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| **S. No** | **Topic** | **Days** |
|  | **Core Java** | **8** |
| 1 | OOPs Concepts | 1 |
|  | Java Programming basic -Java Fundamentals - Introduction - Basic Java Application - Data types in Java - Operators - Type Casting - Programming Constructs - Arrays – loops |
| 2 | Object and Classes concept Classes and Objects in Java - Constructors | 1 |
| Packages - Creating Packages - Adding Classes to Existing Packages - Import statement - Access Modifier |
|  | **Generic Functions-BRD** |  |
| 3 | Class (Static) Variable, instance variables and local variables - Static methods - Pass by value and Pass by reference - Wrapper classes | 1 |
| Inheritance and Polymorphism - Sub classing - The extends Keyword - Chaining of constructor - Use of super keyword - Early/late binding - Dynamic binding and Run Time Polymorphism - Use of final keyword - Abstract class - Interfaces Composition Has-A relationship |
|  | **BRD-EMI Calculator** |  |
| 4 | Exception Handling - Introduction to Exceptions - Using try and catch - Handling Multiple Exceptions - Sequencing catch Block - Using finally - Built in Exceptions - Throwing Exceptions - Catching Exceptions User Defined Exceptions | 1 |
| 5 | Streams and Files - Overview - Introduction To File I/O In Java - Streams - File Streams Using Disk Files - Object Serialization Interface - Object Input Streams And Objects Output Streams - Writing And Reading Your Own Objects - IO Package | 1 |
| 6 | Java Database Connectivity - Introduction to Databases - Overview to ODBC - Overview of JDBC API - How JDBC works - JDBC API Components - Implementation of JDBC classes -JDBC Drivers | 1 |
|  | **BRD-File Upload** |  |
| 7 | Collection Framework - Introduction - Architecture - Java.util package - Set - List - Map - Comparable interface - Comparator interface | 1 |
| 8 | Threads and Synchronization - Introduction to Threads - Thread Scheduling - How to create thread - Runnable Interface - By extending the thread class - Concurrency Synchronization | 1 |
|  | **Objective Test** |  |
| **Servlet/JSP/JS/Bootstrap** | | **7** |
| 9 | HTML+Java Script Baiscs | 1 |
|  | Jquery Basics+Bootstrap Framework- Basics |
| 10 | Request-Response in Web Applications Understanding the Servlet/Life cycle of servlet Http methods-GET/POST | 1 |
| 11 | Parameter Passing, Request Dispatcher,setAttribute and getAttribute methods Servlet Config and ServletContext | 1 |
| Filters |
| 12 | Session Management | 1 |
|  | **BRD-Maker** |  |
| 13 | Understanding the MVC Pattern | 1 |
| 14 | Understanding the JSP Scriptlets | 1 |
| 15 | JSP Page Directives Scopes in JSP and the PageContext object Introduction to JSTL and the java beans | 1 |
|  | **BRD-Checker** |  |
|  | **Objective Test** |  |
| **16** | **Maven** | **1** |
|  | **Spring** | **8** |
| 17 | Dependency Injection,IOC Spring Bean Factory and ApplicationContext | 1 |
| 18 | Constructor Injection Setter Injection Injecting Objects, Bean Autowiring | 1 |
|  | Bean Scopes, Inner Beans , Injection with Collections Bean Definition Inheritance | 1 |
| 19 | Bean Lifecycle Bean PostProcessor BeanFactoryPostProcessor |
| 20 | AOP Overview | 1 |
| 21 | Spring MVC Understanding | 1 |
| 22 | Spring MVC Annotations. Spring Form, Spring Validations | 1 |
| 23 | JDBC Template, Property file usage | 1 |
| 24 | Spring Security | 1 |
|  | **BRD-Maker-Checker** |  |
|  | **Objective Test** |  |
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|  | **Hibernate** | **6** |
|  | **Topics** |  |
| 25 | Introduction To Hibernate, Primary Keys (By JPA) | 1 |
| 26 | CRUD using hibernate, Saving Collections (By JPA) | 1 |
| 27 | One To One/One To Many/Many To Many Mapping (By JPA) | 1 |
| 28 | Proxy Objects and Eager and Lazy Fetch Types, CascadeTypes Implementing Inheritance - Single Table/Table Per Class/ Joined Strategy (By JPA) | 1 |
| Understanding State Changes-Transient, Persistent and Detached Objects Cacheing in Hibernate |
| 29 | Introduction to HQL, HCQL and JPQL | 1 |
| 30 | Spring-Hibernate Integration+Transaction Management | 1 |
|  | **Final BRD** |  |
|  | **Objective Test** |  |