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		Sixth Semester B.E. Degree Examination, June/July 2023
		Advanced JAVA and J2EE
Tim		hrs. Max. Marks: 100
	N	ote: 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, instant variable and method.
	1	Explain with example. (08 Marks)
	b.	What is Autoboxing? Write a Java program that demonstrates autoboxing/unboxing occurs inside expressions. (06 Marks)
	c.	What is Annotation? Explain various retention policies for annotations in Java. (06 Marks)
2	a.	Explain values() and valueOf() methods used enumeration with example program.
-	٠	(06 Marks)
	b.	What do you mean by type wrapper? Explain Numeric type wrapper with an example.
	c.	Explain the following Built-in annotations with an example program  (06 Marks)
	•	@Override ii) Deprecated iii) @Inherited iv) Target (08 Marks)
		Module-2
3	a.	What is collections? Explain interface and methods available under collection interface.
	L	What are comparators? Write a comparator program to cort accounts by last name
	b.	What are comparators? Write a comparator program to sort accounts by last name.  (10 Marks)
		O.D.
4	a.	OR Explain the following Map class with suitable program. i) HashMap ii) TreeMap. (10 Marks)
	b.	Explain any four legacy classes of Java's collection framework with suitable program.
		(10 Marks)
	diam	

## Module-3

- What is string? Explain the string constructors with suitable programming examples.
  - (08 Marks)
  - Explain the string comparison functions with suitable programs.
- (08 Marks) (04 Marks)
- c. Explain indexOf() and lastIndexOf Methods of string class with an example.

## OR

- What is toString() function? Write a program to override toString() and provide your won 6 string representations. (08 Marks)
  - Explain the following StringBuffer methods with an example:
    - i) append() ii) insert() iii) reverse() iv) replace() (06 Marks)
  - Write a program in java to replace all the matching substring with a given string. (06 Marks)

Module-4 What is servlet? Explain the life cycle of servlets. (06 Marks) Write a Java servlet program that demonstrate how parameters can be accessed from HTML. (08 Marks) What is a session object? Write the program to create and Read session object, using JSP. (06 Marks) Define JSP? Explain different types of JSP tags by giving suitable programming examples. 8 (12 Marks) Define Cookie. Write a servlet program to add a cookie. (08 Marks) Module-5 Explain the different step involved in JDBC with a code snippet. (12 Marks) (08 Marks) Explain the four types of JDBC drivers. Explain the use of object in establishing the connection. Also write a program to call stored 10 (10 Marks) procedure. Explain undatable Result set with a programming example. (10 Marks) b.