DECEMBER 2023 **P/ID 37510/PMA2K**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is a token?

2. Give the contents of Java Environment (JDK).

3. List the five types of tokens included in Java.

4. What is type casting?

5. What is an array? Give an example.

6. Give the general form of ?: operator.

7. Write the general form of a switch statement. Give an example.

8. What is multithreading?

9. Give the general form of finally statement.

10. What is meant by Method Overloading?

11. What is an *abstract* class?

12. What is the main difference between abstract method and final method?

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions.

13. What are relational operator? Explain each one of them with example.

14. If $\text{int}\, x = 100$, what is the value of each of the following expressions?

    (a) $x == 99 + 1 ? 5 : 7$

    (b) $(-x)$

    (c) $x >> 2$

    (d) $x \hat{} x$

    (e) $x \% 30$

15. Describe in detail the steps involved in implementing a stand -alone program.

16. Explain how to add an applet to HTML file.

17. Given a positive whole number, write a java program to test whether it is an Armstrong number.

18. How to pass arguments to the constructor of a base class?

19. Name five important control statements in java with example for each.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. What are the different data types in Java. Explain each one of them with examples.

21. Explain at least ten mathematical built—in functions in java with example.

22. Explain wrapper classes.

23. What is synchronization? When do we use it. Explain in detail.

24. Write a program in java to print the transpose of a given matrix.

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