**L.D. College of Engineering**

**Information Technology Department**

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| **Teaching Scheme:** | | | | | |
| **Theory** | **Tutorial** | | **Practical** | | **Total** |
| **4** | **0** | | **2** | | **6** |
| **Subject Name:** | | OBJECT ORIENTED PROGRAMMING USING JAVA | | **Duration:18/6/2018 – 17/10/2018** | |
| **Subject Code:** | | 2150704 | |  | |
| **Branch & Semester:** | | **V-IT-A** | |  | |

**Name of Faculty: Prof. A. C. Patel**

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| **Sr.No.** | **Topic Name** | **Proposed Date** | **Actual Date** |
|  | **Basics of Java:** |  |  |
| **1** | Features of Java, Byte Code and Java Virtual Machine, JDK, | **19/6** |  |
| **2** | Data types, Operator, Control Statements – If , else, nested if, if-else ladders, Switch | **20/6** |  |
| **3** | while, do-while, for, for-each, break, continue. | **21/6** |  |
|  | |  | | --- | | **Array and String** | |  |  |
| **1** | Single and Multidimensional Array, String class | **22/6** |  |
| **2** | StringBuffer class, Operations on string | **26/6** |  |
| **3** | Command line argument, Use of Wrapper Class | **27/6** |  |
|  | **Classes, Objects and Methods:** |  |  |
| **1** | Class, Object, Object reference, Constructor, Constructor Overloading, | **28/6** |  |
| **2** | Method Overloading, Recursion, Passing and Returning object form Method, | **29/6** |  |
| **3** | new operator, this and static keyword, finalize() method, | **3/7** |  |
| **4** | Access control, modifiers, Nested class | **4/7** |  |
| **5** | Inner class, Anonymous inner class, Abstract class | **5/7** |  |
|  | **Inheritance and Interfaces** |  |  |
| **1** | Use of Inheritance, Inheriting Data members and Methods, constructor in inheritance | **6/7** |  |
| **2** | Multilevel Inheritance – method overriding Handle multilevel constructors – super keyword | **10/7** |  |
| **3** | Stop Inheritance - Final keywords, Creation and Implementation of an interface | **11/7** |  |
| **4** | Interface reference, instanceof operator, Interface inheritance | **12/7** |  |
| **5** | Dynamic method dispatch ,Understanding of Java Object Class | **13/7** |  |
| **6** | Comparison between Abstract Class and interface, Understanding of System.out.println -Statement | **17/7** |  |
|  | **Package:** |  |  |
|  | Use of Package, CLASSPATH, | **18/7** |  |
|  | Import statement, Static import, | **19/7** |  |
|  | Access control | **20/7** |  |
|  | **Exception Handling** |  |  |
| **1** | Exception and Error | **24/7** |  |
| **2** | Use of try, catch | **25/7** |  |
| **3** | throw, throws and finally | **26/7** |  |
| **4** | Built in Exception, Custom exception | **27/7** |  |
| **5** | Throwable Class | **31/7** |  |
|  | **Multithreaded Programming:** |  |  |
| **1** | Use of Multithread programming, Thread class and Runnable interface | **1/8** |  |
| **2** | Thread priority, Thread synchronization, | **2/8** |  |
| **3** | Thread communication | **3/8** |  |
| **4** | Thread communication | **7/8** |  |
| **5** | Deadlock | **8/8** |  |
|  | **IO Programming** |  |  |
| **1** | Introduction to Stream, Byte Stream, | **9/8** |  |
| **2** | Character stream, Readers and Writers, | **10/8** |  |
| **3** | File Class, File InputStream, File Output Stream, | **14/8** |  |
| **4** | InputStreamReader, OutputStreamWriter, | **16/8** |  |
| **5** | FileReader, FileWriter, Buffered Reader | **21/8** |  |
|  | **Collection Classes :** |  |  |
| **1** | List, AbstractList, ArrayList, LinkedList, Enumeration, | **23/8** |  |
| **2** | Vector, Properties, Introuduction to Java.util package | **24/8** |  |
|  | **Networking with java.net** |  |  |
| **1** | InetAddress class, Socket class | **28/8** |  |
| **2** | DatagramSocket class, | **29/8** |  |
| **3** | DatagramPacket class | **30/8** |  |
|  | **Introduction to Object orientation** |  |  |
| **1** | Modeling as a Design Technique, Modeling Concepts ,abstraction | **31/8** |  |
| **2** | The three models, Class Model, State model and Interaction model. | **4/9** |  |
|  | **Class Modeling** |  |  |
| **1** | Object and class concepts | **5/9** |  |
| **2** | link and association | **6/9** |  |
| **3** | Generalization and Inheritance | **7/9** |  |
| **4** | Generalization and Inheritance | **11/9** |  |
|  | **Advanced class Modeling** |  |  |
| **1** | Advanced Object and class concepts, Association Ends, | **12/9** |  |
| **2** | N-ary associations, aggregation, abstract classes | **14/9** |  |
| **3** | multiple inheritance, Metadata, Constraints | **18/9** |  |
| **4** | Derived data, Packages. | **19/9** |  |
|  | **State modeling** |  |  |
| **1** | **E**vents, states | **20/9** |  |
| **2** | Transition and conditions, | **25/9** |  |
| **3** | state diagram | **26/9** |  |
| **4** | state diagram behavior | **27/9** |  |
|  | **Interaction Modeling** |  |  |
| **1** | Use case Models | **28/9** |  |
| **2** | Use case Models | **3/10** |  |
| **3** | sequence models | **4/10** |  |
| **4** | sequence models | **5/10** |  |
| **5** | activity models | **9/10** |  |
| **6** | activity models | **10/10** |  |