

II B.Tech I Semester Supplementary Examinations, November 2006
DATA PROCESSING AND FILE ORGANIZATION (COBOL)
(Common to Computer Science & Engineering, Information Technology
and Computer Science & Systems Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. ABC company has five types of products. Sales Representatives of the company get the commission on the sales of the products as per the following formulae.

Product Type	Formula for commission computation
A	$(0.15 * \text{Bill} - \text{rate}) * \text{Quantity}$
B	$(0.10 * \text{Cost} - \text{Rate} + 0.25(\text{Bill} - \text{Rate} - \text{Cost} - \text{Rate}) * \text{Quantity})$
C	$(0.30(\text{Bill} - \text{Rate} - \text{Cost} - \text{Rate})) * \text{Quantity}$
D	$(\text{Rs.}50.00 + (0.5 * \text{Cost} - \text{Rate})) * \text{Quantity}$
E	Rs.40.00

Product type, Cost-Rate, Bill-Rate and Quantity are given as inputs. Develop a COBOL program to compute the Commission-Amount as per the product type. If product type is none of the A, B, C, D or E then Commission_amount is 0. Also draw the flow chart for the same. [8+8=16]

2. (a) What is the function of class condition? Write the structure of a class condition and write various rules of class condition. Illustrate through examples. [4+2+2=8]
- (b) What is the use of Condition-Name condition? Write the rules applicable for a Condition-Name condition. Illustrate through examples. [4+2+2=8]
3. Write the syntax of OCCURS Clause and what are the rules applicable for the OCCURS clause and the subscripts. [4+8+4=16]
4. (a) Find which of the following statements are wrong and correct them. [10x1=10]
- ACCESS MODE IS SEQUENTIAL.
 - ACCESS MODE IS INDEXED SEQUENTIAL.
 - SYMBOLIC KEY ROLL_NO_TF.
 - TF_ROLL_NO IS SYMBOLIC KEY.
 - MF_EMP_NO IS RECORD KEY.
 - READ MASTER_FILE IF KEY IS INVALID GO TO PROC_A.
 - REWRITE MASTER_FILE INVALID KEY GO TO WRITE_ERROR.
 - REWRITE INV_FILE IF INVALID KEY GO TO E_R_R_O_R.
 - OPEN INPUT_OUTPUT_FILE MASTER_FILE.
 - CLOSE INPUT_OUTPUT MASTER_FILE.
- (b) Answer true or false. [6x1=6]

- i. Updated records are written over the corresponding records(having the same key field) in indexed files.
 - ii. It is necessary to sort a master file before it is stored as an indexed sequential file.
 - iii. Unsorted transaction files may be used to update an indexed sequential file.
 - iv. It is necessary to have in indexed master file a record corresponding to each record in the transaction file.
 - v. Indexed organization is good for low activity ration files.
 - vi. Relative files are more machine dependent compared with indexed files.
5. (a) Given the following typical disk drive characteristics of a disk unit:
 - Capacity(megabytes/pack) - 29
 - Maximum seek time (millisec) - 130
 - Minimum seek time (millisec) - 25
 - Average seek time (millisec) - 60
 - Average latency time (millisec) - 12.5
 - Data transfer rate (megabits/sec) - 2.5
 - Recording density (bits/inch) - 2000
 - Track capacity (kilobits/track) - 59
 - No. of disks/pack - 11
 - Tracks per surface - 200
 - No. of recording surfaces/pack - 20
 - Rotational speed(rpm) - 2400
 - Disk diameter(inches) - 14
 Calculate
 - i. The capacity(in bytes) of a cylinder [4]
 - ii. The average, minimum and maximum time required to read one sector(512 bytes) of information. [4]
- (b) What are relative files? Explain with general format the FILE_CONTROL paragraph for relative files. [4+4=8]
6. (a) Explain with syntax and examples different formats of READ statements for relative files. [4+4=8]
- (b) Explain with syntax the following procedure division statements for relative files. [4x2=8]
 - i. DELETE
 - ii. START
7. Write a COBOL program to merge two output files shown below such that the records of one string from each file forms one maximal increasing string in the output File [16]
 - File 1: 5,10,1,18
 - File 2: 3,4,7,9,2,16,17
 (After merging 3,4,5,7,9,10,1,2,16,17,18).

8. Explain meaning of following terms:

- | | |
|---------------------|-----|
| (a) Page footing | [5] |
| (b) Control heading | [5] |
| (c) Report fooling | [6] |

★ ★ ★ ★ ★