

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

ATC(U) EXAMINATIONS

LEVEL TWO

INFORMATION SYSTEMS – PAPER 8

MONDAY, 13 JUNE 2011

INSTRUCTIONS TO CANDIDATES

1. Time allowed: **3 hours 15 minutes**.

The first 15 minutes of this examination have been designated for reading time. You may not start to write your answer during this time.

2. Attempt **all** questions in Section **A** and any **four** questions from Section **B**.
3. Section **A** has **twenty** compulsory multiple-choice questions, each carrying 1 mark.
4. Section **B** has **six** questions and only **four** questions are to be attempted. Each question carries 20 marks.
5. Please read further instructions on the answer book, before you attempt any questions.

SECTION A

Question 1

- (i) The form of transmission whereby signals are transformed into 1's and 0's in order to be sent over a network is.
 - (a) analog.
 - (b) duplex.
 - (c) digital.
 - (d) modular.
- (ii) are systems that make use of transaction processing to provide information needed to manage organizations effectively.
 - (a) Management Information Systems.
 - (b) Decision Support Systems.
 - (c) Geographic Information Systems.
 - (d) Executive Information Systems.
- (iii) One most outstanding feature of computerized accounting systems is:
 - (a) instant reporting.
 - (b) decentralized accounts maintenance.
 - (c) human intervention
 - (d) multiple input of company details.
- (iv) The following are hardware components **EXCEPT**:
 - (a) mother board.
 - (b) mouse.
 - (c) microsoft office.
 - (d) memory chip.
- (v) By network topology we mean:
 - (a) the layout pattern of interconnections of the elements of a computer network.
 - (b) a language or communication among computing devices.
 - (c) a formal set of rules, conventions and data structure for connectivity.
 - (d) The geographical coverage.
- (vi) The following are components of a computer system **EXCEPT**:
 - (a) input.
 - (b) storage.
 - (c) users.
 - (d) processing.

- (vii) The type of software that enables end-users to accomplish certain specific tasks is:
- (a) system software.
 - (b) utility software.
 - (c) inventory management software.
 - (d) application software.
- (viii) The process by which installed software is made ready to use is referred to as:
- (a) customisation.
 - (b) interfacing.
 - (c) configuration.
 - (d) automation.
- (ix) The following are true features of a first-generation language **EXCEPT**:
- (a) consists of zeros and ones.
 - (b) commands similar to spoken English.
 - (c) use of binary instructions.
 - (d) the lowest level computer language.
- (x) The buying and selling of products or services over the internet and other computer networks is best referred to as:
- (a) real time computing.
 - (b) multitasking.
 - (c) electronic commerce.
 - (d) tele-conferencing.
- (xi) Non-professional computer users are able to perform complex tasks without significant knowledge of a computer programming language through:
- (a) distributed computing.
 - (b) end-user computing.
 - (c) cluster computing.
 - (d) centralised computing.
- (xii) The computer program that translates low-level language computer programs to machine code is:
- (a) compiler.
 - (b) assembler.
 - (c) editor.
 - (d) interpreter.

- (xiii) The device that optically converts images and text to a digital format is:
- (a) simulator.
 - (b) remote sensor.
 - (c) modem.
 - (d) scanner.
- (xiv) Computer memory that is directly accessible to the central processing unit is:
- (a) primary storage.
 - (b) secondary storage.
 - (c) auxiliary storage.
 - (d) read only memory (ROM).
- (xv) System maintenance in the context of information technology:
- (a) guarantees continuity of work.
 - (b) ensures that the system satisfies users' needs.
 - (c) ensures that the system is technically feasible.
 - (d) indicates flexible system change-over.
- (xvi) A malfunctioning operating system:
- (a) affects account balances.
 - (b) affects the booting process of the computer.
 - (c) affects the way the document is formatted.
 - (d) may affect the way the anti-virus runs.
- (xvii) The following are features of outsourcing **EXCEPT**:
- (a) transfer of knowledge to company staff.
 - (b) concentration on core activities of the organisation.
 - (c) work is solely executed by company staff.
 - (d) there is cost saving in the long run.
- (xviii) Which of the following is an input device?
- (a) Bar code reader.
 - (b) Bar code.
 - (c) Light Crystal Display (LCD) projector.
 - (d) Dot-matrix printer.

- (xix) Under the extranet network arrangement:
- (a) an organisation's network is used by only staff of the organisation.
 - (b) a system can not be accessed from remote locations.
 - (c) other selected non-organisational staff can have access to the information.
 - (d) management programming knowledge.
- (xx) Before a system is acquired, the following have to be considered **EXCEPT**:
- (a) the users' needs and requirements to be addressed.
 - (b) compatibility with existing components.
 - (c) support availability.
 - (d) management programming knowledge.

SECTION B

Question 2

- (a) Briefly describe the following in relation to information technology:
- (i) Computer system **(2 marks)**
 - (ii) Point-of-sale (POS) terminal **(2 marks)**
 - (iii) Transaction processing **(2 marks)**
 - (iv) Prototyping **(2 marks)**
 - (v) Computer virus **(2 marks)**
- (b) Distinguish between the following in the context of information technology:
- (i) Data backup and data archiving **(2 marks)**
 - (ii) Decision support system and artificial intelligence **(2 marks)**
 - (iii) Bespoke software and off-the-shelf package **(2 marks)**
 - (iv) Real-time computing and batch processing **(2 marks)**
 - (v) Data validation and data verification **(2 marks)**
- (Total 20 marks)**

Question 3

- (a) Explain what is meant by office automation and computerized control systems in the context of business and industry. **(4 marks)**
- (b) Using suitable examples, describe how office automation is employed today in business and industry? **(8 marks)**

- (c) Using suitable examples, describe how computerized control systems are applied today in business and industry.

(8 marks)

(Total 20 marks)

Question 4

As organizations and business accumulate data, data security becomes very critical.

Required:

- (a) Describe the different types of threats to information systems in the business environment.

(10 marks)

- (b) Describe the controls that organizations should put in place to safeguard information systems.

(10 marks)

(Total 20 marks)

Question 5

The Systems Development Life Cycle should be followed in order to acquire or improve organizational information systems.

Required:

- (a) Describe the stages in the Systems Development Life Cycle (SDLC) that most systems development projects follow.

(10 marks)

- (b) Explain why testing should be regarded as a significant part of an information systems development project.

(2 marks)

- (c) Identify and describe the different types of testing that may be carried out during the SDLC.

(8 marks)

(Total 20 marks)

Question 6

Organisations the world over have a choice between centralized and distributed systems business operations.

Required:

- (a) Describe the following in the context of information technology:
 - (i) Distributed systems. (2 marks)
 - (ii) Distributed computing. (2 marks)
 - (b) Explain the advantages of distributed systems to business. (8 marks)
 - (c) Explain circumstances under which distributed systems can be disadvantageous. (8 marks)
- (Total 20 marks)**

Question 7

Although the internet has been successfully integrated in business processes, it has made businesses vulnerable.

Required:

- (a) Describe the benefits of the internet to business processes. (10 marks)
 - (b) Explain the shortcomings of the use of the internet in business today. (10 marks)
- (Total 20 marks)**