B 2262

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 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. Draw a flowchart to find the smallest number among three numbers.

2. State the reasons why pseudo-code representation of any algorithm is popular.

3. How the flags are used in a program?

4. List the rules for linking modules.

5. Give the advantages of arrays.

6. How can you access the elements in multi-dimensional arrays?

7. Can a nested IF statement be converted into a CASE structure always? Justify.

8. How break differs from exit?

9. Distinguish between a file merge design and file match design.

10. Compare sequential versus non-sequential file.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the steps involved in a program development cycle. (12)

(ii) How can we store and access data? (4)

Or

(b) (i) Explain the design structures in pseudo-code. (8)

(ii) Write the pseudo code to search the element in an array using sequential search. (8)

12. (a) (i) Design a program that will create a report with a two-line page heading and single-line column headings. The detail lines should be single spaced. Allow a maximum of 45 detail line per page and the page headings include the system date and a page number. (8)

(ii) Write short notes on parameter records. (8)

Or

(b) (i) Describe about the requirements and goals of the structured design. (12)

(ii) Explain how interactive programs differ from batch programs? (4)

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

(ii) Give the demo to sort the given elements using insertion sort.

[13, 8, 32, 5, 65, 81, 17, 9, 47, 26] (8)

Or

(b) (i) Explain how can you design for searching in two-dimensional arrays? (8)

(ii) Design a program that accesses data from parallel arrays. (8)

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

(ii) Explain the CASE structure with suitable example. (8)

Or

(b) (i) Explain the different types of edit checks. (8)

(ii) Describe about single level control breaks and multi-level control breaks with an example. (8)

15. (a) Design an update program assuming any one transaction record for any one master record.

Or

(b) (i) Explain briefly about indexed sequential access in a file with an example. (12)

(ii) What is the need of EOF testing? (4)