

UNIVERSITY of LONDON

291 0319E

B.Sc. EXAMINATION 2006

for External Students

East Zone

COMPUTING AND INFORMATION SYSTEMS

**CIS 319 DECISION SUPPORT and EXECUTIVE
INFORMATION SYSTEMS**

Duration: 2 hours 15 minutes

Date and Time: Wednesday 10 May 2006: 2.30 – 4.45pm

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.*

Electronic calculators may be used. The make and model should be specified on the script. The calculator must not be programmed prior to the examination. Calculators that display graphics, text or algebraic equations are not allowed.

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 local bus company operates a fleet of 100 buses to various destinations in the locality. At the present time it has a computerised accounting system producing a balance sheet, a profit and loss account and payroll information. It also has a management information system that displays bus timetables, fares, number of journeys made on each route and customer complaints. All other business functions are carried out without the aid of computers. You are required to persuade senior management to adopt a Decision Support System (DSS).
 - (a) Outline the arguments you would use to persuade senior management to adopt such a system, assuming that they are not very computer literate. [17]
 - (b) Describe the counter arguments that senior management might employ to reject your proposal. [8]

2. Explain why the model based management system (MBMS) component of a decision support system is so underdeveloped compared with the database management system (DBMS) component. Illustrate your answer with reference to both Blanning's and Geoffrion's approach to this problem. [25]

3. The manager of your department has become dissatisfied with the conduct and quality of recent departmental meetings. You have been asked to investigate the purchase of a Group Decision Support System (GDSS) in order to improve the situation. You are required to write a short report to the manager outlining,
 - (a) The technical options [13]
and,
 - (b) The way in which the software will improve meeting performance. [12]

4. An investment firm invests the funds of its clients by buying shares on the London Stock Exchange. It uses a simple Decision Support System (DSS) to decide what shares to buy. If the client is seeking long term growth the system merely lists the shares showing the fastest growth over the past five years in descending order. It then allocates the client's funds to a maximum of £500 in each share until the entire fund is allocated. However, if the client is more interested in income then a similar procedure is carried out but the shares listed are those showing the greatest dividend payment over the past five years. Management are dissatisfied with the performance of this system and are thinking of introducing expert system components.

You are required to explain how the integration of an expert system might improve the performance of the DSS and any changes the might have to be made to the basic functions of the DSS in order to incorporate expert system components. [25]

5. You are a systems analyst meeting the Chief Executive of a large multinational corporation who is interested in buying an Executive Information System (EIS). The company sells heavy lifting equipment throughout the world. Explain what questions you might ask the chief executive and what you might have to bear in mind in designing such a system. [25]

END OF EXAMINATION