

Basavarajeswari Group of Institutions
BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT
 (Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN

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Course Code

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Third Semester B.E. Degree Examinations, March/April 2023
OBJECT ORIENTED PROGRAMMING USING JAVA
(Common for CSE/AIML)

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<u>MODULE – 1</u>			
1.	a. List the various buzzwords of Java and explain any five.	06	(2 :1: 1.4.1)
	b. Describe the three main features of Object-oriented programming.	08	(2 :1: 1.4.1)
	c. What is a Datatype? Explain primitive data types in Java.	06	(2 :1: 1.4.1)
OR			
2.	a. List various types of operators and explain Relational, Bitwise and Logical operators in Java.	06	(2 :1: 1.4.1)
	b. Show how 1-D and 2-D arrays are created in java with examples.	08	(2 :1: 1.4.1)
	c. Explain the labeled break and continue statements with an example.	06	(2 :1: 2.5.2)
<u>MODULE – 2</u>			
3.	a. Illustrate how objects and classes are declared and initialized in Java with an example.	06	(2 :2: 2.5.2)
	b. What is the need for a constructor? Show how different types of constructors are implemented with an example.	08	(2 :2: 2.5.2)
	c. Write a Java Program to create a class student with data members as Id, Name, Phone no, and the methods to assign and print the details of the book, Display at least two Students information.	06	(3 :2: 3.6.2)
OR			
4.	a. Explain the following: (i) this keyword (ii) Garbage collection (iii) static methods.	06	(2 :2: 1.4.1)
	b. Explain various types of Inheritance in java with examples.	08	(2 :2: 2.5.2)
	c. Write a program in java that generates an exception out of range if the number is less than 10 and greater than 50 else it displays the square of the given number.	06	(3: 2: 3.6.2)
<u>MODULE – 3</u>			
5.	a. What are packages? Explain the steps for package creation in Java.	06	(2 :3: 1.4.1)
	b. Describe priorities in thread. Brief out the steps for assigning priority to a thread.	08	(2 :3: 1.4.1)
	c. Explain the following with syntax i) start () ii) run () iii) wait ()	06	(2:3: 2.5.2)
OR			
6.	a. Explain synchronization in threads with an example.	08	(2 :3: 2.5.2)
	b. Explain how the states of a thread change.	08	(2 :3: 2.5.2)
	c. Explain notify () and notifyall () methods.	04	(2: 3: 2.5.2)

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI - Performance Indicator)

MODULE – 4

7. a. Explain the two key features of Swings. **04** (2 :4: 2.5.2)
- b. Explain with syntax i) JLabel ii) JTextField iii) JButton iv) JCheckBox **08** (2 :4: 2.5.2)
- c. Write a java program that simulates a traffic light. The program lets the user select one of three red, yellow, or green lights with radio buttons. On selecting a button, an appropriate message with “stop “ready” or “go” should appear above the buttons in a selected colour. Initially, there is no message shown. **08** (3: 4:3.6.2)

OR

8. a. What is an Event? Explain the Delegation event model. **04** (2 :4: 2.5.2)
- b. What is an Applet? Explain the applet methods with syntax. **08** (2 :4: 2.5.2)
- c. Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, -, *, and % operations. Add a text field to display the result. Handle any possible exceptions like divide by zero. **08** (3: 4: 3.6.2)

MODULE – 5

9. a. List and explain the different JDBC drivers. **04** (2 :5: 2.5.2)
- b. Brief out the steps in the JDBC Database connectivity process. **08** (2 :5: 2.5.2)
- c. With an example Program Explain the steps for connecting to a database. **08** (2 :5: 2.5.2)
- OR**
10. a. Explain in brief about the Statement and Prepared Statement Objects. **04** (2 :5: 2.5.2)
- b. What is a Result Set? Explain various types of Scrollable Result Set. **08** (2 :5: 2.5.2)
- c. Write a java program that connects to a database using JDBC and does add, delete, modify and retrieve operations. **08** (3: 5: 3.6.2)

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