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SVIS 315 A -16
B.Sc. Vith Semester Degree Examination
COMPUTER SCIENCE
(Data structure Using C++)
Paper - CS 601

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Karnatak Arts Science &
Commerce College
BIDAR - 585 401

Time : 3 Hours

Maximum Marks : 80

Section -A

I. Answer All the following questions

(15×1=15)

1. Define linear data structure
2. What is array?
3. Which are the components of linked list?
4. LIFO stands for _____
5. What is the condition to represent queue is empty and queue is full?
6. What is complete binary tree?
7. Define union of set.
8. What is degree of node?
9. What is external sort?
10. Define Hash collision?

11. The number of elements in a set is termed as _____
12. The post traversal of a binary tree is DIEFJGCA find out pre order traversal.
13. Which data structure allow deleting and inserting data at top.
14. Mention any two programs name which involves recursive function
15. Define searching?

Section -B

II. Answer any **Five** questions.

(5×5=25)

16. Explain various operations on data structure.
17. Write an algorithm to merge two array elements.
18. How many ways to represents a linked list in memory ? Explain any one?
19. Explain operations on stack.
20. Explain terminologies of sets.
21. Construct a binary tree whose traversals are as followes
In order - DBHEAIFJCG
Pre order - ABDEHCFIJG
22. Explain Resolving Hash clashes by open addressing.

Section -C

Answer any **Four** Questions.

(4×10=40)

23. Write a program to search an element in an array using linear search.
24. Explain different ways to memory representation of sets.
25. Explain with algorithm different types of deleting a node in a single linked list.

26. What is queue? Explain types of queues.
27. Write an algorithm to insert a node on a binary tree.
28. What is radix sort? Arrange the following numbers in ascending order using radix sort method- 348, 143, 361, 423, 538, 128, 321, 543, 366,