# CMR Technical Campus

## B. Tech. Mid Question Bank (R22 Regulation)

**Academic Year: 2024** **Semester: III**

**Subject Name:** Object Oriented Programming Through Java

**Faculty Name: G Swathi, V Rajesh, S Raghavendra**

## PART-A

| MID-I Questions | | | | | |
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| **Q.No** | **Questions** | **Marks** | **BL** | **CO** | **Unit No** |
| 1 | Define class and object. | 2 | L1 | CO1 | 1 |
| 2 | Explain the usage of super keyword in java. | 2 | L2 | CO1 | 1 |
| 3 | What is a Constructor Explain its types? | 2 | L1 | CO1 | 1 |
| 4 | Explain the concept of Object-Oriented Programming. | 2 | L2 | CO1 | 1 |
| 5 | Explain about the method overloading in Java. | 2 | L2 | CO1 | 1 |
| 6 | What is an abstract class ? | 2 | L2 | CO1 | 1 |
| 7 | What is a package ? | 2 | L1 | CO2 | 2 |
| 8 | What is an interface ? | 2 | L1 | CO2 | 2 |
| 9 | What are byte streams and character streams? | 2 | L1 | CO2 | 2 |
| 10 | Describe how to implement an interface. | 2 | L2 | CO2 | 2 |
| 11 | How would you import a user-defined package in a Java program? | 2 | L3 | CO2 | 2 |
| 12 | Explain auto boxing. | 2 | L2 | CO2 | 2 |
| 13 | Define Exception. How to handle Exceptions in java? | 2 | L1 | CO3 | 3 |
| 14 | Explain the advantages of Exception Handling. | 2 | L2 | CO3 | 3 |
| 15 | What are the different types of exceptions in Java? | 2 | L3 | CO3 | 3 |
| **MID-II Questions** | | | | | |
| 16 | Define a Thread. Explain the life cycle of a thread. | 2 | L2 | CO3 | 3 |
| 17 | Explain Synchronization threads with example. | 2 | L2 | CO3 | 3 |
| 18 | What is the difference between thread-based multitasking and process-based multitasking? | 2 | L4 | CO3 | 3 |
| 19 | Explain Properties class. | 2 | L2 | CO4 | 4 |
| 20 | Discuss about Priority Queue. | 2 | L2 | CO4 | 4 |
| 21 | Explain the difference between HashSet and TreeSet. | 2 | L4 | CO4 | 4 |
| 22 | Differentiate between Stack and Vector. | 2 | L4 | CO4 | 4 |
| 23 | Explain Date and Calendar class. | 2 | L2 | CO4 | 4 |
| 24 | How to Access a Collection via an Iterator? | 2 | L3 | CO4 | 4 |
| 25 | What is the uses of Adapter class? Explain | 2 | L2 | CO5 | 5 |
| 26 | What are the limitations of AWT? | 2 | L1 | CO5 | 5 |
| 27 | Explain the MVC architecture. | 2 | L2 | CO5 | 5 |
| 28 | Differentiate between AWT and Swing. | 2 | L4 | CO5 | 5 |
| 29 | What is an Event? Explain Event Listeners? | 2 | L2 | CO5 | 5 |
| 30 | Explain about Applets and its Applications. | 2 | L2 | CO5 | 5 |

# PART-B

| MID-I Questions | | | | | |
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| **Q.No** | **Questions** | **Marks** | **BL** | **CO** | **Unit No** |
| 1 | What is a String? Explain different String Handling functions available in Java | 4 | L2 | CO1 | 1 |
| 2 | Explain the forms of inheritance in Java. | 4 | L2 | CO1 | 1 |
| 3 | Differentiate between Method overloading and Method overriding. | 4 | L4 | CO1 | 1 |
| 4 | Explain abstract class with example. | 4 | L2 | CO1 | 1 |
| 5 | What is method overriding in Java? Provide an example | 4 | L1 | CO1 | 1 |
| 6 | Differentiate about final classes, final methods and final variables. | 4 | L4 | CO1 | 1 |
| 7 | Define Inheritance. Explain Different types of Inheritance available in Java. | 8 | L2 | CO1 | 1 |
| 8 | Explain in-detail about Java Buzzwords. | 8 | L2 | CO1 | 1 |
| 9 | Implement polymorphism and types of polymorphism with example. | 8 | L3 | CO1 | 1 |
| 10 | How would you import a user-defined package in a Java program? | 4 | L3 | CO2 | 2 |
| 11 | Write a java Program that uses a nested interface. | 4 | L1 | CO2 | 2 |
| 12 | Discuss this and super keywords. | 4 | L2 | CO2 | 2 |
| 13 | Implement a program to copy the contents of one file into another file. | 4 | L3 | CO2 | 2 |
| 14 | Explain different Access specifier available in Java. | 4 | L4 | CO2 | 2 |
| 15 | Define File class? Explain Random Access File operations with access modes. | 4 | L2 | CO2 | 2 |
| 16 | Does Java support multiple inheritance? Justify your answer. | 8 | L5 | CO2 | 2 |
| 17 | Create a package. How many ways to importing a package with example? | 8 | L5 | CO2 | 2 |
| 18 | Define a stream. Design the stream classes hierarchy. | 8 | L6 | CO2 | 2 |
| 19 | Explain the following.<br>a) try b) catch c) finally | 4 | L2 | CO3 | 3 |
| 20 | Explain the difference between checked and unchecked exceptions. | 4 | L4 | CO3 | 3 |
| 21 | Write a Java program that demonstrates the use of `try` and `catch` blocks.? | 4 | L3 | CO3 | 3 |
| 22 | Illustrate the creation of user defined exception with an example. | 4 | L5 | CO3 | 3 |
| **MID-II Questions** | | | | | |

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| 23 | Analyze the impact of thread life cycle on the execution of Thread in Java. | 4 | L4 | CO3 | 3 |
| 24 | Develop a Java Program that demonstrates inter-thread communication or producer-consumer problem with example? . | 4 | L5 | CO3 | 3 |
| 25 | Differentiate between multi-tasking and multi-threading. | 4 | L4 | CO3 | 3 |
| 26 | Explain Thread priorities with example. | 4 | L4 | CO3 | 3 |
| 27 | Explain Collection Framework. | 4 | L2 | CO4 | 4 |
| 28 | Differentiate between Array and Arraylist. | 4 | L4 | CO4 | 4 |
| 29 | Differentiate between HashSet and TreeSet. | 4 | L4 | CO4 | 4 |
| 30 | Explain Priority Queue. | 4 | L2 | CO4 | 4 |
| 31 | Explain Hash Map. | 4 | L2 | CO4 | 4 |
| 32 | Explain Hash table and Dictionary. | 4 | L2 | CO4 | 4 |
| 33 | Explain Map interface its classes and sub interfaces (HashMap, TreeMap). | 8 | L2 | CO4 | 4 |
| 34 | Analyze Legacy classes with example. | 8 | L5 | CO4 | 4 |
| 35 | Illustrate Collection Framework with LIST and SET Interface. | 8 | L3 | CO4 | 4 |
| 36 | Write the implementation of Anonymous Inner class. | 4 | L3 | CO5 | 5 |
| 37 | Explain Java Swing class hierarchy. | 4 | L2 | CO5 | 5 |
| 38 | Differentiate between Applet and Application. | 4 | L4 | CO5 | 5 |
| 39 | Implement a Java Program for mouse events. | 4 | L3 | CO5 | 5 |
| 40 | Explain Swing components like, JCombobox, JButton. | 4 | L2 | CO5 | 5 |
| 41 | Explain Graphics class with suitable example. | 4 | L2 | CO5 | 5 |
| 42 | What is an applet? Explain the life cycle of applet? Implement the parameter passing technique for applets. | 8 | L3 | CO5 | 5 |
| 43 | Define Layout. Explain Different layout managers available in Java with neat sketch. | 8 | L4 | CO5 | 5 |
| 44 | 1. Discuss the following swing Buttons:<br>a. JButton b. JCheck Box<br>c. JScroll Pane d. Dialogs. | 8 | L2 | CO5 | 5 |