Enrollment No: _		Exam Seat No:	
	C.U.SHAH UNIVERSITY		

**Summer Examination-2017** 

**Subject Name: Introduction to Algorithms & Data Structure** 

Se	emester struction (1) U (2) Ir (3) D		ook are strictly to be obeyed.	Marks: 70 prohibited.
Q-1		Attempt the following questions:		(14
	a)	What is problem?		
	<b>b</b> )	What is flowchart?		
	c)	Define: injective function.		
	d)	What is average case time complex	ity?	
	e)	Define: constant time complexity.		
	f)	AVL stands for		
	g)	What is spanning tree?		
	h)	What is graph?		
	i)	What is algorithm?		
	<b>j</b> )	DFS stands for		
	k)	Define: Sequence.		
	1)	Define: Tree.		
	m)	Define: natural language.		
	n)	BFS stands for		
Attemp	pt any f	our questions from Q-2 to Q-8		
Q-2		Attempt all questions		

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Q-2		Attempt all questions	
	a.	Explain Binary Search with example	(07)
	b.	Explain Asymptotic Notations.	(07)

## **Attempt all questions** Q-3 Explain Queue and its working.

a.	Explain Queue and its working.	(04)
b.	Explain Hash Table	(05)
Э.	Explain Stack in detail.	(05)



Q-4		Attempt all questions	
	a.	Explain Minimum spanning tree.	(04)
	b.	Describe Graph.	(05)
	c.	Explain Direct Addressing Table.	(05)
Q-5		Attempt all questions	
	d.	Explain Red-Black tree.	(04)
	e.	Describe AVL tree.	(05)
	f.	Explain Topological sort.	(05)
Q-6		Attempt all questions	
_	a.	Explain Dijkstra's Algorithm.	(07)
	b.	Explain Building Blocks of Algorithms.	(07)
Q-7		Attempt all questions	
•	a.	Explain Quick Sort.	(07)
	b.	Write a note on Double Ended Queues.	(07)
Q-8		Attempt all questions	
	a.	Explain Linked list.	(04)
	b.	Describe Merge sort.	(05)
	c.	Explain Prim's algorithm.	(05)

