

**2019**

**MCA**

**4th Semester Examination**

**Java Programming Lab**

**PAPER – MCA-407**

**Full Marks : 100**

**Time: 3 hrs**

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their

Own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any *TWO* question

35 X 2

1. Write a Java Program to define a class, define instance methods for setting and retrieving value of instance variables and instantiate its object.
2. Write a Java Program to demonstrate the use of sub class.
3. Write a Java Program demonstrate the use of nested class.
4. Write a Java Program to define a class, define instance methods and overload them and use them for dynamic method invocation.
5. Write a Java Program to implement array of objects.
6. Write a Java Program to implement Vector class and its methods.
7. Write a Java Program to implement Wrapper classes and their methods.
8. Write a Java Program to practice using String class and its methods.
9. Write a Java Program to practice using String Buffer class and its methods.
10. Write a Java Program to define a class, describe its constructor, overload the Constructors and instantiate its object.
11. Write a Java Program to implement inheritance and demonstrate the use of method overriding.

12. Write a Java Program to implement multilevel inheritance by applying various access controls to its data members and methods.
  
13. Write a program to demonstrate the use of implementing interfaces.
  
14. Write a program to demonstrate the use of extending interfaces.
  
15. Write a Java program to implement the concept of importing classes from user defined package by creating packages.
  
16. Write a program to implement the concept of threading by extending Thread Class.
  
17. Write a program to implement the concept of Exception Handling by creating user defined exceptions.
  
18. Write a program using Applet to display a message in the Applet.
  
19. Write a program to implement the concept of threading by implementing Runnable Interface.
  
20. Write a program to implement the concept of Exception Handling using predefined exception.

**Viva-voce: 20**

**PNB : 10**