S. Y. B.Sc. (Computer Science) Semester III Practical Examination

SUBJECT: CS-233 Practical course based on CS231

Time: 3 hours Max. Marks: 35

- Q1.Implement a list library (doublylist.h) for a doubly linked list of integers with the create, display operations. Write a menu driven program to call these operations. [10]
- Q2. Write a program that sorts the elements of linked list using any of sorting technique. [20]

S. Y. B.Sc. (Computer Science) Semester III
Practical Examination

SUBJECT: CS-233 Practical course based on CS231

Time: 3 hours Max. Marks: 35

- 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]

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Practical Examination

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Time: 3 hours Max. Marks: 35

- Q1. Implement a list library (singlylist.h) for a singly linked list of integer With the operations create, delete specific element and display. Write a menu driven program to call these operations [10]
- Q2. Write a C program to check whether the contents of two stacks are identical. Use stack library to perform basic stack operations. Neither stack should be changed. [20]

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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]

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Q1 Implement a list library (singlylist.h) for a singly linked list. Create a linked list, reverse it and display reversed linked list. [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]

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- Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using selection sort algorithm [10]
- Q2. There are lists where insertion should ensure the ordering of data elements. Since the elements are in ascending order the search can terminate once equal or greater element is found. Implement a doubly linked list of ordered integers (ascending/descending) with insert, search and display operations. [20]

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Time: 3 hours Max. Marks: 35

- 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]

S. Y. B.Sc. (Computer Science) Semester III
Practical Examination

SUBJECT: CS-233 Practical course based on CS231

Time: 3 hours Max. Marks: 35

- 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 X=peek(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 accepted from user. [20]