

## Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020

### Advanced Java and J2EE

Time: 3 hrs.

Max. Marks: 100

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

#### Module-1

1. a. What are Enumerations? Explain values( ) and valueOf( ) methods with an example program. (05 Marks)
- b. What is Autoboxing? Write a java program that demonstrates how autoboxing and unboxing takes place in expression evaluation. (05 Marks)
- c. What are Annotations? Explain the following Built-in annotations with an example program:  
`@Override    @Inherited    @Retention` (10 Marks)

**OR**

2. a. Explain the following methods of `java.lang.Enum` with an example program.  
 (i) `ordinal()`    (ii) `compareTo()`    (iii) `equals()` (10 Marks)
- b. Explain how to obtain Annotations at Run Time by use of Reflection. (10 Marks)

#### Module-2

3. a. What is collection framework? Explain the methods defined by collection interface. (10 Marks)
- b. Explain the constructors of `HashSet` class with an example program. (10 Marks)

**OR**

4. a. Explain the constructors of `TreeSet` class and write java program to create `TreeSet` collection. (10 Marks)
- b. Explain any four legacy classes of Java's collection framework. (10 Marks)

#### Module-3

5. a. What is string in Java? Write a java program that demonstrates any four constructors of `String` class. (10 Marks)
- b. Differentiate between `equals( )` and `==` with respect to String comparison. (05 Marks)
- c. Explain any two character extraction methods of `String` class. (05 Marks)

**OR**

6. a. Explain any four String modification methods of `String` class. (10 Marks)
- b. Explain the following methods of `StringBuffer` class:  
 (i) `append( )`    (ii) `insert( )`    (iii) `reverse( )`    (iv) `replace` (10 Marks)

#### Module-4

7. a. Explain the differences between Servlets and CGI programs. (05 Marks)
- b. Write a Java Servlet program that demonstrates how parameters can be accessed from HTML. (10 Marks)
- c. Explain any two Cookies methods. (05 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and / or equations written eg,  $42+8 = 50$ , will be treated as malpractice.

**OR**

- 8 a. Define JSP. Explain different types of JSP tags by taking suitable example. (10 Marks)  
b. List and explain core classes and interfaces in javax.servlet package. (10 Marks)

**Module-5**

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

**OR**

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

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