UNIVERSITY OF LONDON

FOR EXTERNAL STUDENTS (East)

BSc/Diploma Examination

BSC AND DIPLOMA IN COMPUTING AND INFORMATION SYSTEMS

2910108   Information systems: The Foundation of E-Business

Duration: 3 hours

Date and time: Friday 9 May 2008 : 10.00 – 1.00 pm

There are six questions on the paper. Please answer four questions. Full marks will be awarded for complete answers to four questions. Candidates must not attempt more than the required number of questions. Calculators are not allowed.

THIS EXAMINATION PAPER MUST NOT BE REMOVED FROM THE EXAMINATION ROOM

QUESTION 1

(a) Compare and contrast the terms "system" and "subsystems" in the context of IT while performing work in businesses and government organisations.

[5 Marks]

Explain the following terms that may be used when discussing systems: Purpose; Boundary; Environment; Inputs and Outputs.

(b) [5 Marks]

(c) Explain what is meant by the term "business processes" in relation to creating value for customers. Following this describe the scope of a business process and the value-added by a business process.

[5 Marks]

(d) Describe what is meant by a firm's *value chain*. Include in your answer a description of primary and secondary processes and an example of a value chain for a restaurant.

[5 Marks]

(e) Describe in detail the differences between the practices of E-business and E-commerce. Following this outline three key E-commerce activities.

[5 Marks]

QUESTION 2

(a) Describe the differences between a system, a subsystem, a business processes, a framework and an information system. Include in your answer an example of each.

[5 Marks]

(b) Describe the difference between e-business and e-commerce and provide an example of each.

[5 Marks]

(c) Explain organizational inertia and describe how it impacts upon information systems.

[5 Marks]

(d) The work system framework identifies eight elements needed to understand a work system. Using each of these elements, describe a work system for registering for a course at a university. From a customer's viewpoint, identify the product or service of the work system and explain how you would evaluate that product or service.

[10 Marks]

QUESTION 3

(a) What is the difference between machine-centered design and human-centered design?

[5 Marks]

(b) What are the characteristics of a healthy job, and how are information systems related to these characteristics?

[5 Marks]

(c) What is de-skilling? Explain whether or not information systems necessarily lead to de-skilling of their users.

[5 Marks]

(d) Describe the differences between centralized computing, personal computing, distributed computing, mobile computing and network computing.

[10 Marks]

QUESTION 4

(a) Describe in detail the four phases of building and maintaining systems. For each phase, define the key processes, how they are undertaken and what are the outputs.

[10 Marks]

(b) Explain why a systems development project may fail during one of the four phases of building and maintaining systems. Include in your answer at least three examples.

[5 Marks]

(c) There are many obstacles to applying IT effectively within the real world. These include *unrealistic expectations* and the innate *difficulty in building systems*. Discuss these two obstacles and provide an example of each.

[10 Marks]

QUESTION 5

(a) Compare and contrast a hypermedia database and the World Wide Web.

[5 Marks]

(b) Compare and contrast a relational database and a multi-dimensional database, provide an example of each.

[10 Marks]

(c) Provide a detailed description of a geographical information system.

[5 Marks]

(d) Describe in detail the following methods for accessing data:

    (i) Sequential Access;

    (ii) Direct Access;

    (iii) Indexed Access.

[5 Marks]

QUESTION 6

(a) What is a client/server architecture? Explain the role of middleware in a client/server architecture.

[5 Marks]

(b) Describe what an entity-relationship diagram is, and what it is used for.

[5 Marks]

(c) Describe the difference between a relational database and a data warehouse.

[5 Marks]

(d) Explain the key differences between a MIS, a DSS and EIS.

[5 Marks]

(e) What is meant by the term social context in relation to business communications?

[5 Marks]

END OF EXAMINATION