| Institute: | THADOMAL SHAHANI ENGINEERING COLLEGE |
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| Branch: | Computer |
| Sem: | III |
| Subject Name (with Subject Code): | Data Structure (CSC305) |
| Number of questions: | $\mathbf{1 0}$ |

1. $\quad$ Binary Search is a searching algorithm that works efficiently with
(a) Index list
(b) Sorted list
(c) Binary list
(d) None of the above
2. Hash function division method is represented by
(a) $\mathrm{h}(\mathrm{k})=\mathrm{m}(\mathrm{k}$ A $\bmod 1)$
(b) $\mathrm{h}(\mathrm{k})=\mathrm{k} \bmod \mathrm{m}$
(c) $\mathrm{h}(\mathrm{k})=(\mathrm{k}+\mathrm{m}) * \mathrm{c} 1+\mathrm{c} 2 * \mathrm{k}$
(d) $\mathrm{h}(\mathrm{k})=[(\mathrm{k} * \mathrm{~m})+\mathrm{i}] \bmod 1$
3. Adding an element in a queue is called an operation and the removing of an element is called a $\qquad$ operation.
(a) push, pop
(b) Insertion, deletion
(c) enqueue, dequeue
(d) push, delete
4. The number of edges from the root node to the deepest leaf is called $\qquad$ of the tree.
(a) Length
(b) Width
(c) Depth
(d) Height
5. The situation when in a single linked list if (START=NULL) then it is condition.
(a) Underflow
(b) Overflow
(c) Underflow and Overflow
(d) Duplication
6. What is the number of edges present in a undirected complete graph having 7 vertices?
(a) 49
(b) 7
(c) 20
(d) 21
7. What is an external sorting algorithm?
(a) Algorithm that uses main memory during the sort
(b) Algorithm that uses tape or disk during the sort
(c) Algorithm that involves swapping
(d) Algorithm that are considered 'in place'
8. Convert the given infix expression $((A-(B+C)) * D)^{\wedge}(E+F)$ into postfix expression
(a) $\mathrm{ABC}-+\mathrm{DE} \mathrm{F}^{*}+\boldsymbol{\wedge}$
(b) ABC+-*DEF+^
(c) $\mathbf{A B C}+-\mathrm{D}^{*} \mathrm{EF}+\wedge$
(d) ABC+-D*EF^+
9. Which of the following is non-liner data structure?

| (a) | Trees |
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(b) Stacks
(c) List
(d) Array

10 Which of the following data structure is the most efficient in case of priority queue implementation
(a) Tree
(b) Array
(c) List
(d) Heap

Solution:

