#### Part A:

# Q1. What are the difference between java and C++?

#### ANS:

Java adopts byte code whereas C++ does not C++ supports destructor whereas java does not support. Multiple inheritance possible in C++ but not in java.

# Q2. What is static in java?

## ANS:

Static methods are implicitly final, their methods are not attached to an object rather it is attached to a class.

## Q3. What is garbage collection?

# ANS:

When an object is no longer used, java implicitly recalls the memory of the object. Since java does not support destructor it makes use of garbage collector in the place of destructor.

## Q4. What is overriding?

## ANS:

When any class use the same name, type and arguments as that of the methods in the super class then the class can override the super class method.

# Q5. What are different types of access modifiers?

# ANS:

- 1. public: accessible from anywhere.
- 2. private: can be accessed only inside the class.

- 3. protected: accessed by classes and subclasses of the same package.
- 4. default modifier: accessed by classes contain the same package

## Q6. What is a package?

# ANS:

Package is a collection interface and class which provides a very high level of protection and space management.

# Q7. What is synchronization?

# ANS:

It is mechanism that allows only one thread to process the thread at a time. This is mainly to prevent deadlock.

# Q8. What is the difference between Integer and int?

# ANS:

Integer defined in java. lang package which is a class, whereas int is a primitive data type defined in the Java language itself.

# Q9. What is the difference between subclass and superclass?

# ANS:

Subclass does not inherit anything from other classes whereas superclass inherit from other class.

## Q10. What is the method to implement thread?

# ANS:

Thread can be implemented by run() method

#### Q11. What is JVM?

## ANS:

JVM enables to convert the source code into the code which can be executed in the system. This makes the java independent of the platform

## Q12. What is typecasting?

## ANS:

Typecasting converts entity of one type to entity of another type. It is very important while developing applications.

Casting is of two types:-

- 1. downcasting
- 2. Upcasting

### Q13. What is JVM and its use?

### ANS:

The most important feature of Java is platform independent, this is supported by JVM. It converts the machine code into bytes. It is the heart of the java language and a structure programming language.

#### Q14. Name four container classes?

# ANS:

- \* Dialog
- \* FileDialog
- \* Panel
- \* Frame

### Q15. What is serialization and deserialization?

# ANS:

It is process of representing the state of an object in byte stream. Process of restoring the object is done be describlization.

#### Q16. What is JAR file?

# ANS:

JAR stands for java archive, it is used to compress a class of file.

## Q17. If a variable is declared as private, where may the variable be accessed?

## ANS:

When the variable is declared private, it can be accessed only inside the class in which it is defined.

#### Q18. What is vector class?

# ANS:

Vector class provides the capability to implement array of objects.

# Q19. What is the difference between swing and AWT?

# ANS:

AWT works faster than swing since AWT is heavy weight components.AWT consist of thin layer of code, swing is larger and of higher functionality.

### Q20. What is tagged interface?

### ANS:

Tagged interface is similar to the serializable interface, it instruct the complier to perform some activity.

## Q21. What is the difference between primitive scheduling and time slicing?

# ANS:

In case of primitive scheduling the task with highest priority is performed until it enters the dead state. In case of time slicing it performs the task for sometime and then enter the ready state.

#### Q22. What is referent?

# ANS:

Referent variable are constant variable it cannot be modified to refer to any other object then the one with it was initialized.

#### Q23. What is the resource Bundle class?

# ANS:

It is used to store the local specific resources inorder to tailor the appearance.

## Q24. Is null a keyword?

# ANS:

NULL is not a keyword.

### Q25. What is final?

# ANS:

A final class cannot be sub classed neither extended. The variables cannot change the value.

## Part B:

# **Q1. What is Data Encapsulation?**

### ANS:

Data encapsulation or data hiding is a function that keeps the implementation details hidden to the user. The user of the application is allowed to perform only limited task with the class members that are hidden.

# Q2. What are the different types of inner classes?

# ANS:

- \* Member classes.
- \* Anonymous classes.
- \* Nested top-level classes.
- \* Local classes.

# Q3. What is the difference between instanceof() and isInstance()?

# ANS:

- 1. instanceof() is used to see whether the object can be typecast without making use of the exception.
- 2. isInstance() is to check whether the specified object is compatible with the class that represent the object.

#### Q4. What is RMI?

# ANS:

RMI stands for remote method invocation; it enables the developer to create application based on java, in which the java objects are invoked by java virtual machines.

#### Q5. What is a class?

# **ANS**:

- 1. A class represents a collection of attributes and behaviors of object. It is the class from which individual objects created.
- 2. For example:-
- 3. Bicycle is a class that contain the following attributes
- 4. Speed
- 5. Gear

# Q6. What are the advantages of OOAD?

# ANS:

- \* Reusability
- \* Maintainability
- \* Increase the performance of the system.

# Q7. What is an object?

# ANS:

An object is an entity, which consist of attributes, behaviors and qualities that describe the object.

#### Q8. What is OOAD?

# ANS:

OOAD stands for Object Oriented analysis and design. It is a methodology use to analyze, design and develop applications. It visualizes the class and the objects.

#### Q9. What is Data Abstraction?

## ANS:

It is a process of listing the essential features, without implementation details. Data abstraction is nothing but the extraction of the information which is required and ignoring the other information.

## Q10. Why is java not 100% pure OOPS language?

# ANS:

Java does not support 100% pure OOPS concept, since it support primitive data type like int, long, byte etc, these are not objects.

## Q11. What are the disadvantages of threads?

# ANS:

- 1. The main disadvantage of using thread is that it is operating system dependent. It require to follow CPU cycle that various from system to system.
- 2. Deadlock occurs.

#### Q12. What is serialization?

## ANS:

It is a method which saves the object state by converting to byte stream.

### Q13. What are the different ways to handle exception?

## ANS:

- \* By placing the desired code in the try block and allow the catch block to catch the exception.
  - \* Desired exception can be placed in throw clause.

### Q14. What are java beans?

### ANS:

Java bean is a platform independent and portable. It helps to develop code that is possible to run in any environment

# Q15. What are wrapper classes?

# ANS:

Wrapper class represents a base class for the data source. It allows the primitive data type to be accessed as objects.

## Q16. What is the difference between == and equals methods?

# ANS:

- 1. == is used to check whether two numbers are equal
- 2. Equals is used to check whether two strings are equal.

# Q17. What is the difference between data abstraction and information hiding?

# ANS:

Abstraction mainly focus on the outside view of the object whereas encapsulation prevents the user from seeing the inside view where the properties and behavior of the abstraction is implemented.

### Q18. What is early binding?

## ANS:

Early binding or static type or static binding is assigning the value of the variable during design phase. Early binding instruct the compiler to allocate space and perform other task before the application starts executing.

# Q19. What is singleton class?

## ANS:

A class which can create a single object at a time is called class. The object is accessible by the java virtual machine. It creates a single instance for the class

#### Q20. What is externalizable interface?

# ANS:

Externalizable interface controls the serialization mechanism. It consist of two methods readexternal and writeexternal. It helps to customize the serialization process.

## Q21. Objects are passed by value or by reference?

# ANS:

In java objects are passed by value. Since, the object reference value is passed both the original and the copied parameter will refer to the same object.

## Q22. How can you achieve multiple inheritance in java?

# ANS:

Multiple inheritance in java implemented in similar to the C++ with one difference the inherited interface should be abstract.

# Q23. Is it necessary that each try block must be followed by a catch block?

# ANS:

It is not essential that try block should be followed by catch block.

### Q24. Why is java case sensitive?

# ANS:

Java is platform independent language. It is widely used for developing code which contains different variables and hence java is case sensitive.

### Q25. What are the qualities for a program to be 100% OOPS language?

# ANS:

Encapsulation/Data Hiding

- 1. Polymorphism
- 2. All predifined types are object
- 3. Inheritance
- 4. Operations performed through messages to objects
- 5. Abstraction
- 6. datatypes are to be objects.