



ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

LEVEL II EXAMINATION - JULY 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.

11-08-2024

Morning

[08.45 – 12.00]

No. of Pages : 08

No. of Questions : 07

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 Which one of the following Information Systems is used by tactical managers in the middle level to monitor the current performance status of the organization?

(1) Decision Support System (DSS). (2) Transaction Processing System (TPS).

(3) Management Information System (MIS). (4) Office Automation System (OAS).

1.2 Consider the following statements regarding the mobile computing devices:

(a) The major drawback of using a smartphone is the smaller screen size as it creates difficulties in working for a longer period.

(b) Notebooks have a long battery life.

(c) Desktop PC application software are compatible with Tablets.

Of the above, the correct statement/s is/are:

(1) (a) only.

(2) (a) and (b) only.

(3) (a) and (c) only.

(4) (b) and (c) only.

1.3 Which one of the following is **not** a factor when choosing the internet connectivity?

- (1) Cost. (2) Speed. (3) Confidentiality. (4) Availability.

1.4 Consider the following statements related to E-Commerce and M-Commerce:

- (a)** Buying and selling information, products and services over computer communication networks is called E-Commerce.
- (b)** C2B is one of the major types of E-Commerce.
- (c)** The widespread availability and popularity of wireless devices is a positive factor for M-Commerce.
- (d)** Customers can use previous reviews, comments and ratings about a product when using E-Commerce and M-Commerce

Of the above, the correct statements are:

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

1.5 The procedure of rethinking and reconstructing a company's business activities in order to boost efficiency, reduce costs and improve product or service quality is:

- (1) Business Process Outsourcing. (2) Business Process Re-engineering.
- (3) Fintech Development. (4) Blockchain.

1.6 To provide strategic information to decision-makers, Executive Information Systems (EIS) comprise several components. Which one of the following can be categorized as components of EIS?

- (1) Input, Processing, Output and Feedback.
- (2) Servers, Routers, Keyboards and Monitors.
- (3) Database, Networking, Programming and Security.
- (4) Hardware, Software, Interface and Telecommunication.

1.7 Which one of the following social media platform is most suitable to find for a job seeker to find a suitable job or to connect with professionals in the relevant field?

- (1) LinkedIn. (2) Instagram. (3) Snapchat. (4) Facebook.

1.8 You have been given the following statements with reference to steps to improve cyber security:

- (a) Always download and install the latest software.
- (b) Use strong passwords.
- (c) Backup data.

Of the above, the correct steps are:

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

1.9 Which model of crowd-funding involves backers contributing funds without expecting financial returns or rewards?

- (1) Reward-based crowd-funding.
- (2) Donation-based crowd-funding.
- (3) Lending-based crowd-funding.
- (4) Equity-based crowd-funding.

1.10 Innovations in Artificial Intelligence (AI), Robotics, Internet of Things (IoT), Biotechnology, 3D printing and others are at the core of:

- (1) Biosystems engineering.
- (2) Quantum Computing.
- (3) 4th Industrial Revolution.
- (4) Financial Technology (Fintech).

(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 With the rapid growth of Information Technology, knowledge of employees are overwhelmed with the amount of information they receive and collect from various channels.

1.12 In a Peer-to-Peer network model, there is no centralized server and all nodes on the network can communicate directly with each other.

1.13 One of the main objectives of the Electronic Transactions Act No 19 of 2006 is to facilitate the electronic presentment of cheques.

1.14 Business Intelligence (BI) primarily focuses on describing what has happened in the past, while Business Analytics (BA) focuses on predicting what is likely to happen in the future.

1.15 When using crowd-funding, there are no potential cyber security breaches.

(01 mark each, 05 marks)
(Total 25marks)

End of Section A

SECTION B

(Total 50 marks)

Question 02

In the present data-driven world, data and information have become an integral part of an organization. Data can be transformed into valuable insights and the processed information should be delivered to the right person at the right time and to the right place which facilitates organizations to make better decisions. With this notion, organizations are heavily investing in information systems to gain a competitive advantage.

You are required to:

- (a) **Differentiate** data from information based on dependency and its use in decision-making. (04 marks)
- (b) (i) **Identify** the characteristic of quality of information highlighted in the above scenario. (01 mark)
- (ii) **Explain** the importance of the quality identified in (b)(i) above. (02 marks)
- (c) **Explain** two(02) ways how the decision-making process of an organization has transformed with technology. (03 marks)
- (Total 10 marks)

Question 03

Pick & Go is a newly established supermarket in Gampaha which is planning to provide a better shopping experience with the concept of “*all under one roof*”. The management of this **Pick & Go** has decided to move with state of art technologies from its inception. Further, the management of **Pick & Go** has decided to introduce a database to manage their inventory. They have decided to handle all their documents via cloud storage facilities.

You are required to:

- (a) **Identify** one (1) example for each of the following Information Technology (IT) infrastructure components that can be introduced in **Pick & Go**:
- (i) Operating System.
- (ii) Enterprise Software Applications.
- (iii) Data Management and Storage. (03 marks)
- (b) **Explain** the link between Customer Relationship Management (CRM) and Database. (04 marks)
- (c) **State** three(03) ways how efficiency of business operations achieved through the use of cloud computing. (03 marks)
- (Total 10 marks)

Question 04

Bathik Lanka is a leading organization operates in the apparel industry of Sri Lanka. At the moment, they are using Management Information Systems (MIS) to monitor the current performance status of the organization. Also, **Bathik Lanka** intends to use data mining techniques to identify trends and hidden relationships existing in the apparel industry.

You are required to:

- (a) **Identify** three(03) types of Management Information Systems that can be used by **Bathik Lanka** along with an purpose of using them into the business operations. (06 marks)
 - (b) **Explain** what is meant by data mining. (02 marks)
 - (c) **Identify** two(02) data mining applications that **Bathik Lanka** can apply in their operations. (02 marks)
- (Total 10 marks)

Question 05

In a rapidly evolving technological landscape, **Ceylon Crunchies**, a leading cookie manufacturer is embarking on a major Information Technology (IT) infrastructure upgrade to enhance efficiency and competitiveness. **Ceylon Crunchies** is committed to green computing practices while ensuring minimal environmental impact. However, amidst these advancements, IT team faces challenges regarding information security compliance with stringent legal regulations.

You are required to:

- (a) **List** the three(03) information security concepts (principles) the IT team should use in protecting data. (03 marks)
 - (b) **List** three(03) Acts related to IT and Information Systems (IS) passed by Sri Lankan parliament, which the IT team should consider. (03 marks)
 - (c) **Explain** two(02) practices that the IT team should address to reduce the impact on the environment during the upgrade process. (04 marks)
- (Total 10 marks)

Question 06

You are being hired as a technology consultant for a trendy, tech-savvy restaurant called **Pixel Plate**, where cutting-edge technology plays a pivotal role in daily operations. In the kitchen of **Pixel Plate**, cooking robots are utilized in food preparation. These robots can chop, stir and even cook certain dishes autonomously, streamlining the kitchen workflow. As part of its marketing strategy, **Pixel Plate** wants to create infographics to showcase its innovative approach to customers and investors. The infographics will highlight various aspects of the restaurant's information. **Pixel Plate** has recently adopted the use of crypto-currencies for customer payments due to the convenience and efficiency of these digital currencies.

You are required to:

- (a) **Explain** the technology behind crypto-currency, providing two(02) examples of crypto-currencies. (04 marks)
 - (b) **Explain** two(02) key advantages of integrating robots into **Pixel Plate's** kitchen operations. (04 marks)
 - (c) **List** two(02) examples for infographic that **Pixel Plate** could use to visually represent its information to its stakeholders. (02 marks)
- (Total 10 marks)

End of Section B

SECTION C

(Total 25 marks)

Question 07

Pigeon Express, a leading courier company in Sri Lanka is looking to streamline its operations and enhance customers' satisfaction through the implementation of software applications with a centralized database structure. With branches located across different regions in the country, **Pigeon Express** recognizes the need for a stable and reliable internet connection to connect these branches seamlessly.

Pigeon Express is also considering the introduction of Business Process Outsourcing (BPO) to optimize its vehicle fleet management. By partnering with a BPO, the company aims to efficiently utilize resources by leasing vehicles and drivers as needed.

Additionally, **Pigeon Express** is exploring the utilization of social media platforms to broaden its customer reach and engagement. Recognizing the power of digital marketing in today's interconnected world, the company plans to establish a strong online presence through platforms such as Facebook, Twitter and Instagram.

As part of its strategic initiatives, **Pigeon Express** is also prioritizing the enhancement of its cyber-security measures. With the increasing threat of cyber-attacks in the digital age, the company recognizes the importance of safeguarding its sensitive data and ensuring the privacy of customer information. **Pigeon Express** is planning to use a Database Management System (DBMS) to store company's data.

You are required to:

- (a) (i) **List** two(02) examples of application software for each of the categories specified below, assuming that you are the IT consultant of **Pigeon Express**:
- Desktop Publishing Software.
 - Accounting Software. (04 marks)
- (ii) **Explain** three(03) drawbacks of using a Data Base Management System (DBMS) for storing data. (06 marks)
- (b) **State** three(03) popular internet connectivity options that **Pigeon Express** can consider. (03 marks)
- (c) **List** three(03) risks associated with Information Technology on business and operations of **Pigeon Express**. (03 marks)
- (d) **Explain** three(03) benefits that **Pigeon Express** expects to gain by implementing Business Process Outsourcing (BPO). (06 marks)
- (e) **State** three(03) positive impacts that **Pigeon Express** can achieve by leveraging social media for its courier services and enhancing customer experience. (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.