## **END TERM EXAMINATION**

SECOND SEMESTER [BCA] MAY- JUNE 2015

Pape	r Code: BCA-108	Subject: Data Structure using C (BATCH- 2011 Onwards)
Time	: 3 Hours	Maximum Marks: 75
Note:	Attempt any five questions include	ding Q.No 1 which is compulsory.
Q1	Answer the following questions:- (a) Explain the working of insertion s (b) What do you mean by binary s conventional binary tree?	(5x5=25) sort with suitable example. search tree? How is it different from
	(c) What is circular queue and how i (d) Explain the differences between li (e) Write a C function for addition of	linear and non linear data structures.
Q.2	of two sparse matrices.	natrix? Write a procedure for addition (6) . Also write a C function to evaluate a (6.5)
Q.3	(a) Write C function that finds the to (b) Write a C function to concatenate	otal number of nodes in a linked list.(6) e two input strings. (6.5)
Q.4	of height h.	tal number of nodes in a binary tree (6) the insertion and deletion operations in (6.5)
Q.5		post order traversals of a binary tree left and right skewed binary search (12.5)
Q6	What is AVL tree? Explain various per explain various rotations to balance	ossible nodes types in this tree. Also an AVL tree. (12.5)
Q7	(a) Describe B-tree indexing with sui (b) Explain different types of searchine example to illustrate binary search	ing techniques Give a suitable
Q8	<ul><li>(a) Discuss the role of 'Hashing in da other searching techniques?.</li><li>(b) Write an algorithm for merge sort</li></ul>	ata searching. How is it different from (6) t. (6.5)

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