

**UNIVERSITY OF LONDON**

**GOLDSMITHS COLLEGE**

**BSc Examination 2003**

**COMPUTING AND INFORMATION SYSTEMS**

**CIS105 Introduction to Information Systems**

Duration: 3 hours

Date and time:

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- *Do not attempt more than FOUR questions on this paper. Full Marks will be awarded for complete answers to FOUR questions.*
  - *Electronic calculators are not needed for this examination and therefore should not be used.*

**THIS EXAMINATION PAPER MUST NOT BE  
REMOVED FROM THE EXAMINATION ROOM**

### Question 1.

Write short notes on **five** of the following

- a) The distinction between soft and hard data, and their importance in Information Systems.
- b) Expert systems.
- c) Concurrent manufacturing.
- d) Entity relationship diagrams for developing the logical view of a database.
- e) Executive information systems.
- f) The traditional life-cycle approach to system development.

[25 marks]

### Question 2.

- (a) What are the dimensions by which we measure quality?

[6 marks]

**Scenario: Go-Golfing Inc. Custom golf balls**

*Go-Golfing Inc. is a company that supplies, amongst other things, golf balls. Their market research has indicated that there would be a sizeable demand for personalised golf balls, that is golf balls onto which a short message could be printed. This could be used for example as advertising for the customer's company, or simply carry the customers name. Go-Golfing Inc. buy loose golf balls from their supplier GolfPro, print the customers required message on the balls using their well maintained printing machine, and package them into sets of 3 in a presentation case. It was found that the demand for the personalised golf balls peaked around the spring, in time for summer golf matches, and during periods where there are televised world championship golf matches taking place. At these times of increased demand, Go-Golfing Inc. found that they had difficulty in acquiring the stocks of blank balls they required from GolfPro.*

- (b) In the above scenario, Go-Golfing Inc., give an example of a primary process and a secondary process, and explain your choices.

[4 marks]

- (c) Draw the value chain for Go-Golfing Inc's personalised golf balls product described in the scenario.

[8 marks]

- (d) How could Information Systems be used to extend Go-Golfing Inc.'s value-added chain and improve its competitiveness? Please provide at least two examples.

[7 marks]

### Question 3

- a) Briefly describe the difference between a computer system that is "User Friendly" and one that is "User Hostile". Please provide an one example of each.

[8 Marks]

- (b) Describe in detail three aspects of user friendly features which designers of information systems should consider and aim to incorporate when building information systems. Include at least one example for each aspect you have chosen.

[12 Marks]

- (c) Briefly describe how people can be affected by how an Information System has been implemented and how such systems rely upon people to be effective and efficient.

[5 Marks]

### Question 4.

- a) What are architectural characteristics?

[4 marks]

- b) Describe the effects of high and low values of the architectural characteristic Range of Involvement.

[4 marks]

- c) Describe how Information Systems can be used to broaden or constrict the range of involvement in a business process

[5 marks]

- d) Describe the effects of high and low values of the architectural characteristic Degree of Reliance on Machines.

[5 marks]

### Scenario: Internet auction by Hamiltons's

*Traditionally Hamilton's were a normal auction house, the goods they sold were brought to the auction house, the buyers inspected and then bid for the goods. The times have now changed. Now Hamilton's auctions its goods via the Internet. All goods must be evaluated and rated by one of Hamilton's accredited experts at the auction house. This examination and validation process is supplemented by the extensive use of commercial databases to authenticate, for example, markings on pottery. This evaluation information and photographs of the items are then included in the electronic auction catalogue. The time for the auction of the particular item is also included. Buyers may now examine the catalogue and log on to bid at the times when the item of interest is up for auction. Only if they are successful in the auction are the goods sent to the buyers. Hamilton's find that in general they make more money from their auctions now and more potential customers are able to bid for the items. For the customers there is no longer a need to travel to examine the available goods.*

- (a) On the basis of the above information, estimate the level of all seven architectural characteristics discussed in the course for Hamilton's Internet auctions, and explain your choice.

[7 marks]

**Question 5.**

- (a) What are inward and outward looking variables, and why is it useful to draw a distinction between the two when examining a business process?  
[4 marks]
- (b) What is a process architecture and why is it useful to describe a business process in terms of its architectural characteristics?  
[3 Marks]
- (c) Describe the typical impact of the following architectural characteristics on a business process:  
[6 Marks]
- (i) Too high a complexity
  - (ii) Too little attention to management issues
  - (iii) Too high a degree of structure

**Scenario: Smile-On Holidays**

*Smile-On holidays is a company which specialises in cheap package holidays. They achieve this through the extensive use of Information Systems. Each branch of Smile-On is connected to the company's central database where the details of all the holidays available are stored. These in cheap package holidays are the most popular, as determined by Smile-On through market research. A customer is matched as closely as possible to a holiday, but may have to compromise to fit in with what is available. Some customers have complained in the past that Smile-On will not, or can not, give them the holiday they actually want. However the board of management have decided that their present system works well for the majority, and keeps costs low.*

- (d) On the basis of the above information state *two product related variables* of which *Smile-On holidays*, seen as a system, is likely to have too little, and explain your answer.  
[6 Marks]
- (e) On the basis of the above information state *one process related variable* of which *Smile-On holidays*, seen as a system, is likely to have too little, and explain your answer.  
[3 marks]
- (f) On the basis of the above information state *one architectural characteristic* of which *Smile-On holidays*, seen as a system, is likely to have too little, and explain your answer.  
[3 Marks]

**END OF EXAMINATION**