

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

ATC(U) EXAMINATIONS

LEVEL TWO

INFORMATION SYSTEMS – PAPER 8

FRIDAY, 18 JUNE 2010

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.

SECTION A

Question 1

- (i) One effective method of collecting user requirements when developing a systems is:
 - (a) prototyping.
 - (b) investigation.
 - (c) analysis of alternatives.
 - (d) feasibility of the project.
- (ii) The most efficient method of safeguarding data while in transit is by use of:
 - (a) file compression.
 - (b) encryption.
 - (c) firewall.
 - (d) backing up.
- (iii) One advantage why companies outsource IT services is to:
 - (a) increase costs.
 - (b) get rid of problematic staff.
 - (c) upgrade existing systems.
 - (d) concentrate on core activities.
- (iv) Primary storage:
 - (a) is not directly accessible to the CPU.
 - (b) is directly accessible to the CPU.
 - (c) does not lose the data when the device is powered.
 - (d) is removable mass storage.
- (v) A collection of fields is a:
 - (a) file.
 - (b) record.
 - (c) character.
 - (d) database.
- (vi) The following are programming languages **EXCEPT**:
 - (a) assembler.
 - (b) basic.
 - (c) converter.
 - (d) C.

- (vii) The speed of a modern printer is determined by:
- (a) megahertz.
 - (b) pages per minute.
 - (c) memory.
 - (d) post-script type.
- (viii) The following are characteristics of good data **EXCEPT**:
- (a) timeliness.
 - (b) relevance.
 - (c) ability to be easily saved on secondary storage.
 - (d) accuracy.
- (ix) In terms of the systems development life cycle, an economic feasibility study:
- (a) provides supporting documentation.
 - (b) demonstrates the net benefit of the proposed application.
 - (c) increases agency costs of acquiring the product.
 - (d) determines the product to buy.
- (x) The person responsible for coordinating development of a business IT solution is:
- (a) programmer.
 - (b) manager.
 - (c) systems analyst.
 - (d) end-user.
- (xi) The smallest element of computer storage is a:
- (a) register.
 - (b) byte.
 - (c) bit.
 - (d) ASC II code.
- (xii) Which of the following is system software?
- (a) Oracle RDBS.
 - (b) Microsoft Word.
 - (c) Microsoft Windows
 - (d) Internet.

- (xiii) Which of the following enables ICPAU students access their examination progress from the ICPAU website?
- (a) Networking alone.
 - (b) Internet alone.
 - (c) Extranet and Internet protocols.
 - (d) Intranet and Internet protocols.
- (xiv) The practice of modifying computer hardware and software to accomplish a goal outside of the creator's original purpose is called:
- (a) hacking.
 - (b) programming.
 - (c) database administration.
 - (d) customisation.
- (xv) A disaster recovery plan, in an organisation:
- (a) identifies the causes of minor risks only.
 - (b) involves an analysis of the business processes and continuity needs.
 - (c) highlights the alternative ways of achieving the organisational goals.
 - (d) forecasts the occurrence of a disaster.
- (xvi) Which of the following is true about data warehousing?
- (a) It is a collection of databases with information extracted from other databases.
 - (b) End-users do not require authorisation to access the resource.
 - (c) All data is located on one mainframe or PC server.
 - (d) Is intended only for users who have analytical inclination.
- (xvii) The science of making computers do things that require intelligence when done by humans is known as:
- (a) expert system.
 - (b) automation.
 - (c) execution.
 - (d) artificial intelligence.
- (xviii) Which of the following is a feature of a 5th generation language?
- (a) Non-procedural.
 - (b) Close to natural language.
 - (c) Multitasking.
 - (d) Decentralized processing.

- (xix) One way of safeguarding personal computers from power fluctuations is by use of:
- (a) anti-virus.
 - (b) firewall.
 - (c) UPS.
 - (d) passwords.
- (xx) Processing of data immediately as and when it is received is referred to as:
- (a) centralised processing.
 - (b) batch processing.
 - (c) transaction processing.
 - (d) real time processing.

SECTION B

Question 2

- (a) Briefly describe the following in relation to information technology:
- (i) Computer storage. (2 marks)
 - (ii) Computer operating system. (2 marks)
 - (iii) Computer output device. (2 marks)
 - (iv) E-mail. (2 marks)
 - (v) Computer spam. (2 marks)
- (b) Distinguish between the following IT terms:
- (i) Star and bus network topology. (2 marks)
 - (ii) Source and object code. (2 marks)
 - (iii) Centralized and distributed systems. (2 marks)
 - (iv) Digital and analog signal. (2 marks)
 - (v) Encryption and backup. (2 marks)
- (Total 20 marks)**

Question 3

The advancement in computer technology has contributed to its continued application to business operations.

Required:

- (a) Explain what is meant by 'computer system'.
(2 marks)
 - (b) In today's business operations, outline the areas where computer systems are applied.
(4 marks)
 - (c) Describe the function of the main components of a computer system?
(14 marks)
- (Total 20 marks)**

Question 4

The combination of computer network technology and the internet have contributed to a global platform for business telecommunication.

Required:

Briefly explain:

- (a) the advantages of computer networks.
(5 marks)
 - (b) situations under which computer networks may be disadvantageous to business.
(5 marks)
 - (c) ways how the internet has benefited business proprietors.
(5 marks)
 - (d) problems associated with the use of the internet in business.
(5 marks)
- (Total 20 marks)**

Question 5

- (a) Describe the stages of the systems development life cycle.
(8 marks)
 - (b) The process of putting a new information system online and retiring an old system is very critical. Explain the different ways in which such a thing can be done.
(8 marks)
 - (c) Explain what business managers need to consider before embarking on IT systems change-overs.
(4 marks)
- (Total 20 marks)**

Question 6

Information systems are constantly evolving as the technology continues to grow and hence their continued application to business today.

Required:

- (a) Define the term 'information systems' in relation to IT. (4 marks)
 - (b) Giving specific examples, describe the types of information systems in organizational environments. (8 marks)
 - (c) Describe any **four** problems associated with adopting computer-based information systems in organizations. (8 marks)
- (Total 20 marks)**

Question 7

In today's world, security of information systems is of paramount importance, and therefore, business managers should make special considerations for it.

Required:

- (a) What do you understand by the term 'information security'? (4 marks)
 - (b) Describe:
 - (i) some of the common threats to information systems in business. (8 marks)
 - (ii) appropriate measures that can be taken to guard against the threats identified in (b) (i) above. (8 marks)
- (Total 20 marks)**