P30/P32/CMP214/EE/20190207

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) What is recursion? When to use it. Give examples.   5

   b) How to create classes and objects? How to use objects? Give examples.   5

   c) What are constructors? What are rules to define constructors functions? Give examples.   5

   d) Explain bubble sort algorithm with examples.   5

   e) Write a short note on inheritance.   5

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

   a) What is exception handling used? When exception handling used? Give types of exception handling.   5

   b) What are abstract classes? How to construct abstract classes and methods?   5

   c) What are interfaces? How they are different than abstract classes?   5

   d) What are packages? How to create packages and use them?   5

   e) What is stream based IO model? What are different types of streams?   5

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

    a)   How to catch multiple exceptions? Explain with examples.   5

    b)   How to access file system attributes? How to create our own filters?   5

    c)   What is Input and Output filters? What are predefined streams.   5

    d)   What is serialization and deserialization? Where it is useful?   5

    e)   What are collection classes? Why do we need collections?   5

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

    a)   How to use array list collection?   5

    b)   How to create function- Template?   5

    c)   What an app needs to achieve network communication?   5

    d)   What is MD5? Where it is used and what are its benefits?   5

    e)   What is network serialization? How to achieve it programmatically.   5

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