
- (b) **Explain** two(02) advantages that **Ceylon Spice** can obtain by setting up a website. (04 marks)
- (c) **Explain** two(02) best practices to be adopted by **Ceylon Spice** for reducing of impact on environment. (04 marks)
- (d) **Explain** four(04) components of IT infrastructure that the company might have to invest in for achieving strategies mentioned in (a) above. (08 marks)
- (e) **Explain** three(03) steps that can be taken by **Ceylon Spice** to improve cyber security. (06 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.