CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Regular) - June- 2025
JAVA PROGRAMMING
(ECE)

[Time: 3 Hours] **[Max. Marks: 60]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(10 Marks)**

1. a) What is encapsulation? [1M]
   b) What is the use of the '**this**' keyword in Java? [1M]
   c) What is inheritance in Java? [1M]
   d) Define interface in Java. [1M]
   e) Define thread in Java. [1M]
   f) What is an exception in Java? [1M]
   g) What is JDBC? [1M]
   h) Define a byte stream. [1M]
   i) Define adapter class. [1M]
   j) State the difference between applet and application. [1M]

PART-B **(50 Marks)**

2. Explain the key concepts of OOP in Java with suitable examples. [10M]
   OR
3. Write a Java program demonstrating simple class, object, and method concepts. [10M]

4. Discuss various types of inheritance with examples. [10M]
   OR
5. Write a Java program to demonstrate interface implementation. [10M]

6. Explain the concepts of exception hierarchy and handling with examples. [10M]
   OR
7. Write a Java program to create and manage multiple threads. [10M]

8. Discuss the Java Collections Framework with examples for List and Map. [10M]
   OR
9. Write a Java program to connect to a database and retrieve data using JDBC. [10M]

10. Design a GUI using Java Swing components with a suitable layout. [10M]
    OR
11. Explain applet lifecycle and security issues with examples. [10M]

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