VCD-061016 SYBSC (C.S) C-III III-SEMESTER REGULAR EXAM 2016-17 75-MARKS 21/2	3.061016 SY
NOTE: 1. Figure should be neat and labelled	Note: i)
2. All questions are compulsory	ii
3. Right side indicates marks	
가는 사람들이 그 그 아이에서 나는 바로 다른 것이라면 가장 하게 되었다. 그는 그는 사람이 가득하고 있다면 하는데 가장하는데 다른 사람이 되었다.	D
Q.1 Answer the following. (Attempt Any 4)	marks
	Q.1 A
a) Write short note on time and space complexity?	a) Ex
b) Explain in detail N-Log-N and Quadratic function? c) Write short note on these notation?	b) W
c) Write short note on theta notation? d) Explain in detail proceedition and post condition regarding ADTS?	۷ (ن
d) Explain in detail precondition and post condition regarding ADTS? e) Write a program to match parenthesis in an expression using stack.	
f) Write a program to match parenthesis in an expression f) Write short note on Dynamic programming problem solving method?	d) F
g) List different counting primitive operations?	
g) List different counting primitive operations?h) Explain in detail evaluation postfix expression?	
a detail evaluation postiix expression.	
Q.2 Answer the following. (Attempt Any 4)	20 marks
a) Write program to implement Queue?	e
b) Write a program for deletion of a node at front of single linked list?	
c) Explain in detail circular linked list?	
d) Write short on trees and explain their properties?	
e) Explain following concepts of binary trees	
i. Tree Size	
ii. Depth	
iii. Height	
iv. Width	
v. Size	
[15] [16] - [16	
and algoritation for insertion of element at the head of a Single Linke	ed List?
resolution of a flode in a freet	
h) Write a program to simulate stack using Linked List?	
3 Answer the following. (Attempt Any 4)	[20 marks]
a) Explain post order traversal with its algorithm?	
b) Write a program to implement Property 5:	
Problem to implement breadth First traversal in tree?	
details data structures for graphs?	
d) Explain in detail adjacency matrix in graph?	
e) Write short on the Map ADTS?	
f) Write an algorithm for Dijkstra's algorithm to find shortest path?	
g) List the problems of reachability in graph?	
b) Write a program to imple	
h). Write a program to implement adjacency list structure in graph?	
그는 아이들이 얼마나 아이들이 얼마나 하는 사람이 가득하게 하는 것이 되었다. 그 그는 사람들이 살아 있다면 하는 것이 없다.	

4 Answer the following. (Attempt Any 3)

[15 marks]

- a) Explain best case, worst case, and average case regarding algorithm analysis?
- b) Write a program to implement different methods of stack?
- c) Write a program for insertion of node in Double Linked List?
- d) Explain in detail Binary trees?
- e) Explain the following behaviors of Maps
 - i. M.get(k,d=None)
 - ii. M.keys()
 - iii. M.clear()
 - iv. M.popitem()
 - v. M.items()
- f) Write a program to implement inorder tree traversals?

____ The End ----