Q 2315

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Second Semester

Information Technology

IF 142 — PROGRAM DESIGN AND DEVELOPMENT

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How can you store and access the data?

2. What are the advantages and disadvantages of pseudo-code?

3. Why we break our designs into modules?

4. How interactive programs differ from batch programs?

5. How can you declare a single dimensional array in 'C'?

6. What are parallel arrays?

7. List out the logical operators of 'C'.

8. Give the seven types of input errors.

9. List the operations that can be performed in a file.

10. Specify the two types of non-sequential access.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe the various steps involved in a program development cycle. (10)

    (ii) Write the pseudo code to search the element in an array using sequential search. (6)

Or

    (b) (i) Draw and explain all flowchart symbols. (10)

    (ii) Draw the flowchart to find the factorial of a given number. (6)

12. (a) Write short notes on following with an example:

    (i) Flags and Switches (8)

    (ii) Parameter records. (8)

Or

    (b) Illustrate the requirements and goals of structured design.

13. (a) (i) How can you design for searching in two-dimensional arrays? (6)

    (ii) Write the pseudo code or a program to read two 3 × 3 arrays, multiply the arrays and print the resultant array. (10)

Or

    (b) (i) Write a program or pseudo code to sort the elements using bubble sort technique. (8)

    (ii) Give the demo to sort the given elements using insertion sort. [10, 5, 36, 7, 66, 8, 15, 89, 37, 22] (8)

14. (a) (i) With an example illustrate the conversion of IF statements using AND and OR into nested IFs. (8)

    (ii) Illustrate the conversion of a nested IF into a CASE structure with suitable example. (8)

Or

    (b) (i) Design a multi-level control break program that includes the values from the compare fields in heading and total lines and uses group indication in writing the detail lines. (10)

    (ii) List and explain the different types of edit checks. (6)

Q 2315

15. (a) Design an update program that allows multiple transaction records for any one master record.

Or

(b) Design an update program using an indexed sequential file.