



17840



## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – BCA(MAWT)-Hons-2024

Course Name – Object Oriented Programming in JAVA

Course Code - BMT27103 (T)

( Semester II )

Library

Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

Full Marks : 40

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 10=10

1. Choose the correct alternative from the following :

(i) Identify the organization that currently maintain Java.

- |                    |           |
|--------------------|-----------|
| a) Microsoft       | b) IBM    |
| c) Sun Microsystem | d) Oracle |

(ii) JVM is the \_\_\_\_\_. Identify the correct option from the following.

- |                     |                  |
|---------------------|------------------|
| a) Java Interpreter | b) Java class    |
| c) Java compiler    | d) Java constant |

(iii) Select a major difference between OOP and Procedural Language.

- |                       |                  |
|-----------------------|------------------|
| a) Data hiding in OOP | b) Data mixing   |
| c) Less Lines of code | d) No difference |

(iv) Select the size of a character variable (char c) in Java \_\_\_\_\_.

- |            |            |
|------------|------------|
| a) 4 bytes | b) 2 bytes |
| c) 8 bytes | d) 1 byte  |

(v) Static method in a java class could be called using \_\_\_\_\_. Select the most suitable option from the following.

- |                         |                  |
|-------------------------|------------------|
| a) Class name only      | b) Object only   |
| c) Object or Class name | d) None of these |

(vi) Show the correct keyword to create an object in Java.

- |           |        |
|-----------|--------|
| a) def    | b) old |
| c) malloc | d) new |

(vii) JRE is implementation of \_\_\_\_\_. Identify the correct option from the following.

- |                         |                    |
|-------------------------|--------------------|
| a) Java Virtual Machine | b) Desktop machine |
|-------------------------|--------------------|

- c) Windows machine  
 (viii) Select a use of 'InputStreamReader' class in Java.  
 a) Scanning document  
 c) Taking console input  
 (ix) Indicate what will be the output of the following code: `int x = 5; int y = ++x * 2; System.out.println(y);`  
 a) 10  
 c) 14  
 (x) Select the package where the System class is defined.  
 a) java.lang  
 c) java.object
- d) Java Development Kit  
 b) Scanning picture  
 d) None of these  
 b) 11  
 d) 12  
 b) java.util  
 d) None of these

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. What is message passing in Java? (3)
3. Illustrate association, aggregation, and composition with suitable examples. (3)
4. Write a Java program to check whether a given number is prime or not. (3)
5. Write a Java program to find the sum of the digits of a given number. (3)
6. Analyze the purpose of the 'throw' keyword in Java? Demonstrate with an example. (3)

OR

What is the difference between synchronized and volatile keywords in Java? (3)

### Group-C

(Long Answer Type Questions)

5 x 3=15

7. What is an Object in Java? How does it differ from a Class? Explain with an example. (5)
8. Discuss the life cycle of a Java thread and the various states of it can be shown using state diagram. (5)
9. Discuss Wrapper Class with reference to the concept of Autoboxing and Unboxing. (5)

OR

Write a simple Java class Adder which include methods to take input of two numbers, produce their sum and output the result. Create an object from the class and find the sum of two integers. (5)

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