

RVR & JC COLLEGE OF ENGINEERING (AUTONOMOUS):: CHOWDAVARAM

II/IV B.Tech., (CSE)

ASSIGNMENT TEST - I

Time: 45 Mts.

2021-22' (4th Semester)

Max.Marks: 12

CSH11 – ADVANCED DATA STRUCTURES

| | | | | RBT Level |
|-----|--|----|-----|----------------------|
| 1 | What are the methods used to represent a Dictionary? Discuss. | 6M | C02 | 2 |
| 2.a | What are the characteristics of a good hash function? Give two examples. | 3M | C01 | 2 |
| b | Give reason for maintaining constant load factor for a hash table. Explain how rehashing helps in improving the performance of hashing. | 3M | C01 | 2 |
| 3 | With a procedure and a relevant example, discuss separate chaining in hashing. | 6M | C01 | 2 |
| 4.a | Randomizing a data structure improves the performance of operations. Justify the statement with an example. | 3M | C02 | 4 |
| b | Give reasons for bounding the height of a Skip list to $O(\log n)$. | 3M | C02 | 4 |
| 5 | Construct an AVL tree with the keys 45, 78, 35, 10, 22, 58, 96, 112, 89, 34, 66, 12. Show the resulting tree after each insertion. Also specify the necessary rotations performed. | 6M | C03 | 3 |
| 6 | What is a splay tree? Illustrate with suitable examples, various types of rotations performed during splaying. | 6M | C03 | 2 |