IT- 506 – Java Programming (Lab)

Unit I
JDK Installation and setting the path, JDK Tool(Java Compiler, Java Virtual Machine, Debugger, Appletviewer, Javadoc, Jar),Compile and run java program, Compiler options and JVM options, Data type, Operators , Control Statement (if, if…else, switch …case, while, for, do…while, break, continue, labeled break, labeled continue) , Arrays ,Memory allocation and garbage collection,Classes and object scope and life time ,Access specifies, Constructor and finalize method , this keyword, instance block, static block, static data member, static method, Inheritance, method overriding, dynamic method dispatch, constructors in Inheritance ,super keyword, abstract method and abstract class, final method ,final data member, final class, defining an Interface, Implementing and applying interface, extending Interface.

Unit-II
creating package , using package. Try, catch, throw, throws, finally, Object Class,String Class, String Buffer class, Math Class, Wrapper Classes, StringTokenizer Class, Collection, Set, List Map, ArrayList, SortedSet, Iterator, File Class, Thread class and its method, Creating Thread ,lifecycle of a thread, Runnable Interface, thread synchronization, wait, notify, ThreadGroup class.

Unit -III
Command Line Arguments, InputStream , OutputStream,Reader,Writer, ,FileInputStream, FileOutputStream, DataOutputStream, DataInputStream, FileReader, FileWriter, InputStreamReader, BufferedReader ,ObjectOutputStream, ObjectInputStream, Object Serialization.,Scaner , RandomAccessFile.

Unit -IV
Abstract Window toolkit, awt package, Applet, Lifecycle of an Applet, GUI Component (Button, Label, TextField, TextArea, List, Choice, CheckBox), Panel, Event Source, Event handlers, Event classes, Containers, Frame class, Panel ,Dialog , Layout Manager,Swing, swing complonents, JFrame, JApplet,

JPanel, JButton, JLabel, JTable, JTextField,JTextArea,JRadioButton,JCheckBox,JList JTree, Icon, LookAndFeel.,Graphics2D and drawing Image.

Unit-V
Networking basics, Socket, port, Proxy servers, Internet addressing and URL, java.net – networking classes and interfaces, Implementing TCP/IP based Server and Client.
Classes to be covered Socket, ServerSocket, IPAddress, URL connections; Programs on chatting 1-1 & 1-M (Threading),Implementing UDP based Server and Client DatagramPacket and DatagramSocket. Introduction of RMI & Architecture ,Implementing RMI ,Writing RMI Server, Designing Remote Interface, Implementing Remote Interface, Passing Object in RMI, Creatting RMI Client. Types of JDBC Drivers, Writing JDBC applications using select, insert, delete, update; Types of Statement objects (Statement, PreparedStatement and CallableStatement); ResultSet, ResultsetMetaData; Inserting and updating records, Connection Pooling.

Reference Books:-
1.   Java 2 Complete Reference (5th Ed), Herbert Schildt, TMH
2.   Core Java Volume-I, Horstman and Cornell, Pearson Education
3.   Core Java Volume-II, Horstman and Cornell, Pearson Education