GPCET
Pioneering Innovative Education

SET NO:1

G.PULLAIAH COLLEGE OF ENGINEERING &TEC CHNOLOGY

(I B.Tech-II Sem- I-MID objective, Branch: CSE)

Subject: DS **Max. Marks: 10 M**

Time : 20 Minutes **Date : 08-03-2017**

Roll No: _____ Invigilator Signature: _____

Answer all questions

1. A technique for direct search is [ ]
(A) Binary Search (B) Linear Search (C) Tree Search (D) Hashing
2. If h is any hashing function and is used to hash n keys into a table of size m, where n<=m, the expected number of collisions involving a particular key x is[ ]
(A) less than 1. (B) less than n. (C) less than m. (D) less than n/2.
3. Key value pairs is usually seen in [ ]
(A) Hash tables (B) Heaps (C) Both a and b (D) Skip list
4. The goal of hashing is to produce a search that takes [ ]
(A)O(1) time (B) O(n2) time (C) O(log n) time (D) O(n log n) time
5. The best data structure to check whether an arithmetic expression has balanced parentheses is a [ ]
(A) queue (B) stack (C) tree (D) list
6. In the worst case, the number of comparisons needed to search a singly linked list of length n for a given element is [ ]
(A) $\log_2 n$ (B) n/2 (C) $\log_2 n - 1$ (D) n
7. The process of accessing data stored in a serial access memory is similar to manipulating data on a [ ]
(A) heap (B) queue(C) stack (D) binary tree
8. Which data structure is used for implementing recursion? [ ]
(A) Queue. (B) Stack. (C) Arrays (D) List
9. On which principle does stack work? [ ]
(A) FILO (B) FIFO (C) LILO (D) Both a and c above
10. The dummy header in linked list contain [ ]
(A) first record of the actual data
(B) last record of the actual data
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(A) 37 (B) -37 (C) 40 (D) 3

13.Which out of these is a non-linear data-structure [ ]

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14. The functions used for dynamic memory allocation are [ ]

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(A) time complexity (B) space complexity

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(I B.Tech-II Sem- I-MID objective, Branch: CSE)

Subject: DS **Max. Marks: 10 M**

Time : 20 Minutes **Date : 08-03-2017**

Roll No: _____ **Invigilator Signature: _____**

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G.PULLAIAH COLLEGE OF ENGINEERING &TEC CHNOLOGY

(I B.Tech-II Sem- I-MID objective, Branch: CSE)

Subject: DS **Max. Marks: 10 M**

Time : 20 Minutes **Date : 08-03-17**

Roll No: _____ Invigilator Signature: _____

Answer all questions

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SET NO:4

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(I B.Tech-II Sem- I-MID objective, Branch: CSE)

Subject: DS **Max. Marks: 10 M**

Time : 20 Minutes **Date : 08-03-2017**

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11. Postfix notation is also known as [ ]

(A) polish notation (B) reverse polish notation

(C) post notation (D) post-operator notation

12. The deque in which insertion is done at one end and deletion from both ends: [ ]

(A) input-restricted deque (B) output-restricted deque

(C) input-output restricted deque (D) Any of the above

13. The estimated amount of time required in executing an algorithm is referred to as _____ of the algorithm. [ ]

(A) time complexity (B) space complexity

(C) time and space complexity (D) none of the above

14. The main measures for the efficiency of an algorithm are [ ]

(A) processor and memory (B) complexity and capacity

(C) time and space (D) data and space

15. The functions used for dynamic memory allocation are [ ]

(A) delete and free (B) free and realloc

(C) malloc and free (D) malloc and calloc

16. A node in a double linked list comprises of [ ]

(A) information field (B) information field and next pointer

(C) information field, next pointer & previous pointer (D) information field, next pointer, previous pointer and thread field

17. The worst case occurs in linear search algorithm when:

(A) item is in the middle of the array (B) item is not in the array

(C) item is the last element in the array (D) item is the last element in the array or not in the array at-all

18. On which principle does queue work? [ ]

(A) FILO (B) FIFO (C) LILO (D) Both a and c above

19. The postfix expression: 5 6 2 + * 12 4 /- when evaluated gives the following result: [ ]

(A) 37 (B) -37 (C) 40 (D) 3

20.Which out of these is a non-linear data-structure [ ]

(A) arrays (B)linked-lists (C) queues (D) tree