P32/P131/CMP214/CMP514/EE/20240112

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) Explain Hibernate Architecture.   5

   b) Explain Spring Core Inversion of Control and Dependency Injection.   5

   c) What are the modules of spring framework?   5

   d) Briefly explain Publishing a Service using JSON in JSP.   5

   e) Explain JDBC Architecture.   5

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

   a) What is JSP and why do we need it?   5

   b) What is Spring MVC framework?   5

   c) What is IOC and DI?   5

   d) Explain working with Apache Tomcat Web Server.   5

   e) Explain Generic Servlets Http Servlet and Http Session.   5

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

   a) Explain Hibernate with Servlets.   5

   b) Explain JSON Objects and Arrays in JSON.   5

   c) Explain Inter-Servlet Communication.   5

   d) Write steps for accessing database using JDBC API.   5

   e) Explain JSP Page Context.   5

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

    a)   How Java Mail API use to send mail using Java Codes?   5

    b)   Explain Servlet Session Binding/Tracking.   5

    c)   Explain DBC Driver Manager.   5

    d)   List various layouts used in Java explain any one example.   5

    e)   Explain Spring Web MVC.   5

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