P30/P32/P131/CMP215/CMP505/EE/20230117

Time : 3 Hours   **Marks : 80**

Instructions :

1. All Questions are Compulsory.
2. Each Sub-question carry 5 marks.
3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
4. Question paper of 80 Marks, it will be converted in to your programme structure marks.

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1. Solve any **four** sub-questions.

     a) Describe Circular Linked Lists.   5

     b) Explain class in CPP.   5

     c) Describe Recursive LL.   5

     d) Explain Queue with help of example.   5

     e) Explain Merge sort.   5

2. Solve any **four** sub-questions.

     a) Explain stack with suitable example.   5

     b) Explain any two methods used to evaluate Hash functions.   5

     c) Explain following terms with example: 5

         i) Sibling

         ii) Leaf Node

     d) Describe Unions in CPP.   5

     e) Describe B-tree in data structure.   5

3. Solve any **four** sub-questions.

     a) Describe Insertion of node in Binary Search Operation.   5

     b) Explain Quick Sort.   5

     c) Describe DEQUEUE in detail.   5

     d) Explain the concept of Circular Queue with example.   5

     e) Explain hashing technique.   5

4.   Solve any **four** sub-questions.

    a)   Explain link list.   5

    b)   Explain Binary Search Trees.   5

    c)   Explain heap sort with example.   5

    d)   Define object with suitable example.   5

    e)   Distinguish between Stack and Queue.   5