CLASS: BTECH/IMSC   SEMESTER : III
BRANCH: CSE/IT/MATH & COMP.   SESSION : MO/19

SUBJECT: CS201 DATA STRUCTURES

TIME: 3 HOURS   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4.* Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)	Define Asymptotic notations. Discuss the significance and limitations of Asymptotic notations with examples.	[5]
Q.1(b)	Write a procedure/algorithm/program which deletes all duplicate elements from the array.	[5]
Q.2(a)	How does linked stack differ from linear stack. Can stack be used for non-recursive program? Justify.	[5]
Q.2(b)	Define circular Queue. List the advantages of Circular queue over linear queue with examples.	[5]
Q.3(a)	Write a procedure/algorithm/program to convert an infix to prefix equivalent expressions. Explain with an example.	[5]
Q.3(b)	Write a procedure/algorithm/program for merging of two link list. Explain with diagram.	[5]
Q.4(a)	Write a procedure/algorithm/program for PREDORDER traversal of a TREE. Explain with an example.	[5]
Q.4(b)	Write a procedure/algorithm/program to find a Minimum spanning tree. Explain with an example.	[5]
Q.5(a)	Write a procedure/algorithm/program for Insertion sort and explain with an example.	[5]
Q.5(b)	Write a procedure/algorithm/program to create a Binary search tree and explain with example.	[5]