Section A

[12 Marks – 1 mark each]

Select the **BEST** answer for each of the following:

A.1. $H(k) = (h(k) + i*i) \% m$

a. Chaining
b. Linear Probing
c. Double hasl
d. Quadratic pr

A.2. An application for heaps is

a. Reheapification upwards
b. Reheapification downwards
c. Expression tre
d. Priority queue

A.3. In a full binary tree nodes are added

a. One level at a time
b. At the root
c. At the first inser
d. One node at a ti

A.4. A heap is a

a. FIFO data structure
b. FILO data structure
c. A complete BST
d. A complete binary

A.7. When implementing a priority queue using heap, the highest priority could be found at the

a. Leaf node
b. Last node
c. Root node
d. A node which is a child of all nodes.

A.8. In hashing, chaining is one the .....techniques

a. Hash function making
b. Collision resolution
c. Storage
d. Collision.

A.9. In a full binary tree of height h, the number of nodes is

a. $2^h - 1$
b. $h^2 - 1$
c. $2^h + 1$
d. $h^2 + 1$.

A.10. The main drawback of quadratic probing is

a. Collision resolution
b. Collision
c. Primary clustering
d. Secondary clustering

A.11. The time complexity of searching in a balanced Binary Search Tree (BST) is

a. O(n)
b. O(log n)
c. $O(n^2)$
d. O(n log n)

A.12. In the ideal situation, accessing data in a hash table is

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b. O(1)
c. O(log n)
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