

15CS553

# Fifth Semester B.E. Degree Examination, June/July 2023 Advanced Java and J2EE

Time: 3 hrs.

Max. Marks: 80

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

# Module-1

- 1 a. What are enumerations? How to use an enum constructor, instance variable and method? Explain with example. (06 Marks)
  - b. What is Autoboxing? Write a Java program that demonstrates autoboxing/unboxing occurs inside expressions. (06 Marks)
  - c. Demonstrate marker annotations with an example.

(04 Marks)

#### OR

- 2 a. Explain the various type wrappers used in Java. (05 Marks)
  - b. What is Annotation? Explain various retention policies for annotations in Java. (05 Marks)
  - c. Explain how to obtain annotations at run-time by use of reflection?

(06 Marks)

## Module-2

- 3 a. Explain ArrayList. Write a program to demonstrate how ArrayList can be used to insert and remover string. (08 Marks)
  - b. Explain Queue interface. Explain different methods defined by Queue.

(08 Marks)

#### OR

- a. Create a class STUDENT with two private string members: USN, Name using LinkedList class in Java, write a program to add atleast 3 objects of above STUDENT class. Also display the data in neat format.

  (08 Marks)
  - b. Explain ArrayList class and explain following methods:
    - i) binarySearch ii) copyOf iii) equals iv) fill

(08 Marks)

# Module-3

- 5 a. Explain the following string comparison methods with examples:
  - i) equals() ii) regionMatches() iii) startsWith iv) endsWith().

(08 Marks)

b. Explain the various string constructors used in Java with examples.

(08 Marks)

#### OR

- 6 a. Explain the following methods of StringBuffer class with examples:
  - i) capacity() ii) reverse() iii) deleteCharAt() iv) charAt().

(08 Marks)

b. How compareTo() method differs from compareToIgnoreCase() method? Write a Java program to sort an array of string in descending order by ignoring the case. (08 Marks)

# Module-4

- 7 a. What is the role of Tomcat server? Explain different steps involved in configuring for development of servlet program execution (08 Marks)
  - b. Write a Java servlet program to accept two parameter from webpage, find the sum of them, display the result in web page. Also give necessary html script to create web page. (08 Marks)

## OR

- Explain different JSP tags with a program to demonstrate all tags. (08 Marks)
  - What are cookies? How cookies are handled in JSP? Write a program to create with name "Username" and cookie value "xyz". Also display stored cookie in webpage. (08 Marks)

- (06 Marks) Explain the four types of JDBC drivers. (10 Marks)
  - Describe the various steps of JDBC with code snippets.

- Write a Java program to execute a database transaction. (08 Marks) 10
  - Explain: b.
    - i) Callable statement object
    - ii) Prepared statement object

(08 Marks)