MID-SEMESTER EXAMINATION, November-2025
Programming Projects with Java-1 (CA 3216)

Program: MCA **Semester: 1st**
Full Marks: 30 **Time: 2 Hours**

Subject/Course Learning Outcome	*Taxonomy Level	Ques.Nos.	Marks
To remember and comprehend the fundamental concepts of Java programming by reading, writing, executing, and debugging Java applications within the Eclipse framework. This includes the ability to understand and explain variables, constants, primitive data types, and core libraries along with their functionalities.	L1, L2	1(a, c), 3(a)	6
To apply operators and type casting mechanisms proficiently to manipulate and transform data within Java programs, ensuring accurate and efficient computation.	L1, L2, L3	1(b), 2(a), 4(c)	6
To critically analyze and systematically implement conditional statements to effectively govern program flow based on diverse logical conditions.	L1, L3	2(b, c), 4(a), 5(a)	8
To design and critically evaluate iterative solutions utilizing loops to efficiently ad dress repetitive computational problems.	L1, L2, L3, L4	3 (b, c), 4(b), 5(b, c)	10
To design and proficiently manipulate arrays for systematic storage and management of data collections.	-	-	-
Develop and implement modular programs using methods, and demonstrate object-oriented principles through classes, objects, and enumerations	-	-	-

*Bloom's taxonomy levels: Remembering (L1), Understanding (L2), Application (L3), Analysis (L4), Evaluation (L5), Creation (L6)

Answer all questions. Each question carries equal mark.

1. (a) What is the purpose of the import statement? 2

   (b) Write a Java program that checks whether an integer entered by the user is even or odd by using ternary operator. 2

(c) Find the output of the below code snippet bellow: 2
```
char ch = 'A';
int i = ch;
System.out.println(i);
```

2. (a) Write a Java program to swap values of two variables without   2
using third variable.

(b) Write a Java program using nested if-else to find the largest   2
number among three numbers.

(c) Find the output of the below code snippet bellow: 2
```
int a = 8;
    if (a++ == 8)
        if (a == 9)
            System.out.println("Yes");
        else
            System.out.println("No");
    else
        System.out.println("Maybe");
```

3. (a) Write a Java program to print the following pattern using   2
nested while loop.
```
*
**
***
****
```

(b) Given two numbers, find the remainder when one is divided by   2
the other without using the % operator.

(c) Find the output for the code snippet bellow   2
```
for (int i = 1; i <= 3; i++) {
   for(int j = 1; j <= 3; j++) {
   if(j == 2)
      continue;
   System.out.print(i + "" + j + " ");
}
}
```

4. (a) What is fall-through in a switch case?   2

(b) Write a program in Java to check the number is prime or not.   2

(c) Find the output for the code snippet bellow   2
```
int sum = 0;
for (int i = 1; i <= 5; sum += i,i++);
    System.out.println (sum);
```

5. (a) Write a Java program to assign an exam hall based on roll   2
number-
Roll number ending with 0-3 → Hall A
Ending with 4-6 → Hall B
Ending with 7-9 → Hall C

(b) Write a Java program to check whether a given number is a   2
palindrome or not.

(c) Write a Java program to find the factorial value of any number   2
entered through the keyboard.

End of Questions