NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCE
COMPUTER SCIENCE DEPARTMENT
DECEMBER 2002 EXAMINATIONS

SUBJECT: BUSINESS INFORMATION SYSTEMS
CODE: SCS 1203

Instructions to candidate:

Answer any five (5) questions
All questions carry equal marks

3 HOURS

QUESTION ONE

a) Group Decision Support Systems are referred as 'a set of software, hardware and language procedures that support a group of people engaged in a decision-related meeting'. Describe the most common types of GDSSs and discuss the features of modern organizations that increase the importance of GDSS. [10]

b) Wireless communications come in different forms or channels. Which are these channels, how do they function, and what environment is each suited for? [10]

QUESTION TWO

a) Define a computer and describe the essential components that form its 'brain'. [10]

b) Your organization needs to purchase hardware. Write a report for management stating the specification for the hardware in terms of the size of RAM, power of the computer and make of the computer. [10]

QUESTION THREE

a) A business executive can access the computer in his office from a laptop while he is on an Air Zimbabwe flight between Bulawayo and Johannesburg. Explain how technology facilitates this, and support your explanation with a diagram. [10]

b) A commercial bank which has branches all over Zimbabwe and abroad intends to put them online. Briefly describe the network system in terms of topology and why you select the particular topology over others. [10]

QUESTION FOUR

a) Users of a mainframe computer are experiencing very slow response times in their terminals. This could be as a result of the under performance of the different equipment that make up the network. Identify the different equipment and their functions and how each could be responsible for the slow response time. [10]

b) What services are available on the Internet that would assist a business organization boast its operations locally and internationally. [10]

QUESTION FIVE

a) Draw an E-R diagram and show the structures of the relational database tables that result from it for a University Registrar's office. The office maintains data about each class including the instructor, course, and the time and place of a class meeting. For each student-course relationship, a grade is recorded. [12]

b) Separating the data from the applications that operate on the data is the principle on which DBMSs operate. Explain the theory behind this, and what advantages and disadvantages this has. [8]

QUESTION SIX

i. What is an information system and what are its characteristics? [6]

ii. Information systems can be classified into groups on the basis of their functionality. Which are these groups? [4]

iii. For an upcoming business person, there are options to either rent, lease or buy hardware. Which of these options would you go for and why? Why not go for the other two? [10]

QUESTION SEVEN

a) Outline and describe the main threats to a computerized information system. In your answer comment on the increasing use of networks and the relevance of this to the identified threats. [10]

b) Name and describe the various types of computer viruses and their characteristics. [10]

QUESTION EIGHT

a) (i) What is meant by booting a system? [3]

(ii) What is concurrency and how are concurrency-related problems resolved? [5]

(iii) What is a data warehouse? [2]

b) Explain the differences between distributed and centralized database systems, giving the advantages and disadvantages of each. [10]

QUESTION NINE

a) Name the components of an expert system and how each works. [10]

b) Explain the environment, input and outputs of a Material Requirements Planning system. [10]

END OF QUESTION PAPER

GOOD LUCK!