UNIVERSITY OF SWAZILAND

FACULTY OF COMMERCE

DEPARTMENT OF BUSINESS ADMINISTRATION

MAIN EXAMINATION 2005

TITLE OF PAPER: MANAGEMENT INFORMATION SYSTEMS I

DEGREE AND YEAR: DCOM III   IDE

COURSE NUMBER: BA 311-1

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS:1. THIS PAPER CONSISTS OF SECTIONS (A) AND (B)

2. THE CASE STUDY SECTION (A) IS COMPULSORY

3. ANSWER ANY TWO QUESTIONS FROM SECTION B.

Note MARKS WILL BE AWARDED FOR GOOD COMMUNICATION IN ENGLISH AND FOR ORDERLY PRESENTATION OF WORK

THIS EXAMINATION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

SECTION A

Pelegrin Industries.

Pelegrin Industries has been in business for more than 70 years. The company manufactures sports equipment, and its specialty is hunting and fishing equipment. The firm has its headquarters and manufacturing plants in Dayton, Ohio. It ships directly to sporting goods wholesalers and a number of large retailers located throughout North America. Pelegrin has grown rapidly during the last few years as a result of close attention to quality products and customer satisfaction. As the company has grown, it has become increasingly difficult for the production department to assess the market success of its increasingly larger product line. As a result, production has not always matched demand, resulting in crisis production runs or large overruns of unpopular products. A major contributor to this situation is that sales data are buried in paper invoices that are not analyzed easily. To support its information needs, the company has a large number of paper file systems for its financial, personnel, marketing, and production records. Recently, the slowness of processing paper files has become painful to the company. Some customers have canceled orders because they were taking too long to fill. In addition, the managers have been finding it difficult to make decisions or develop long-range plans simply because the paper files do not permit the timely construction of reports useful for decisions.

At a recent executive meeting, the problems with the paper recording system were discussed. Alice Noel, the production officer, felt that developing a computerized file system for the company's various paper records was long overdue. She stated that computerizing the files would speed up order processing and shipping and allow for timely reports. She felt that a great deal of commercial file system software was available from which the company could choose and that it would be relatively easy to identify the best file system software for each application that the firm had. She also stated that the company was not so unique that it had to develop its own programs in-house. She felt that it should hire some consultants, buy the different programs, and get the computerized files implemented as soon as possible.

Clyde Morehouse, the personnel officer, felt that it was silly to go to the expense of purchasing commercial software and hiring "a bunch of consultants." He felt that the firm should hire its own programmers on a full-time basis to develop the software in-house. That way, the company would also have the programmers available to develop additional programs in the future. Furthermore, in-house programmers could develop software specifically designed for the firm. He felt it was high time that Pelegrin had its own management information systems department.

John Akers, the financial officer, suggested that there was really nothing seriously wrong with Pelegrin information systems that a few more people wouldn't cure. He recommended that additional order-entry and shipping clerks be hired to move the products out the door faster. He argued that computerizing the files would take a lot of money and a lot of time, and during the developmental stages of the project, the company

would still require additional help to meet its immediate needs for speedier order processing.

You are the new assistant to the chief executive for the firm, and you have just completed a number of seminars on the use of computers to support managerial decision making. Your boss, Claire Williams, has asked you to prepare a report on the filing systems at Pelegrin for the next meeting. She would like to know what you think about each of the officer's views and what you would recommend that they do to solve their paper problems.

Prepare a memo to Claire Williams

     (a) Analyzing each of the other officers' ideas and   40 marks

     (b) Detailing the approach you would recommend to solve the problem. Make certain that you justify each of your recommendations.   10 marks

SECTION B 311-1

Question 1

A visiting computer salesman explains that the product is written with a relational database and supports SQL. Your manager tells you later that he does not know what this means.

Required

a) Explain the principles of the relational model   2marks

b) What is SQL   3marks

The following relations (table) have been defined for a relational application. The key of each relation table is shown in bold.

PRODUCT **Product – code**, product description, price
CUSTOMER **Customer-no**, customer-name, customer-address
ORDER **Order-no**, customer-no, customer name
ORDER LINE **Order-no, product-code**, product description, order-date

There are three likely errors in these tables which prevent them from being in Third Normal Form,

c) Identify, briefly explain and correct each error.   9marks

d) Discuss the rules that apply in each of the three normal forms.   6marks

e) Compare the traditional file organization and management techniques

     5marks

Question 2

a) Define the term system and explain the structure of a system   7marks

b) Define and distinguish between closed and open systems, with the aid of examples.   7marks

c) Discuss the three different views of a data base   11marks

Question 3

a) Discuss any five of the components of a data base   10marks

b) It has been said that you don't need database management software to have a database environment. Discuss   10marks

c) What is normalization?   5 marks