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| **B. E. Degree (Autonomous) Sixth Semester End Examination (SEE),** | | | | | | | | | | | | | | | |
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| **JAVA FULL STACK DEVELOPMENT** | | | | | | | | | | | | | | | |
| **(Model Question Paper –III)** | | | | | | | | | | | | | | | |
| **Time: [ 3 Hours ]** | | | | | | | | |  | | | | **[ Maximum Marks: 100]** | | |
|  | | | | | | |  |  | | --- | --- | | **Note** | **Answer ANY ONE from Question No. 1 and 2**  **Answer ANY ONE from Question No. 3 and 4**  **Answer ANY ONE from Question No. 5 and 6**  **Answer ANY ONE from Question No. 7 and 8**  **Answer ANY ONE from Question No. 9 and 10** | | | | | | | | |  | |

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| **Q.NO** | | **Answer Five Full Questions** | **Marks** | **CO’S** | **Bloom’s Level** |
| **1** | **a.** | Explain the concepts of Object Orientation. | **04 Marks** | **CO 1** | **L 1,2** |
| **b.** | What is String Parsing in Java? Explain parsing of Integers to String with a program example**.** | **06 Marks** | **CO 1** | **L 1,2** |
| **c.** | Write about  i)Gradle Fundamentals ii)TDD with Junit 5. | **10 Marks** | **CO 1** | **L 5** |
| ***Or*** | | | | |  |
| **2** | **a.** | Explain how type safety can be achieved in Collections  with an example. | **08 Marks** | **CO 1** | **L2** |
| **b.** | Design Java code snippet to demonstrate the following  i.foreach loop ii.Switch iii.dowhile | **12 Marks** | **CO 1** | **L5** |
|  | | | | | |
| **3** | **a.** | Explain how concurrency problems are overwhelmed in Collections with example. | **10 marks** | **CO 2** | **L1,2** |
|  | **b.** | Design and implement a simple JDBC application program. | **10 Marks** | **CO 2** | **L5** |
| ***Or*** | | | | |  |
| **4** | **a.** | Write note on:  i.JDBC API Components ii.JDBC Statements | **10 marks** | **CO 2** | **L2** |
|  | **b.** | Define Streams. List out the different StreamAPI Operations and explain with an example. | **10 Marks** | **CO 2** | **L1,2** |
|  | | | | |  |
| **5** | **a.** | Define Hibernate and its architecture. Explain the properties of an Entities objects. Design and implement a simple entity program for employee class. | **10 Marks** | **CO 3** | **L1,5** |
|  | **b.** | Demonstrate the concept of crud operations on data in JPA. | **10 Marks** | **CO 3** | **L2** |
| ***Or*** | | | | |  |
| **6** | **a.** | Explain JPA Architecture and how it is related to ORM. | **10 Marks** | **CO3** | **L3** |
|  | **b.** | Explain the purpose of EntityManager in JPA. | **05 Marks** | **CO3** | **L2** |
|  | **c.** | List some of JPA query methods and write about them. | **05 Marks** | **CO3** | **L2** |
| **7** | **a.** | Explain Spring Framework Architecture in detail. | **10Marks** | **CO4** | **L1,5** |
|  | **b.** | Explain some of the most used Spring Boot annotations with an example. | **06 Marks** | **CO4** | **L1,2** |
|  | **c.** | List out the difference between Spring Boot and Spring MVC. | **04 Marks** | **CO4** | **L1** |
| ***Or*** | | | | | |
| **8** | **a.** | Design and implement simple spring boot program to print “WELCOME TO SPRING BOOT”. | **10 Marks** | **CO4** | **L5** |
|  | **b.** | Explain Bean Lifecycle in Spring Framework. | **10Marks** | **CO4** | **L2** |
| **9** | **a.** | Define Angular JS. Explain features of Angular JS. | **10 Marks** | **CO5** | **L1,2** |
|  | **b.** | Explain the following Angular JS Directives with an example:   1. ng-app 2. ng-init | **10 Marks** | **CO5** | **L1,2** |
| **Or** | | | | |  |
| **10** | **a.** | Design the code for simple “Hello World” Angular JS application and showcase the Model, View and Controller part in it. | **10 Marks** | **CO5** | **L2** |
|  | **b.** | Differentiate among Javascript and Node.js. | **05 Marks** | **CO5** | **L1** |
|  | **c.** | Explain Angular JS Modules. | **05 Marks** | **CO5** | **L2** |