P30/P32/P131/CMP203/CMP503/EE/20220628

Time : 3 Hours 45 Minutes   **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)   What do you mean by constructor? What are advantages of constructor?   5

   b)   Explain hierarchy of ios class.   5

   c)   What is polymorphism? Explain with suitable example.   5

   d)   What do you understand by function returning a pointer variable?   5

   e)   What are benefits of OOPs?   5

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

   a)   What is a class? How objects of a class are created?   5

   b)   Write the syntax to access the member function outside class definition using scope resolution operator.   5

   c)   Explain static data member in C++.   5

   d)   What is recursion function? While writing any recursive function what thing(s) must be taken care of ?   5

   e)   What is the use of constructor function in a class?   5

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

   a)   Write Do's and Don'ts about references in C++.   5

   b)   Explain dynamic memory allocation in detail.   5

   c)   What do you mean by variables? Explain with suitable examples.   5

   d)   Explain malloc () with suitable example.   5

   e)   Differentiate arrays vs structures in C++.   5

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

    a) What is virtual base class? When do we make it?   5

    b) Write a programme in C++ which demonstrates the use of single inheritance?   5

    c) Explain encapsulation in detail.   5

    d) Explain overloaded operators >> and << with suitable example.   5

    e) Explain for loop with suitable example.   5

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