THE INSTITUTE OF
CHARTERED ACCOUNTANTS OF SRI LANKA

SCHOOL OF ACCOUNTING AND BUSINESS
BSc. (APPLIED ACCOUNTING) GENERAL / SPECIAL DEGREE PROGRAMME

END SEMESTER EXAMINATION – JANUARY 2016

ICT 30330 Management of Information Technology

Date	:	31st January 2016
Time	:	9.00 a.m. – 12.00 p.m.
Duration	:	Three (03) hours

Instructions to Candidates:

- Write the Index Number in the space provided at the top of this sheet. Do not write your name anywhere in this question paper.

- This paper consists of three part. (A, B and C)

- Part A – Answer **ALL** questions in the separate sheet provided.

  Part B – Answer **ALL FOUR (04)** questions on the paper itself.

  Part C – Answer **ANY ONE (01)** questions

- The total marks for the paper is 100.

- The marks for each question are shown in brackets.

- Answers should be written neatly and legibly.

Part A

Select the most appropriate answer.

1. Which of the following is NOT a component of Information Systems?
    a. Hardware
    b. People
    c. Information
    d. Processes

2. The Microsoft Excel feature that helps solving linear programming models is called…
    a. Goal Seek
    b. Solver
    c. Simulator
    d. Model Builder

3. What does crowdsourcing mean?
    a. Process of raising money to fund what is typically a project or business venture through many donors using an online platform
    b. Process of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, online
    c. Process of studying how online communities behave in interactive platforms of businesses
    d. Process of recruiting people online for businesses around the globe

4. Which of the below is NOT a characteristic of Big Data
    a. Lots of verified data
    b. Lots of unstructured data
    c. High volume of data
    d. High velocity of arrival

5. IT project justification is needed for:

    A. The support and commitment of the top management

    B. The alignment with the business strategy

    C. The assessment of the investment after completion of the project

Which of the above is/are correct?

    a. A only

    b. A and B only

    c. A and C only

    d. All A, B and C

6. What is the immediate next step after "system design" in the System Development Life Cycle?

    a. System analysis

    b. Programming

    c. Testing

    d. Implementation

7. Which of the following is true about Rapid Application Development (RAD)

    a. It is a synonym for Joint Application Development (JAD)

    b. It practically means Visual basic programming

    c. It is a system development methodology

    d. It is a set of re-usable components that could be used for system development

8. A point of sale (POS) system that uses barcode readers is an example for a/an…

    a. Operational Business Intelligence (BI) system

    b. Operations management systems

    c. Decision support system

    d. Transaction processing system

9. At which level of the management hierarchy does the strategic information systems may aim?

   a. Executive level
   b. Strategic level
   c. Operational level
   d. All levels

10. What is the predecessor concept of the modern concept of cloud computing?

    a. Ubiquitous computing
    b. Utility computing
    c. Service computing
    d. Pay-as-you-use computing

(Total 20 marks)

Part B

Answer **all four (04)** questions on the question paper itself in the space provided.

Question No. 01

a. State three examples for IT resources of an organization

(02 marks)

b. Define the term "business model"

(02 marks)

c. Explain the impact of networked computing and Internet technology on business?

(05 marks)

d. Briefly explain one example for each of "market pressures", "societal pressures" and "technological pressures" **(one for each).**

(06 marks)

(Total 15 marks)

Question No. 02

a. Define the term "information system"

(02 marks)

b. Compare and contrast transaction processing systems (TPS) and decision support systems (DSS)

(05 marks)

c. Explain why having a "data warehouse" is advantageous for an organization

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(03 marks)

d. Business data could be classified as "structured" and "unstructured" data. State three examples for unstructured data and explain why analyzing unstructured data is important for a business organization.

(05 marks)

(Total 15 marks)

Question No. 03

a. How can the "Moore's law" be interpreted pertaining to IT investments in an organization?

(02 marks)

b. Use of Information Technology can mitigate as well as introduce business risk. Briefly explain two examples for each of mitigation and introduction of business risks by the use of IT (Two for each).

(08 marks)

c. Explain why the justification of ROI of IT projects is difficult.

(05 marks)

(Total 15 marks)

Question No. 04

a. What is meant by "IT markets within the firm"?

(02 marks)

b. What is the importance of identifying the IT markets within the firm when formulating an IT strategy?

(02 marks)

c. Identifying the trends developing in the environment is vital for the success of an IT strategy of an organization. Briefly explain three recent trends that could be worth considering when preparing an IT strategy.

(06 marks)

d. Formulate a linear programming model for the following problem.

A company produces two products, A and B. The sales volume for A is at least 80% of the total sales of both A and B. However, the company cannot sell more than 100 units of A per day. Both products use one raw material, of which the maximum daily availability is 240lb. The usage rates of the raw material are 2lb per unit of A and 4lb per unit of B. The unit profits for A and B are 20$ and 40$ respectively. Determine the optimal product mix for the company.

(05 marks)

(Total 15 marks)

Part C

Answer any __one (01)__ question

Question No. 01

a. Briefly explain "system investigation", "system design" and "testing" stages of the software development life cycle

(06 marks)

b. Suppose you have been appointed as a project manager and assigned the task of developing a POS system for a leading supermarket.

   i.   State three requirements of the system.

(03 marks)

   ii. What would be the roles of your project team?

(03 marks)

   iii. Name a programming language and a database management system software that could be used for this project

(02 marks)

   iv. Suppose you want to implement this system without taking any risk of damaging the daily operations of the supermarket. What would be the conversion strategy you would use for this implementation?

(02 marks)

c. Explain why change management is important when introducing new systems at organizations

(04 marks)

(Total 20 marks)

Question No. 02

a. What is a "business continuity plan" and why is having a business continuity plan is important for a business organization?

(04 marks)

b. Briefly explain the three layers of network security

(06 marks)

c. State two biometrics that could be used as access controls

(02 marks)

d. What is the difference between malware and computer viruses?

(02 marks)

e. Suppose your server has been flooded by a very large number of service requests originated from a particular IP address and goes unresponsive.

i. What type of computer crime ~~this could~~could this be?

(01 mark)

ii. Explain what precautions you could have taken to defend against this attack

(03 marks)

f. Define "acceptable use policy"

(02 marks)

(Total 20 marks)