Code No. BTS 052C

B.TECH DEGREE III SEMESTER EXAMINATION IN INFORMATION TECHNOLOGY, MARCH 1998

IT 305 INTRODUCTION TO INFORMATION TECHNOLOGY

Time: 3 Hours   Max. Marks: 100

(Note: Your answers should be brief and to the point)

I   a)   Describe salient features of a management information system for your computer department. Implement at least one module (say, student details query module) using d Base (or any other database package).   (20)

OR

    b)   Develop an application for producing the progress report of the students of your department, using Lotus 1-2-3 or Excel. Give the various cell formulae. The report should contain the following details.

- Marks obtained in different subjects
- Maximum marks in each subject
- Highest and Lowest marks awarded in a particular subject.
- Class average in a particular subject
- Total marks of a student
- Percentage of total marks of a student
- Class rank of a student based on total marks   (20)
  (Make suitable assumptions)

II   a)   i)   Write short notes on any Three of the following with reference to internet

                   Gopher
                   Socket
                   HTML
                   ARPANET
                   Anonymous FTP   (12)

       ii)   Following is the email address of a node in Cochin
                epsilon @ gias md 01. vsnl. net. in   (3)

             What does each factor in this address imply?

       iii)   What are the major functions of Transmission Control Protocol and Internet Protocol (TCP/IP)   (5)

OR

    b)   i)   Develop an INTRANET involving Computer Science, Electronics and Physics departments of your University. Describe the hardware configuration proposed with justification. Suggest suitable subnet and IP addresses and all other relevant details.   (10)

       ii)   What is the Y 2 K problem?   (10)
            Is the programs developed on PC/ATs under MS DOS are affected by this?
                Justify your answer.
            What sort of programs are badly affected by this problem?

III   a)   List out and describe the basic data processing business functions of FACT unit which produces caprolactum. Illustrate the information flow among these functions.   (20)

OR

b) i) Suggest a crash recovery scheme for a Bank information system, with justifications. (5)

ii) Detail the issues involved in Master file creation and maintenance of an application for computerising Bank functions. (15)

IV a) i) Discuss the basic steps involved in structured programming. (10)

ii) What is the difference between data-names and constants in COBOL (5)

iii) What are the issues involved in developing shared IT applications. (5)

OR

b) i) How does COBOL differentiate between searching sorted and unsorted tables. (5)

ii) What is the difference between an index and a subscript in COBOL. (5)

iii) Using any two sorted files, write a program incorporating the MERGE feature to combine them into one file. (10)

V a) Write a COBOL program to determine the overall effect on a factory budget if the employees are given salary increases as follows:

7% for Senior executives
8% for Junior executives
11% for Supervisors and other employees
Read input file and print a pay roll report
(Make suitable assumptions for any data that you find relevant to develop this program and indicate this as a comment(s).)

OR

b) i) Write a COBOL PROGRAM to prepare the invoice form from the following data.

. Customer number
. Customer name
. date of sale
. description
. quantity
. unit price
. discount percentage
. sale tax percentage
. freight charge

(Make suitable assumptions for any data that you find relevant to develop this program and indicate this as a comment(s)).

*****