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**BCACACN 602**

**Sixth Semester B.C.A. Degree Examination, June/July 2024  
(NEP 2020) (2023 – 2024 Batch Onwards)  
ADVANCED JAVA AND J2EE**

Time : 2 Hours

Max. Marks : 60

**Note :** Answer **any six** questions from Part – A and **any one full** question of **each** Unit from Part – B.

**PART – A**

1. a) What is an enumeration ? How enumeration can be created ? (6×2=12)  
b) List two advantages of Java Beans.  
c) What is collection framework ? List any two goals of collection framework.  
d) Write the differences between hasNext() and next() method.  
e) Provide the syntax and an example for the charAt() method to extract characters from a string.  
f) State two advantages of using distributed computing over centralized computing.  
g) What are servlets ?  
h) What is the difference between the executeQuery() and executeUpdate() methods of a statement object in JDBC ?

**PART – B**

**Unit – I**

2. a) Demonstrate the usage of the valueOf() and values() methods with an example.  
b) With an example explain how enumeration values are used to control a switch statement. (6+6)
3. a) What is Autoboxing and Unboxing ? Explain with an example.  
b) Write short note on the following :
  - i) Bound and constrained properties
  - ii) Persistence. (6+6)



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**Unit – II**

4. a) i) List any three methods of List interface with its purpose.  
ii) What is an iterator ? Explain with an example.
- b) Write a Java program that demonstrates the usage of a custom comparator for sorting strings in reverse order. (6+6)
5. a) Explain the roles and responsibilities of the Model, View and Controller components in the MVC architecture.
- b) Explain the usage of the for-each loop in Java when working with collections. Compare and contrast the for-each loop with the traditional approach of using an Iterator. (6+6)

**Unit – III**

6. a) With an example explain the four methods of StringBuffer class.
- b) Outline the key steps involved in developing a basic Remote Method Invocation (RMI) Application. (6+6)
7. a) What is the usage of delete() and deleteCharAt() methods ? Explain them using their syntax and an example.
- b) Explain the Advantages and Disadvantages of distributed computing. (6+6)

**Unit – IV**

8. a) Explain the three key methods in the lifecycle of a servlet (init(), service(), destroy()).
- b) Explain the following methods of HttpServletRequest interface with their syntax
- i) getCookie
  - ii) getMethod
  - iii) getPathInfo
  - iv) getSession.
- (6+6)
9. a) Explain the key stages involved in the lifecycle of a Java Server Page (JSP).
- b) i) What are the JDBC statements ? Explain.
- ii) Explain the steps to connect to the database in java. (6+6)

