

**[6468]-55****T.Y. B .Sc. (Computer Science)****CS - 355 : Object Oriented Programming Using Java - I  
(2019 Pattern) (Semester - V)****Time : 2 Hours]****[Max. Marks : 35****Instructions to the candidates :**

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*

**Q1) Attempt any Eight of the following (out of Ten) :  $[8 \times 1 = 8]$** 

- a) What is the purpose of the final keyword when applied to variables?
- b) What is the purpose of the javap tool in Java?
- c) How is a 1D array declared in Java?
- d) What is the Object class in Java?
- e) What is a wrapper class in Java?
- f) What is the role of the extends keyword in Java?
- g) What is the purpose of BufferedReader Class?
- h) Define Exception
- i) Name the package used for event handling in java.
- j) Name any two GUI components used in Swing.

**Q2) Attempt any FOUR of the following (out of Five) :  $[4 \times 2 = 8]$** 

- a) What are constructors in Java? Explain constructor overloading and how the this keyword is used in constructors.
- b) Write a Java program to demonstrate inheritance and the use of the super keyword.
- c) Explain the difference between FileReader and FileWriter in Java.
- d) What are the different types of layouts in Swing? Discuss any two of them.
- e) Explain command line arguments with suitable example.

**Q3) Attempt any TWO of the following (out of Three) :** [2 × 4 = 8]

- a) Explain how event handling works in Swing with an example using ActionListener
- b) Write a Java program to define a class ‘Doctor’ with data members doctorId, doctorName and doctorSpecialization. Accept the data for ‘n’ objects using array of objects and display it.
- c) Design a screen in Java using Swing to handle mouse events such as MOUSE\_MOVED and MOUSE\_CLICK and display the x and y co-ordinate of mouse click in a textfield.

**Q4) Attempt any TWO of the following (out of Three) :** [2 × 4 = 8]

- a) Write a Java program to print the contents from one file into another file in reverse order.
- b) What is Interface? Explain with example code.
- c) Write a Java program using Swing to create a simple graphical user interface (GUI) with buttons, labels, and text fields.

**Q5) Attempt any ONE of the following (out of Two) :** [1 × 3 = 3]

- a) Explain the process of creating and accessing packages in Java. Write a program to demonstrate package usage.
- b) Write a program that demonstrates the creation and handling of custom exceptions in Java.

