

GHRCEM, WAGHOLI, PUNE
DEPARTMENT OF AI, SY AI-A QUESTION BANK FOR CAE I
SUBJECT: Object Oriented Programming

| Sr no | Question | Unit | BL | CO |
|--------------|---|-------------|-----------|-----------|
| 1 | Define Object-Oriented Programming (OOP). | I | L1 | CO1 |
| 2 | List the four main principles of OOP. | I | L1 | CO1 |
| 3 | Interpret the purpose of JVM, JDK, and JRE in Java?. | I | L2 | CO1 |
| 4 | Explain the different data types available in Java. | I | L2 | CO1 |
| 5 | Difference between while and do-while loops | I | L2 | CO1 |
| 6 | Explain the different types of operators in Java. | I | L2 | CO1 |
| 7 | Illustrate different control flow statements in Java? | I | L2 | CO1 |
| 8 | Describe the structure of a simple Java program. | I | L1 | CO1 |
| 9 | Explain the key features of Java as a programming language. | I | L2 | CO1 |
| 10 | Why is Java considered a platform-independent language? | I | L1 | CO1 |
| 11 | Illustrate how an if-else statement works with an example. | I | L2 | CO1 |
| 12 | Differentiate between switch and if-else statements. | I | L2 | CO1 |
| 13 | Explain the use of the final keyword for variables in Java. | I | L2 | CO1 |
| 14 | Compare and contrast break and continue statements in loop execution. | I | L2 | CO1 |
| 15 | How does Java handle memory management with the help of garbage collection? | I | L2 | CO1 |
| 16 | Explain how the Java Virtual Machine (JVM) executes a Java program. | I | L2 | CO1 |
| 17 | Explain Variables. Write the syntax for declaring a variable in Java. | I | L2 | CO1 |
| 18 | Summarize the benefits of using OOP in software development. | I | L2 | CO1 |
| 19 | Demonstrate the use of the modulus operator with an example program. | I | L3 | CO1 |
| 20 | Implement a for loop in Java to print numbers from 1 to 10. | I | L3 | CO1 |
| 21 | Define a class and an object in Java. | II | L1 | CO1 |
| 22 | Explain different types of constructors in Java. | II | L2 | CO2 |
| 23 | What is the purpose of the this keyword in Java? | II | L1 | CO2 |
| 24 | Explain the different access modifiers available in Java. | II | L2 | CO2 |
| 25 | How do you declare a static variable in Java? | II | L1 | CO2 |
| 26 | Illustrate method overloading in Java? | II | L2 | CO2 |
| 27 | Difference between arrays and strings in Java. | II | L2 | CO2 |
| 28 | Define an array and Explain its types in Java. | II | L2 | CO2 |

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| 29 | Explain how objects are created and used in Java. | II | L2 | CO2 |
| 30 | Describe the difference between instance and static variables. | II | L2 | CO2 |
| 31 | Explain the mutability and immutability of strings in Java. | II | L2 | CO2 |
| 32 | Why is the String class immutable in Java? | II | L2 | CO2 |
| 33 | How does constructor overloading work in Java? | II | L2 | CO2 |
| 34 | Why do we need access modifiers in Java? | II | L2 | CO2 |
| 35 | Write a Java program to demonstrate the use of the static keyword with methods and variables. | II | L3 | CO2 |
| 36 | What happens if a class does not define a constructor? | II | L2 | CO2 |
| 37 | Explain the implications of using private constructors in Java. | II | L2 | CO2 |
| 38 | How do you create an object of a class in Java? | II | L1 | CO2 |
| 39 | Differentiate between instance variables and local variables in Java. | II | L2 | CO2 |
| 40 | What does the new keyword do when creating an object in Java? | II | L1 | CO2 |

Dr Yogesh Mali

SUBJECT TEACHER

Dr. Rachna Sable

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