

B. N. Bandodkar College of Science, Thane

F. Y. B. Sc. Semester II Examination, March 2014

Course Code: USCS202

Duration: 2 Hrs.

Total Marks: 60

- Note:**
- i. All questions are compulsory.**
 - ii. Figures on right indicate maximum marks.**

- Q. 1**
- a** Explain recursion with the help of a C program. 8
- OR**
- a** What is function? How to call a function? Explain with an example. 8
 - b** Explain bubble sort algorithm with an example. 7
- OR**
- b** Write C code to solve the Tower of Hanoi problem. 7
- Q. 2**
- a** Explain the difference between array and pointer. What do you understand by pointer to a pointer? 8
- OR**
- a** Explain the use of following functions: 8
 - i.** fopen() **ii.** fgetc() **iii.** fputs() **iv.** fwrite()
 - b** With the help of a 'C' program explain Pointer to a function. 7
- OR**
- b** What is meant by dereferencing? What is the difference between a pointer and a dereferenced pointer? 7
- Q. 3**
- a** What is stack? Write algorithm to add elements in C. 8
- OR**
- a** Write a 'C' program to insert an element in Linked List after a given node. 8
 - b** Write an algorithm to search for a element in link list. 7
- OR**
- b** What is queue? Write a 'C' program to delete an element from queue. 7
- Q. 4**
- a** Explain the use following functions: 8
 - i.** malloc() **ii.** calloc() **iii.** realloc() **iv.** free()
- OR**
- a** What is meant by Linked list? With suitable examples show the representation of linked list in memory. 8
 - b** What is Macros? Differentiate between functions and Macros. 7
- OR**
- b** With the help of a 'C' program explain Pointer to a structure. 7