2015 BCA(II) / 11 / 15

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ME - 9/2

(\text{Turn over})

\text{Q-1) None of these}
\text{Q-2) Complex data structure}
\text{Q-3) Non-linear data structure}
\text{Q-4) Linear data structure}

2 \times 10 = 20

\text{Choose the correct answer of the following:}

\text{1) Answer all questions.}

\text{Objective Type Questions (Q-1 to Q-4)}

\text{Group - A}

\text{Answer from both groups as directed.}

\text{The figures in the margin indicate full marks.}

\text{Candidates are required to give their answers in their own words as far as practicable.}

\text{Full Marks : 80}

\text{Time: 3 hours}

9. Create a binary search tree when the elements are inserted in the following order:

\text{Q-5) 99, 15, 05, 20, 07, 23, 40, 92}

\text{Q-6) What is AVL tree? Compare it with binary tree.}

\text{Q-7) Explain Dijkstra’s algorithm with suitable examples.}
(h) Average case time complexity of the quick

(lv) None of the above

(liv) O(n log n)

(liv) O(n^2)

(lv) O(n)

sort algorithm is more than :

(lv) None of the above

(liv) Hashing

(liv) Sequential search

(lv) Binary search

The search keys must be ordered in :

(lv) None of these

(lv) Any numbered

(lv) At least one

(lv) 0

How many cycles should be contained in tree ?

(lv) None of the above

(lv) All of the above

(liv) Base value

(liv) Key variable

(iv) Terminator of the algorithm

(iv) Recursion always requires :

(liv) None of the above

(liv) Function call

(liv) Access to disk storage

(liv) The line printer

(d) Queues can be used for :

(lv) Is also called a void pointer in C

(liv) Is the address of some node

(liv) Is equal to NULL in C:

(liv) Marks the end of the node

NULL-pointer?

(c) Which one of the following is true in case of

(lv) None of the above

(liv) To determine if list is empty

(lv) Replace

(lv) Modify

(lv) Performed on linked-list can not be

Which of the following operations can not be
ME-92

(4)

Contd.

Arats?

(b) What are the advantages of linked-list over string "I LOVE MY COUNTRY" stored

2. (a) Write an array of size 20 and show how a

Answer any four questions of the following :

Group - B

(Long-answer Type Questions)

15x4 = 60

(i) Name the sorting algorithm for which time is

(Worst case efficiency of this search is :)

(iii) Indexed search

(ii) Binary search

(iii) Quick-sort

(iv) Selection-sort

(iv) None of these

(iii) None of these

(b) What is Hashing? Mention its uses

(i) What is recursion? Explain its characteristic

2. (a) Explain similarities and dissimilarities

(b) Between Stack and Queues

(c) What is ternary (

(d) A + (B + C + D) * (E - F) / G

(e) A + B - (C + D) * (E - F) / G

(f) A + B / (D + E) * (F - G)

(g) A + B / C + D + E

(h) A - B / (D + E) * F

(i) None of these

3. What are the various operations possible on a

circular linked-list? Explain all of them with

algorithm.