UNIVERSITY of LONDON
B.Sc. EXAMINATION 2008
for External Students
East Zone

COMPUTING AND INFORMATION SYSTEMS AND CREATIVE COMPUTING

2910319 DECISION SUPPORT and EXECUTIVE INFORMATION SYSTEMS

Duration: 2 hours 15 minutes

Date and Time: Friday 9 May 2008 : 2.30 – 4.45 pm

There are FIVE questions on this paper.
*Do not attempt more than **THREE** questions. All questions carry equal marks and full marks can be obtained for complete answers to **THREE** questions.*
A hand held calculator may be used when answering questions on this paper but it must not be pre-programmed or able to display graphics, text or algebraic equations. The make and type of machine must be stated clearly on the front cover of the answer book.
Candidates are advised that their answers to all questions will be greatly strengthened by the citing of examples either of their personal experience or from written sources. Full referencing of sources is not necessary; an indication of the nature of the source is all that is required.

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

1. A large company operates 50 car retail outlets throughout the United Kingdom. It sells a range of cars from a single manufacturer and also provides spare parts, routine maintenance and repairs.

   Head office has sufficient money to buy a Decision Support System **OR** an Executive Information System, but not both.

   Outline the advice you would give the company to help it decide which system to choose. Illustrate your answer with examples relevant to the company's business.

   [25]

2. (a) Compare and contrast the design of a relational database system (RDBMS) with that of a multidimensional database system (MDBS).

   [12]

   (b) Discuss how a firm that stocks spare parts for cars, to sell to various retail outlets, might use both types of database system for its business operations.

   [13]

3. A firm, that sells stationery, has 10 travelling salesmen operating in different parts of the country and who are therefore very seldom at head office.

   The firm wishes to install a Group Decision Support System (GDSS) to facilitate communication and decision-making between head office staff and the salesmen.

   What advice would you offer management on the appropriate GDSS hardware and software that it should purchase?

   [25]

4. A commercial bank in the U.S.A. predicts next year's house prices and mortgage rates by using a simple model that merely averages out the past ten year figures and projects them in a straight line graph into the following year. This model is part of a Decision Support System. Explain how the introduction of an Expert System component might enhance the performance of the decision support system, given the present turmoil in the U.S.A. housing market.

   [25]

5. It is well known that Modelbased Management Systems, as part of a DSS, are not so well developed as Database Management Systems.

   Explain why this situation has arisen and discuss at least one approach to Modelbased Management Systems that tries to tackle this problem.

   [25]

END OF EXAMINATION