

**BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)**  
**Computer Science & Engineering-AI&ML**  
**B. Tech. Sem - II :SUMMER : 2023**  
**SUBJECT : OBJECT ORIENTED PROGRAMMING**

Day : Thursday

Time : 10:00 AM-01:00 PM

Date : 1/6/2023

S-23933-2023

Max. Marks : 60

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Draw neat and labelled diagram **WHEREVER** necessary.
- 3) Assume suitable data if **NECESSARY**.

- Q.1 a) Define Conditional Operator? Write the suitable example? (06)  
b) Define an Array? Classify the types of arrays in Java. (04)

**OR**

- Q.1 Explain the term: (10)  
a) Class                      b) Object                      c) Abstraction  
d) Inheritance              e) Polymorphism

- Q.2 a) What is mean by OOP? Illustrate the Concepts OOP? (05)  
b) What is a package? How to create user defined package in java with example. (05)

**OR**

- Q.2 Write a java program to find the factorial value of the given number using user defined package concept. (10)

- Q.3 a) What is Vectors? Describe Methods of the Vector Class. (05)  
b) What is a String? Explain different string declarations with an example. (05)

**OR**

- Q.3 a) What is Vectors? Describe Methods of the Vector Class. (05)  
b) What is a String? Explain different String declarations with an example. (05)

- Q.4 a) Distinguish Methods Overriding and Method Overloading. (05)  
b) What is an abstract class? Explain all the cases to implement abstract class. (05)

**OR**

- Q.4 Write a java program to implement inheritance concept. (10)

- Q.5 Write a java program to create own exception for Negative Value Exception if the user enter negative value. (10)

**OR**

- Q.5 a) What is Multithreading? Illustrate the ways to create multiple threads in java. (05)  
b) Explain about Thread Life Cycle. (05)

- Q.6 What is AWT? Discuss about AWT controls. (10)

**OR**

- Q.6 Write a java program to implement an AWT based calculator with basic operations. (10)

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