

Assessment-1

Core Java

1. Which of the following is not a Java feature?
 - A. Dynamic
 - B. Architecture Neutral
 - C. Use of Pointers
 - D. Object-oriented
 - **Answer: C**
2. Which of the following is the correct syntax for a main method in Java?
 - A. `public void main(String args[])`
 - B. `public static void main(String args[])`
 - C. `public static int main(String args[])`
 - D. `public int main(String args[])`
 - **Answer: B**
3. Which data type is used to create a variable that should store text?
 - A. myString
 - B. string
 - C. String
 - D. Txt
 - **Answer: B**
4. Which of the following is a valid declaration of a char?
 - A. `char ch = '\utea';`
 - B. `char ca = 'tea';`
 - C. `char cr = '\u0223;`
 - D. `char cc = '\itea';`
 - **Answer: A**
5. Which method can be used to find the length of a string in Java?
 - A. `length()`
 - B. `getSize()`
 - C. `getLength()`
 - D. `size()`
 - **Answer: A**
6. Which of the following is a valid keyword in Java?
 - A. interface
 - B. string
 - C. Float
 - D. unsigned
 - **Answer: A**
7. Which of the following is not an access modifier in Java?
 - A. protected
 - B. public
 - C. void
 - D. private
 - **Answer: C**
8. Which of these cannot be used for a variable name in Java?
 - A. identifier

- B. variable
 - C. 1st_variable
 - D. \$var
 - **Answer: A**
- 9. Which of the following loops will execute the body of loop even when the condition controlling the loop is initially false?
 - A. for
 - B. while
 - C. do-while
 - D. none
 - **Answer: C**
- 10. What is the size of a byte variable in Java?
 - A. 4 bits
 - B. 8 bits
 - C. 16 bits
 - D. 32 bits
 - **Answer: B**

Java 8 Features

- 11. Which of the following is a new feature in Java 8?
 - A. String concatenation
 - B. Lambdas
 - C. Swing
 - D. Collections
 - **Answer: C**
- 12. What is the use of the `default` keyword in interfaces in Java 8?
 - A. To define the default implementation of a method
 - B. To mark the method for deletion
 - C. To overload the method
 - D. To define a new class
 - **Answer: A**
- 13. Which of the following is true about functional interfaces in Java 8?
 - A. They must contain exactly one abstract method
 - B. They can contain multiple abstract methods
 - C. They must be annotated with `@FunctionalInterface`
 - D. They can be used as anonymous classes only
 - **Answer: A**
- 14. Which package contains the `Stream` API in Java 8?
 - A. `java.lang`
 - B. `java.io`
 - C. `java.util.stream`
 - D. `java.util.function`
 - **Answer: C**
- 15. Which of the following is not a valid method of `java.util.stream.Stream`?
 - A. `filter`
 - B. `map`
 - C. `collect`
 - D. `parse`
 - **Answer: A**

16. Which of the following is used to create an infinite stream in Java 8?
- A. Stream.generate()
 - B. Stream.infinite()
 - C. Stream.create()
 - D. Stream.repeat()
 - **Answer: A**
17. What does the Optional class in Java 8 help to address?
- A. NullPointerExceptions
 - B. Compile-time errors
 - C. Infinite loops
 - D. Incorrect type casting
 - **Answer: A**
18. Which method is used to check if an Optional contains a value in Java 8?
- A. hasValue()
 - B. isPresent()
 - C. exists()
 - D. valuePresent()
 - **Answer: C**
19. What type of expression is a lambda expression in Java 8?
- A. Anonymous function
 - B. Named function
 - C. Parameterized function
 - D. Static function
 - **Answer: A**
20. Which functional interface does the forEach method in Java 8 accept?
- A. Consumer
 - B. Supplier
 - C. Function
 - D. Predicate
 - **Answer: A**

JDBC

21. Which of the following is not a JDBC driver type?
- A. JDBC-ODBC bridge driver
 - B. Native-API driver
 - C. Network Protocol driver
 - D. Embedded driver
 - **Answer: A**
22. Which method is used to execute a SELECT query in JDBC?
- A. execute()
 - B. executeQuery()
 - C. executeUpdate()
 - D. executeSelect()
 - **Answer: B**
23. Which method is used to execute an INSERT, UPDATE, or DELETE query in JDBC?
- A. execute()
 - B. executeQuery()
 - C. executeUpdate()

- D. executeInsert()
- **Answer: C**
- 24. Which JDBC type represents a SQL DATE?
 - A. java.sql.Date
 - B. java.sql.Timestamp
 - C. java.sql.Time
 - D. java.util.Date
 - **Answer: A**
- 25. Which method is used to load a JDBC driver class in Java?
 - A. Class.forName()
 - B. DriverManager.load()
 - C. Driver.load()
 - D. DriverManager.registerDriver()
 - **Answer: A**
- 26. What does the getConnection method of DriverManager return?
 - A. Statement
 - B. Connection
 - C. ResultSet
 - D. SQLWarning
 - **Answer: B**
- 27. Which of the following is not a valid JDBC URL?
 - A. jdbc:mysql://localhost:3306/mydb
 - B. jdbc:oracle:thin:@localhost:1521
 - C. jdbc:sqlserver://localhost;databaseName=mydb
 - D. jdbc:database://localhost/mydb
 - **Answer: D**
- 28. How do you set a string parameter in a PreparedStatement in JDBC?
 - A. setString(index, value)
 - B. setParameter(index, value)
 - C. setStringValue(index, value)
 - D. setParam(index, value)
 - **Answer: A**
- 29. Which method is used to close a Connection object in JDBC?
 - A. closeConnection()
 - B. end()
 - C. close()
 - D. disconnect()
 - **Answer: C**
- 30. What exception is thrown by JDBC methods?
 - A. SQLException
 - B. IOException
 - C. ClassNotFoundException
 - D. ConnectionException
 - **Answer: A**

Collections

- 31. Which of the following is not a part of the Java Collections Framework?
 - A. HashMap
 - B. Hashtable

- C. TreeSet
 - D. Array
 - **Answer: D**
32. Which class provides a resizable array implementation in Java?
- A. Array
 - B. Arrays
 - C. ArrayList
 - D. LinkedList
 - **Answer: C**
33. Which of the following is a marker interface?
- A. Serializable
 - B. Cloneable
 - C. EventListener
 - D. All of the above
 - **Answer: D**
34. Which method is used to add an element at a specific position in a list?
- A. add()
 - B. insert()
 - C. addAt()
 - D. add(index, element)
 - **Answer: D**
35. Which interface does java.util.HashSet implement?
- A. List
 - B. Collection
 - C. Set
 - D. Map
 - **Answer: C**

Exception Handling

36. Which of the following is a checked exception?
- A. IOException
 - B. NullPointerException
 - C. ArrayIndexOutOfBoundsException
 - D. ArithmeticException
 - **Answer: A**
37. Which keyword is used to handle exceptions in Java?
- A. try
 - B. catch
 - C. throw
 - D. All of the above
 - **Answer: D**
38. Which block is always executed in Java, whether an exception is handled or not?
- A. try
 - B. catch
 - C. finally
 - D. throw
 - **Answer: C**
39. Which of the following is true about the throw keyword in Java?
- A. Used to declare an exception

- B. Used to throw an exception
 - C. Used to handle an exception
 - D. Used to ignore an exception
 - **Answer: B**
40. Which of the following is a runtime exception?
- A. IOException
 - B. SQLException
 - C. ClassNotFoundException
 - D. NullPointerException
 - **Answer: D**

Multithreading

41. Which method must be implemented by all threads?
- A. run()
 - B. start()
 - C. execute()
 - D. main()
 - **Answer: A**
42. Which of the following is a valid constructor of the Thread class?
- A. Thread()
 - B. Thread(Runnable r)
 - C. Thread(String name)
 - D. All of the above
 - **Answer: D**
43. Which of the following is the correct way to start a new thread?
- A. thread.run()
 - B. thread.start()
 - C. thread.init()
 - D. thread.execute()
 - **Answer: B**
44. Which method is used to pause the execution of a thread for a specific period?
- A. suspend()
 - B. stop()
 - C. sleep()
 - D. wait()
 - **Answer: C**
45. Which is the correct way to implement a thread in Java?
- A. Extend the Thread class
 - B. Implement the Runnable interface
 - C. Both A and B
 - D. None of the above
 - **Answer: C**
46. Which method is used to wait for a thread to finish its execution?
- A. wait()
 - B. notify()
 - C. join()
 - D. finish()
 - **Answer: C**
47. What does the `synchronized` keyword in Java do?

- A. Allows multiple threads to access a resource
- B. Prevents multiple threads from accessing a resource simultaneously
- C. Stops a thread from executing
- D. Starts a new thread
- **Answer: B**

48. Which method is called when a thread is started?

- A. init()
- B. run()
- C. start()
- D. execute()
- **Answer: C**

49. Which of the following is not a state of a thread?

- A. New
- B. Runnable
- C. Blocked
- D. Finished
- **Answer: D**

50. What does the `wait()` method do in a synchronized block?

- A. Releases the lock and waits until `notify()` or `notifyAll()` is called
- B. Acquires the lock and waits
- C. Continues execution without waiting
- D. Throws an exception
- **Answer: A**