

**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**

**III-B.TECH-II-Semester End Examinations (Supply) - December- 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) | Define Encapsulation.                             | [1M] |
| b)    | List out the advantages of inheritance.           | [1M] |
| c)    | Define interface.                                 | [1M] |
| d)    | What is method overriding?                        | [1M] |
| e)    | What is the purpose of the 'try' block in Java?   | [1M] |
| f)    | List out the states of Thread in their lifecycle. | [1M] |
| g)    | Define Vector with syntax.                        | [1M] |
| h)    | Define Byte Streams.                              | [1M] |
| i)    | Name any two container classes in Swing.          | [1M] |
| j)    | Define an Event source and give one example.      | [1M] |

**PART-B**

**(50 Marks)**

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|-----------|---|-------|
| 2.        | Explain each of the primitive datatypes present in java? Discuss in detail.                                     | [10M] |
| <b>OR</b> |   |       |
| 3.        | Explain briefly about String class and discuss various methods in String class with an example.                 | [10M] |
| 4.        | Discuss in detail about creating and importing packages with an examples.                                       | [10M] |
| <b>OR</b> |   |       |
| 5.        | Compare various differences between interfaces and abstract class with an example.                              | [10M] |
| 6.        | What is an Exception? Explain different types of Exception.   | [10M] |
| <b>OR</b> |   |       |
| 7.        | What are the challenges of thread synchronization, and how they can be overcome in a multithreaded environment? | [10M] |
| 8.        | Explain the concept of Java collection framework. Write a brief overview on it.                                 | [10M] |
| <b>OR</b> |   |       |
| 9.        | Explain JDBC and its types. How can a Java application connect to a database using JDBC?                        | [10M] |
| 10.       | Explain in detail about AWT class hierarchy.  | [10M] |
| <b>OR</b> |   |       |
| 11.       | What is the importance of Delegation Event Model on Event Handling?   | [10M] |

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