

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Regular & Supplementary Winter Examination-2023**

**Course: B. Tech. Branch : Computer & Allied Engineering Semester :III**

**Subject Code & Name:BTCOC305B & (Elective) Object Oriented Programming in Java**

**Max Marks: 60**

**Date:11/01/2024**

**Duration: 3.00 Hr.**

***Instructions to the Students:***

- 1. All the questions are compulsory.*
- 2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
- 3. Use of non-programmable scientific calculators is allowed.*
- 4. Assume suitable data wherever necessary and mention it clearly.*

(Level/CO) Marks

**Q.1 Solve Any Two of the following.**

- |                                                                          |               |   |
|--------------------------------------------------------------------------|---------------|---|
| A) Explain different parts of a Java program with an appropriate example | (Application) | 6 |
| B) What are the advantages of the object-oriented programming language?  | (Understand)  | 6 |
| C) List the primitive data types available in Java and explain.          | (Understand)  | 6 |

**Q.2 Solve Any Two of the following.**

- |                                                                                                   |               |   |
|---------------------------------------------------------------------------------------------------|---------------|---|
| A) What are the benefits of break and continue statements explain with example?                   | (Analysis)    | 6 |
| B) Discuss default constructor and parameterized constructor with the help of an example in Java? | (Application) | 6 |
| C) How do we implement polymorphism in JAVA? Explain briefly                                      | (Understand)  | 6 |

**Q.3 Solve Any Two of the following.**

- |                                                                                                                                                                                           |                |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---|
| A) a) Write a program to find the smallest and largest number from given input array?<br>For example : <b>Input:</b> arr[]={13,4,2,5,9}<br><b>Output :</b> Maximum is 13 and Minimum is 2 | (Application)) | 6 |
| B) Write a program to check whether enter number is palindrome or not?                                                                                                                    | (Application)  | 6 |
| C) Write the differences between interface and abstract class                                                                                                                             | (Understand)   | 6 |

**Q.4 Solve Any Two of the following.**

- |                                                                                                       |               |   |
|-------------------------------------------------------------------------------------------------------|---------------|---|
| A) Define inheritance. What are the benefits of inheritance? How to prevent a class from inheritance? | (Understand)  | 6 |
| B) Write a program to demonstrate hierarchical and multiple inheritance using interfaces              | (Understand)  | 6 |
| C) Define polymorphism. Explain run time polymorphism with the help of example.                       | (Application) | 6 |

**Q.5 Solve Any two of the following.**

- |                                                                                        |               |   |
|----------------------------------------------------------------------------------------|---------------|---|
| A) What is the difference between error and an exception? Explain with help of example | (Understand)  | 6 |
| B) How to create a user defined exception?                                             | (Application) | 6 |

- C) Write an html page and also provide a JavaScript for accepting a user ID (Application) 6  
and password from the user to ensure that the input is not empty  
\*\*\* End \*\*\*

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