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## Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024

### Advanced Java

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.*

*2. M : Marks , L: Bloom's level , C: Course outcomes.*

| Module – 1 |    |   | M  | L  | C   |
|------------|----|---|----|----|-----|
| Q.1        | a. | What is collection Framework? Explain the methods defined by the following Interfaces:<br>(i) Collection<br>(ii) List<br>(iii) Sorted Set<br>(iv) Queue | 10 | L2 | CO1 |
|            | b. | What are Legacy Classes? Explain any four legacy classes of Java's collection Framework with suitable program.  | 10 | L2 | CO1 |
| OR         |    |   |    |    |     |
| Q.2        | a. | Explain how collectors can be accessed using an iterator with example.  | 5  | L3 | CO1 |
|            | b. | What are the various changes that collection framework underwent recently?  | 5  | L1 | CO1 |
|            | c. | With an example program, explain how to store user-defined classes in collections.  | 10 | L2 | CO1 |
| Module – 2 |    |   |    |    |     |
| Q.3        | a. | Explain any two character extraction methods of string class.   | 5  | L2 | CO2 |
|            | b. | Explain the various string constructors used in Java with examples.   | 10 | L2 | CO2 |
|            | c. | Explain additional string methods.  | 5  | L2 | CO2 |
| OR         |    |   |    |    |     |
| Q.4        | a. | Briefly describe special string operations with syntax and examples.  | 5  | L2 | CO2 |
|            | b. | Explain the following methods of string buffer class with examples :<br>(i) capacity ()<br>(ii) reverse ()<br>(iii) insert<br>(iv) append ()            | 10 | L2 | CO2 |
|            | c. | Explain any four string modification methods of string class.   | 5  | L2 | CO2 |
| Module – 3 |    |   |    |    |     |
| Q.5        | a. | Explain the four types of the swing buttons, with demonstration program.  | 10 | L3 | CO3 |
|            | b. | Explain MVC connector Architecture.   | 5  | L2 | CO3 |
|            | c. | What are the two key swing features? Discuss.   | 5  | L1 | CO3 |
| OR         |    |   |    |    |     |
| Q.6        | a. | Explain the following :<br>(i) JLabel and Image Icon.<br>(ii) JTextField  | 10 | L2 | CO3 |
|            | b. | Write a program to demonstrate a simple swing application.  | 10 | L3 | CO3 |
| Module – 4 |    |   |    |    |     |
| Q.7        | a. | Explain the life cycle of Servlets.   | 5  | L2 | CO4 |
|            | b. | Describe the core interfaces that are provided in Jakarta (Javax), Servlet, http package.   | 5  | L2 | CO4 |
|            | c. | Define JSP. Explain the different types of JSP tags by taking suitable example.   | 10 | L2 | CO4 |
| OR         |    |   |    |    |     |

|                   |           |  |           |           |            |
|-------------------|-----------|--|-----------|-----------|------------|
| <b>Q.8</b>        | <b>a.</b> | Explain any two cookies method.  | <b>5</b>  | <b>L1</b> | <b>CO4</b> |
|                   | <b>b.</b> | With a code, explain how to handle HTTP get requests and HTTP post requests.             | <b>10</b> | <b>L2</b> | <b>CO4</b> |
|                   | <b>c.</b> | Explain how cookies can be handled using servlets.                                       | <b>5</b>  | <b>L4</b> | <b>CO4</b> |
| <b>Module – 5</b> |           |  |           |           |            |
| <b>Q.9</b>        | <b>a.</b> | Explain different steps involved in JDBC process with a code snippet.                    | <b>10</b> | <b>L3</b> | <b>CO5</b> |
|                   | <b>b.</b> | List and elaborate Database Metadata Object methods.                                     | <b>5</b>  | <b>L2</b> | <b>CO5</b> |
|                   | <b>c.</b> | List and explain three kinds of exception occurred in JDBC.                              | <b>5</b>  | <b>L2</b> | <b>CO5</b> |
| <b>OR</b>         |           |  |           |           |            |
| <b>Q.10</b>       | <b>a.</b> | Mention all steps to create the association between the database and a JDBC/ODBC bridge. | <b>12</b> | <b>L3</b> | <b>CO5</b> |
|                   | <b>b.</b> | Explain the four types of JDBC drivers.  | <b>8</b>  | <b>L2</b> | <b>CO5</b> |

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