

VALLIAMMAI ENGINEERING COLLEGE
DEPARTMENT OF INFORMATION TECHNOLOGY
IT2301 - JAVA PROGRAMMING

QUESTION BANK

III YEAR /V -SEM

UNIT-I

PART-A (2 MARKS)

1. What is meant by 'static' in java?
2. What is the difference between a constructor and a method?
3. List the features of Java
4. What is JVM?
5. List the tools available in JDK
6. What is JRE?
7. What is an access specifier in java?
8. Define JIC (Just in –time compiler).
9. Give the meaning of public static void main(String a[])
10. What is an abstract class?
11. What is finalize() and Garbage Collection?
12. What is the difference between method overloading and overriding?
13. What is a class, object and method?
14. What are a class variable, member variable and local variable?
15. What is encapsulation? Explain with an example.
16. What is meant by abstraction?
17. What is the difference between final, finally and finalize?
18. What is the difference between static and non static variables?
19. What is a constructor?
20. What do you mean by command line parameters?

PART-B (16 MARKS)

1. Explain in detail about Java Buzzwords (or) Java features (or) characteristics.
2. What does it mean that a method or class is abstract? Can we make an instance of an abstract class? Explain it with example.
3. What is Constructor in java? Why constructor does not have return type in java? Explain it with proper example.
4. Why do we need Static members and how to access them? Explain it with clear example.
5. Explain method overloading with an example program
6. Explain in detail about constructor overloading with an example
7. Explain in detail about explicitly invoking garbage collector and finalize() method?
8. Explain method overloading and method overriding with give suitable example.
9. Explain classes and objects of java classes.
10. Explain the access specifiers (Visibility Controls) supported by Java with an example code

UNIT-II

PART-A

1. What is a StringBuffer class and how does it differs from string class?
2. Why multiple inheritance using classes is disadvantage in java?
3. How to define an Interface?
4. What is polymorphism?
5. What is meant by Dynamic binding?
6. What is the need for BufferedReader and BufferedInputStream class?
7. What the different forms of Polymorphism.
8. What is the difference between an interface and an abstract class?
9. Define the Inheritance principle.
10. What is packages?
11. What is meant by Binding and static binding?
12. What is the importance of == and equals() method with respect to String object?
13. Define arrays.
14. Define Java documentation.
15. Define class hierarchy
16. What is meant by abstract classes.
17. Difference between the super and this keyword.
18. Define strings.
19. What is mean by final keyword?
20. Draw the table of visibility or member access in inheritance.

PART-B

1. What is polymorphism in java ? Explain How Polymorphism is supported in java.
2. Write a java program to maintain the books details like BookId, AccessionNumber, BookName, Author, Publication in books package and keep the journal details such as Journalid;JournalName;in journal package in main class use these two packages details for Staff and Student classes and display the books and journals information as requested by the user.
3. How to Declare and Initialize a String in java and also explain the different string handling functions with suitable examples.
4. Write a program to create interface named customer. In this keep the methods called information(), show() and also maintain in the Tax rate. Implement this interface in employee class and calculate the tax of the employee based on their Income.

Income	Tax Percentage	
	Male	Female
>=1,90,000	Nil	Nil
>=2,00,000	10%	Nil
>=5,00,000	20%	10%
<5,00,000	25%	20%

5. Write the procedure in which an array can be created in Java. Explain the two dimensional arrays with an example program.
6. What is the need for Javadoc tool? Explain how java documentation is made.
7. What is Inheritance, Explain different types of inheritance supported by Java with an example?
8. Define polymorphism and explain how dynamic binding is implemented in Java with an example code
9. Define a package, and give the list of steps used to create a package in Java. Explain with a sample code.
10. Explain Abstract classes and Dynamic binding with an example program.

UNIT-III

PART-A

1. How to define an Interface?
2. What is a stream and which class allows you to read objects directly from a stream.
3. What is the difference between Byte Streaming and Character Streaming?
4. List the methods in DataInput interface.
5. List the methods in InputStream and Reader class.
6. List the methods in OutputStream and Writer class.
7. What is the difference between Random Access file and Sequential Access file?
8. What is the need for BufferedReader and BufferedInputStream class?
9. Define reflection and list its benefits.
10. Does Java support multiple inheritances? Justify your answer.
11. Define an interface. How it differs from abstract classes?
12. Why Java doesn't support multiple inheritances?
13. Give the hierarchy of AWT package.
14. Which class is the super class of all classes in Java? List atleast five methods of this class.
15. How would you override the method equals()?
16. List the methods available in Class class.
17. List few methods to develop 2D shapes in Java.
18. What is an Applet?
19. What is the difference between Shallow and deep copying?
20. What is Object cloning?
21. What is an inner class?
22. Different types of inner classes?
23. List the needs of inner classes.
24. How an object of type interclass is created.

PATR-B

1. How will you display an image on the frame in a window using java?
2. What is meant by stream? What are the types of streams and classes? Explain in detail.
3. Explain in brief about object cloning and Reflection
4. Write about the properties of Java interface with an example code
5. Explain the InputStream, OutputStream class hierarchy with an example program.
6. Explain the Reader, Writer stream lass hierarchy with an example program
7. Discuss on the visibility of base class members in privately and publicly inherited classes.
8. What are abstract classes? Give an example (with the program) to illustrate the use of abstract classes.
9. How is a Frame created? Write a java program that creates a product enquirer form using frames
10. Explain each and every method used for developing 2D shapes

UNIT-IV

PART-A

1. What is the relationship between an event-listener interface and an event-adapter class?
2. Why swing components are called lightweight component?
3. Which containers use a Flow Layout as their default layout?
4. What is the base class of all exceptions?
5. What is the difference between Exception and Error in java?
6. What is the difference between throw and throws clauses?
7. Differentiate between Checked Exceptions and Unchecked Exceptions?
8. What is User defined Exceptions?
9. Can a catch block exist without a try block?
10. Can a finally block exist with a try block but without a catch?
11. What will happen to the Exception object after exception handling?
12. What is the importance of finally block ?How does finally block differ from finalize() method?
13. What are the constraints imposed by overriding on exception handling?
14. What is a Java Exception & its Types? Define try, catch, throw in an Exception block.
15. What are the different ways to generate an Exception?
16. Where does Exception stand in the Java tree hierarchy?
17. Where are the scroll bars on my JList (or JTextArea)? What is the difference between a Scrollbar and a ScrollPane?
18. How can we capture Key Events for the Tab key?
19. Name three subclasses of the Component class?
20. What is the relationship between an event-listener interface and an event adapter? What interface is extended by AWT event listeners?

PART-B

1. What is Event Handling in java? List out the available event classes and listener interfaces with suitable example.
2. What is Exception handling in java? Why it is used? Write a java code to simulate the way a stack mechanisms works with exception handling, throwing and dealing with exceptions such as stack is full(if you want to add more elements into the stack)or Stack is empty(you want to pop elements from the stack).
3. Describe about 'Key Event' and 'Mouse Event'.
4. Explain in detail about AWT event hierarchy and explain the features of Java Swing.
5. Write Short note on MVC design pattern
6. Short note on Layout management.
7. Give the hierarchy of JComponent class with explanation.
8. Define an Exception and explain how the Exceptions are handled.
9. What is the difference between throw and throws clauses? Explain with a code
10. What is the difference between checked and unchecked exceptions? Give the use of finally.

UNIT- V

PART- A

1. Why do we need run()&start() method both. Can we achieve it with only run method?
2. What is java virtual machine?
3. Describe synchronization in respect to multithreading.
4. Explain different way of using thread?
5. What is synchronization and why is it important?
6. When a thread is created and started, what is its initial state?
7. What are synchronized methods and synchronized statements?
8. What is daemon thread and which method is used to create the daemon thread?
9. What method must be implemented by all threads?
10. What kind of thread is the Garbage collector thread?
11. What is a thread? What is daemon thread?
12. What is generic programming?
13. What is the algorithm used in Thread scheduling?
14. What are the different level lockings using in the synchronization keyword?
15. What are the ways in which you can instantiate a thread?
16. What are the states of a thread?
17. What are the threads will start, when you start the java program?
18. What are the different identifier states of a Thread?
19. Why do threads block on I/O?
20. What is synchronization and why is it important?

PART- B

1. Explain the detail about generic classes and methods with suitable example.
2. Write a java program for inventory problem to illustrate the usage of Thread synchronized keyword and interthread communication process. They have three classes called consumer, producer and stock.
3. Explain the different states of a thread.
4. Explain thread synchronization with examples.
5. Explain the algorithm used for thread scheduling.
6. Explain generic classes and methods.
7. What are the advantages of Generic Programming?
8. Describe multi threading.
9. Explain about the Executors.
10. Explain about the generic code and virtual machine.