B.Tech – II (4th Semester), 2020
18CP218T – Object Oriented Concepts and Programming
Course Syllabus for End Semester Examination (Online Mode Examination)

Units covered after Mid Semester Exam

- Interface – Multiple inheritance
  - Difference between Interface and Abstract class in Java
  - Static final variables in Interface
  - Default methods
  - All other topics covered into Interfaces theory and practical assignments
- Package
  - Usefulness of Package
  - Create package manually and from command line
  - Importing the packages
  - All other topics covered into Package theory and practical assignments
- Polymorphism in Java
  - Compile time Polymorphism (Method Overloading)
  - Runtime Polymorphism – Using classes/ Using Interfaces
  - The contents from theory and practical assignment involving the usage of polymorphism
- Collections and Generics in Java
  - Usage of Collection API
  - Collection classes and Interfaces included in Practical assignments.
- Java Input/Output
  - Types of Streams
  - Usage of Binary Streams and Writer Streams
  - Working with FileStreams
  - Working with Object Streams
  - All other topics covered into Input/Output theory and practical assignments.
- Exception Handling in Java
  - Introduction
  - Exception and Errors Classes
  - Checked and Unchecked Exceptions
  - Runtime Exceptions Examples
  - Exception handling in methods
  - User Defined Exception
  - All other topics covered into exception handling theory and practical assignments.
- Multithreading in java
  - Introduction
  - Life Cycle of Thread

- ○ Thread in Java
- ○ Thread Synchronization in Java
- ○ All components related to thread (Runnable interface, thread using extending thread class, wait(), notify(), notifyall(), exception handling in threading, sleep(), etc.,)
- ○ All other topics covered into multi threading theory and practical assignments.
- Graphical User Interface in Java
  - ○ Swing Components (JFrame, JLabel, JButton, JRadioButton, JCheckbox, JComboBox, JList, JTextField, JTextArea, JMenu, etc…)
  - ○ Event Handling in Java (ActionListener , MouseListner, KeyPressed, KeyTyped, etc…)
  - ○ Applet in Java
    - ▪ Life Cycle of Applet
    - ▪ Graphics through Applet (Draw different shapes, etc…)
  - ○ All other topics covered into GUI theory and practical assignments.