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Question Paper Code : 97043

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Second Semester

Computer Science and Engineering

CS 6202 – PROGRAMMING AND DATA STRUCTURES – I

(Common to Computer and Communication Engineering and Information Technology)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define an array. Give an example.
2. Give example on call by reference.
3. What are the statement used for reading a file.
4. Define the need for union in C.
5. What are abstract data type?
6. What is circular linked list?
7. Give the applications of stack.
8. What is doubly ended queue?
9. Define extendible hashing.
10. Differentiate internal and external sorting.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the various control statements in C language with example in detail. (16)

Or

- (b) Briefly discuss about:

- (i) Function with number of arguments.
- (ii) Function Pointers.

(8 + 8)

12. (a) Explain the difference between structure and Union with examples. (16)

Or

(b) Explain about file manipulations in detail with suitable program. (16)

13. (a) Describe the creation of a doubly linked list and appending the list. Give relevant coding in C. (16)

Or

(b) Explain the following:

(i) Applications of lists.

(ii) Polynomial manipulation. (8 + 8)

14. (a) Discuss about Stack ADT in detail. Explain any one application of stack. (16)

Or

(b) Explain about Queue ADT in detail. Explain any one application of queue with suitable example. (16)

15. (a) What are the different type of hashing techniques? Explain them in detail with example. (8 + 8)

Or

(b) Write an algorithm to sort a set of 'N' numbers using quick sort Trace the algorithm for the following set of numbers:

88, 11, 22, 44, 66, 99, 32, 67, 54, 10. (16)