Unit 1 :Introduction to Java

Short Questions (1 to 3 marks each):

1. Write down the functions of JVM.
2. What is bytecode?write down the significance of CLASSPATH.
3. What is JVM?
4. Explain working of JIT.
5. Define preprocessor.
6. Explain how java is strongly typed language.
7. Java is robust-justify.

Detailed Questions (4 to 10 marks each):

1. Compare the features of java and C++.
2. Explain the features of java in detail.
3. Explain java program structure.
4. Explain how java is robust and architecture neutral.

Unit 2: Basic Concepts

Short Questions (1 to 3 marks each):

1. Differentiate between break and label break.
2. How to declare array with different number of columns in each row?
3. Explain the keyword equivalent to goto statement in java.
4. What do you mean by immutable object?explain with example.
5. Compare String and StringBuffer.
6. How java implement feature of goto?
7. Write difference between length() and length.
8. Compare >> and >>>.
9. What will be the result of the expression 9 | 9?
   a.   1   b. 18   c. 9   d. none of the these.
10.   One of the feature of java is that an array can store many different types of values. (true/false).
11. The default case is always required in the switch selection structure(true/false).
12. Explain shift right zero fill operator.
13. The default value of char type variable is

a.   '\u0020'   b. '\u00ff'   c. " "   d. '\u0000'

14. What will be the result of the expression 13 & 25?

   a.38   b. 9   c. 25   d. 12

15. The expression (x==y &&a<b) is true,if either x==y is true(true/false).

16. Which operators have right to left associativity?

17. Write down the use of volatile keyword.

18. How to compare two objects?

19. Explain any two java tools.

20. Explain valueOf() function.

Detailed Questions (4 to 10 marks each):

1. Explain control statements in java.
2. Various ways to create a string.
3. Explain type casting.
4. Explain narrowing conversion.
5. Explain arrays in java.
6. Explain bitwise operator.
7. Explain constructors of String class.
8. Discuss the datatypes of java and their wrapper class.
9. Explain String class along with its methods with example.
10. Explain narrowing and widening conversion with example.
11. What do you mean by wrapper class? Why do we need it?
12. Write a note on StringBuffer class & its methods with example.
13. Explain command line arguments with example.
14. Explain with example when to declare a variable,method and block as static.
    Also explain static and non-static nested class.
15. Write a note on type casting.
16. Write a note on garbage collection in java.
17. Explain narrowing conversion and widening conversion with example.

Unit 3: Classes & Objects

Short Questions (1 to 3 marks each):

1. How can we create object of interfaces?
2. Can we create destructors in java? Justify.
3. Write down the use of volatile keyword.

4. Explain abstract keyword.
5. What is reference variable in java.
6. What is difference between abstract and concrete class.
7. A constructor must always invoke its super class constructor in its first statement .(true/false).

Detailed Questions (4 to 10 marks each):

1. Write down the difference between abstract class and interface.
2. How to implement multiple inheritance in java? Explain with example.
3. Explain super keyword with example.
4. Differentiate between method overriding and overloading. Explain how can we achieve runtime polymorphism in java.
5. Write a short note on access modifiers in java.
6. Compare interface with abstract class and class.
7. Write a note on abstract class.
8. Define interfaces. how interfaces are implemented? Can interfaces be extended?
9. Write a note on constructor overloading with example.
10. What is interface? Can we declare "final" to it? How does it differ from abstract class?
11. Explain concept of overloading and overriding in java.
12. Explain interface. How to create userdefined interface?
13. Explain dynamic method dispatch with example.

Unit 4: Packages,Applet classes

Short Questions (1 to 3 marks each):

1. List any 4 built in package with brief desciprtion.
2. Differentiate between paint( ) and repaint( ) method.
3. What is difference between applet and application?
4. Give difference between repaint( ) and update( ) method.

Detailed Questions (4 to 10 marks each):

1. Write a note on applet lifecycle.
2. What is package? How to access methods of package in another package?

Prepared by: Sneha Saini

Explain various access specifiers with package.

3. What is applet? How to pass parameters to the applet? Explain with example.
4. What is package? How can we create sub package and import it into another package?
5. What is an applet? List out various methods of graphics class used with applet.
6. What is package? Explain types of package.
7. Write a note on packages.

Unit 5: Exceptions

Short Questions (1 to 3 marks each):

1. Define monitor.
2. How mutex can be achieved in thread?
3. Differentiate between checked and unchecked exception.
4. Define daemon thread.
5. What type of exception must be caught or declared?
6. Clarify isAlive( ) and join( ) methods.
7. What is the purpose of yield() method.
8. Give difference between wait( ) and join() method.

Detailed Questions (4 to 10 marks each):

1. Explain exception handling with example.
2. What is exception? Explain user defined exception with example.
3. Write a note on thread synchronization.
4. Explain various states of threads.
5. What is exception? Explain chained exception in detail.
6. Explain life cycle of a thread.
7. Write a note on deadlock with example.
8. Discuss the hierarchy of applet class structure. How to pass parameters to applet?
9. "Synchronization is necessary to avoid deadlock " Justify. Discuss about synchronization with example.
10. Explain inter thread communication.

Prepared by: Sneha Saini