SAVITIBAI PHULE UNIVERSITY OF PUNE
S. Y. B.Sc. (Computer Science) Semester III
Practical Examination
SUBJECT: CS-233 Practical course based on CS231
Time: 3 hours Max. Marks: 35

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Q1. Implement a list library (singlylist.h) for a singly linked list of integer with the operations create, display. Write a menu driven program to call these operations [10]

Q2. Write a program that copies the contents of one stack into another. Use stack library to perform basic stack operations. The order of two stacks must be identical.(Hint: Use a temporary stack to preserve the order). [20]

Q3. Viva [5]

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Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using quick sort algorithm. [10]

Q2. Write a program that checks whether a string of characters is palindrome or not. The function should use a stack library (cststack.h) of stack of characters using a static implementation of the stack. [20]

Q3. Viva [5]

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Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=push(S) and S=pop(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. Write a program that sorts the elements of linked list using bubble sort technique. [20]

Q3 Viva [5]

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Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=push(S), isFull(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. There are lists where new elements are always appended at the end of the list. The list can be implemented as a circular list with the external pointer pointing to the last element of the list. Implement singly linked circular list of integers with append and display operations. The operation append(L, n), appends to the end of the list, n integers either accepted from user or randomly generated. [20]

Q3. Viva [5]

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Q1. Read the data from the 'employee.txt' file and sort on age using Count sort and write the sorted data to another file 'sortedemponage.txt'.

[10]

Q2. Write a program to convert an infix expressionof the form (a*(b+c)*((d-a)/b)) into its equivalent postfix notation. Consider usual precedence's of operators. Use stack library of stack of characters using static implementation

[20]

Q3 Viva [5]

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Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the above six operations. Write a driver program that includes stack library and calls different stack operations. [10]

Q2. Read the data from the 'employee.txt' file and sort on age using Merge sort or Quick sort and write the sorted data to another file 'sortedemponage.txt'. [20]

Q3. Viva [5]