Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17CS2055** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PROGRAMMING IN J2EE** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain the various types of enterprise architecture with neat sketch. | CO1 | 8 |
| b. | Create a JDBC application program to store your personal details in a database. | CO1 | 12 |
| **(OR)** | | | | |
| 2. | a. | Discuss about Model View Controller with real time examples | CO1 | 8 |
| b. | Illustrate a JDBC program to update existing data in a database using PreparedStatement object. | CO1 | 12 |
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| 3. | a. | Construct the Sign-In and Sign-Up operation using HTML, Servlet and JDBC as per the following design. | CO2 | 15 |
| b. | Describe the life cycle methods of java servlets with sample code. | CO2 | 5 |
| **(OR)** | | | | |
| 4. | a. | Explain the usage of filters in a web application with program design. | CO2 | 10 |
| b. | Create online shopping cart using JSP with proper HTML code as per the following constraints.   * design a HTML page to display the products with details. * when user clicks “Add To Cart” button, read the user selected product details. * update the shopping cart using JSP session objects. | CO2 | 10 |
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| 5. | a. | Describe the life cycle diagram of the following with neat sketch.   * Stateless Session Bean * Stateful Session Bean * Entity Class | CO3 | 10 |
| b. | Deveop an enterprise application program using HTML, Servlet and Session Bean for the following requirements.   * Design a HTML page for Dollar to Rupee convertor and Body Mass Index calculator. * Create a Session bean with two functionalities such as dollartorupee() and calculateBMI(). * Include a Servlet to read the data from HTML and call the appropriate session bean functionalities. | CO3 | 10 |
| **(OR)** | | | | |
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| 6. | a. | Consider the following table in database called “Bank” and design a HTML and Java Persistence Application program to perform the following operations.  a) Create New Account  b) Deposit – updates the balance column  c) Withdraw – updates the balance column  **Table Name: Account**   |  |  |  | | --- | --- | --- | | **AccName** | **AccNo** | **Balance** | |  |  |  | |  |  |  | | CO3 | 15 |
| b. | Discuss about Message Driven Bean(MDB) with an example program. | CO4 | 5 |
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| 7. | a. | Create a java application program to compose an Email message from [abc@gmail.com](mailto:abc@gmail.com) to info@apple.com | CO5 | 10 |
| b. | Discuss the components of JMS program with suitable examples. | CO4 | 10 |
| **(OR)** | | | | |
| 8. | a. | Develop a program to read all the email messages and display the same in a console window using java Mail API. | CO5 | 8 |
| b. | Explain the mechanisms used for implementing security on a application server. | CO6 | 12 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss the MVC design pattern and components of Structs 2 based application. | CO6 | 8 |
| b. | Design the following with respect of SOAP.   * Creating a simple SOAP Message * Accessing the parts of a SOAP Message * Adding Content to the SOAPBody object * Sending a SOAP Message | CO5 | 12 |