B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2003.

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. What is sentinel value?

2. Write the advantages and disadvantages of using a Pseudocode.

3. Explain how switch statement works.

4. What are the sources of Parameter records?

5. Write a note on Headers and Footers.

6. Write a note on searching in two–dimensional arrays.

7. What is loop control with respect to writing interactive program?

8. What are parallel arrays?

9. How could logical operators be implemented using Nested IF structures?

10. Write a simple pseudocode to explain the concept of sub-total.

PART B — (5 × 16 = 80 marks)

11. (i) Write in detail about the various phases involved in the Program Development Life Cycle. (8)

    (ii) Discuss in detail about any two design structures used in program development. (8)

12. (a) Design a program that creates a report of sales in food world. Input is from a file of sales, giving date, item number, quantity and unit price for each sale item. Output should include date, item number, and total value of sale (quantity times unit price) for each item in the input file.

Or

(b) (i) Write short notes on Totals and Parameter records.

(ii) Design a program that will create a report with a two-line page heading (double spaced) and single-line column headings. The detail lines should be single-spaced. Allow a maximum of 45 detail lines per page.

13. (a) What are the requirements and goals of Structured design.

Or

(b) Explain about the tasks performed in each of the following steps of declaring, loading writing and accessing arrays.

14. (a) Explain Bubble sort and Insertion sort algorithms with an example each.

Or

(b) Design a multilevel control break statement with priming read. Discuss the difficulties involved.

15. (a) Design a merge program in which the loop is exited when either file is empty.

Or

(b) (i) Define and describe the sequential update process.

(ii) Design an update program assuming only one transaction record for any one master record.

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