

Code No: R20A0508

**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

**II B.Tech II Semester Supplementary Examinations, June 2024****Object Oriented Programming through Java****(CSE, IT, CSE-CS, CSE-AIML, CSE-DS, CSE-IOT, B.Tech-AIDS & B.Tech-AIML)**

Roll No									

**Time: 3 hours****Max. Marks: 70**

**Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

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**SECTION-I**

- |   |          |  | <b>BCLL</b> | <b>CO(s)</b> | <b>Marks</b> |
|---|----------|--|-------------|--------------|--------------|
| 1 | <b>A</b> | Explain about Recursion in java with an example.   | <b>L1</b>   | <b>CO-I</b>  | <b>[7M]</b>  |
|   | <b>B</b> | Write a java program to display total marks of five students using student class and the following attributes: Regno(int), Name(string), Marks in subjects(integer), Total(int). Also find the maximum mark and minimum marks obtained by a student in a particular subject. | <b>L5</b>   | <b>CO-I</b>  | <b>[7M]</b>  |

OR

- |   |          |   |           |             |             |
|---|----------|---|-----------|-------------|-------------|
| 2 | <b>A</b> | Discuss in detail about the features in java.                   | <b>L1</b> | <b>CO-I</b> | <b>[7M]</b> |
|   | <b>B</b> | Explain about control statements in java with suitable program. | <b>L1</b> | <b>CO-I</b> | <b>[7M]</b> |

**SECTION-II**

- |   |          |  |           |              |             |
|---|----------|--|-----------|--------------|-------------|
| 3 | <b>A</b> | Briefly explain about the inheritance and its types in java with suitable program. | <b>L2</b> | <b>CO-II</b> | <b>[7M]</b> |
|   | <b>B</b> | Discuss about the inner classes in java with suitable example.                     | <b>L2</b> | <b>CO-II</b> | <b>[7M]</b> |
- OR
- |   |          |  |           |              |             |
|---|----------|--|-----------|--------------|-------------|
| 4 | <b>A</b> | Elaborate the concept of method overloading and method overriding in java with suitable example. | <b>L2</b> | <b>CO-II</b> | <b>[7M]</b> |
|   | <b>B</b> | What is Package? Explain how the creation and execution of a package with detail.                | <b>L4</b> | <b>CO-II</b> | <b>[7M]</b> |

**SECTION-III**

- |   |          |  |           |               |             |
|---|----------|--|-----------|---------------|-------------|
| 5 | <b>A</b> | Discuss about try, catch, and throw, throws and finally keyword in java with an example program. | <b>L1</b> | <b>CO-III</b> | <b>[7M]</b> |
|   | <b>B</b> | Write in detail multithreading concepts in java with example program.                            | <b>L2</b> | <b>CO-III</b> | <b>[7M]</b> |

OR

- |   |          |  |           |               |             |
|---|----------|--|-----------|---------------|-------------|
| 6 | <b>A</b> | Discuss the fundamental principles and concepts of exception handling in Java which focusing on common exceptions such as NullPointerException, Array IndexOutOfBoundsException, StringIndexOutOfBoundsException, ArithmeticException, NumberFormatException and UserdefinedException. Illustrate with examples how each mentioned exception can occur and how programmers can effectively handle them to enhance the robustness of their Java applications. | <b>L4</b> | <b>CO-III</b> | <b>[7M]</b> |
|---|----------|--|-----------|---------------|-------------|

**B** Discuss in detail about the various stages of thread life cycle with neat diagram. **L5** **CO-III** [7M]

**SECTION-IV**

**7** **A** Write short notes on Java collection framework with example program. **L1** **CO-IV** [7M]

**B** Briefly explain the concept of JDBC with a suitable program. **L2** **CO-IV** [7M]

**OR**

**8** **A** Explain about java I/O file streams classes with examples **L1** **CO-IV** [7M]

**B** Write a java program to demonstrate the concept of file management using File class. **L3** **CO-IV** [7M]

**SECTION-V**

**9** Explain the different layout managers in Java with example **L3** **CO-V** [14M]

**OR**

**10** **A** Discuss the Java GUI components with suitable example. **L1** **CO-V** [7M]

**B** Enumerate in detail mouse events with a sample program. **L2** **CO-V** [7M]

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