



# SRI VASAVI ENGINEERING COLLEGE

PEDATADEPALLI, TADEPALLIGUDEM-534 101

Department of Computer Science and Engineering

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**Academic Year:**2017-18

**Year-Sem:**II-II

**Course:**Java programming

## UNITWISE QUESTIONBANK

### UNIT-1

- 1 Briefly explain the concept of encapsulation with an example
- 2 Bring out the importance of inheritance with the help of an example?
- 3 Why the concept of polymorphism is is considered to be very important Explain?
- 4 Briefly explain the salient features of java language?
- 5 What is stand alone application? Briefly explain the procedure of creating and executing a standalone application?
- 6 List 5 major differences between JAVA C and C++?
- 7 Explain how java is strongly associated with the Internet?
- 8 Explain how java is more secured than other languages?
- 9 What is a Buzzword? List and explain any 10 java buzzwords?
- 10 What is a data type? List any basic eight data types in java, explain them with examples?
- 11 What is a constant? Explain different types of constants used in java
- 12 What is a variable? Explain about the scope of variable in detail?
- 13 Write a program that reads the radius of a circle as input taken dynamically while running and then computes the circumference and area?
- 14 What is an operator? Explain various types of operators used in java?
- 15 Determine the value for each of the following expression if a=5, b=10, and c=-6
  - a)  $a > b \ \&\& \ a$
  - b)  $a \ \&\& \ a > c$
  - c)  $a <= c \ || \ b > a$
  - d)  $b > 15 \ \&\& \ c > 0 \ || \ a > 0$
  - e)  $(a/2 == 0 \ || \ b/2 == 0) \ \&\& \ c < 0$
- 16 Why do we need control statement? Name and explain any five important control statements in java?
- 17 What does the break statement do? How it is used in the switch statement, explain with example?
- 18 How does do while differ from the while statement, Explain with an example?
- 19 Explain with example the use of break and continue statements in a “for” loop?
- 20 What is an array? Explain why arrays are usually processed with “for” loops?
- 21 Write a java program to print the following pattern using “for” loops  
I  
2 3  
4 5 6
- 22 Given a number write a program using while loop to reverse the digits of a number?  
For Example Input:12345 Output:54321



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- 23 Write a java program to eliminate the duplicate elements from the given set of input elements  
Sample input: 1 2 3 4 4 5 3 2  
Sample Output: 1 2 3 4 5
- 24 Write a java program to find the nth smallest number in the given set of elements  
Sample input 2 4 3 5 8 7 N=3  
Sample output: The third smallest element is:4
- 25 Write a java program to sort the elements of the matrix in row wise  
Sample input 1 3 2 sample output: 1 2 3  
6 5 4 4 5 6  
9 7 8 7 8 9
- 26 Write a java program to find the N prime numbers  
Sample input:7  
Sample output: 2 3 5 7 11 13 17
- 27 Write a java program to arrange the elements of the array in an ascending order
- 28 Write a java program to find the Fibonacci series  
Fibonacci series 1 1 2 3 5 8.....
- 29 Define type casting? Explain typecasting with an example?
- 30 Write a java program to find the factorial of a given number?

## UNIT-2

- 1 What is a class? How does it accomplish data hiding explain with example?
- 2 What are objects? Explain with example how are object created from a class?
- 3 What are the three parts of a simple empty class explain with example?
- 4 What is a constructor? How do we invoke a constructor? What are its special properties?
- 5 What is a method? Explain in detail about method overloading?
- 6 What is the advantage of constructor overloading explain with example?
- 7 When do we declare the members of the class as static explain with example?
- 8 When do we declare a method or class as final explain with example?
- 9 When do we declare a method or class as abstract explain with example?
- 10 What is the advantage of using "this" keyword, explain?
- 11 What are the difference between constructor and a method explain with examples?
- 12 What do you mean by garbage collection, explain with example?
- 13 Explain about inner classes with an example?
- 14 Define a class method square as defined below  
Data member: side  
Methods : squarearea() To compute the area of a square  
Squareperimeter() To compute the perimeter of a square  
Within the main method of the class square create an object for the class square .  
Compute the area and perimeter by invoking the appropriate methods
- 15 Define a class method circle as defined below  
Data member: radius  
Methods : constructor()  
circlearea() To compute the area of a circle



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- Within the main method of the class circle create an object for the class circle . Compute the area of circle when radius is 20 by invoking the appropriate methods
- 16 What is a string? Explain any of the five string methods with syntax and examples?
  - 17 Write a java program to arrange the array of strings in an alphabetical order
  - 18 Write a java program to find whether the given string is a palindrome or not  
Sample Input: MALAYALAM  
(Note: reversing a string should be the same as input)
  - 19 Explain about stringBuffer class with example?
  - 20 Explain streamtokenizer and its methods with an example?
  - 21 Explain the following methods of strings with examples
    - a) charAt()
    - b) IndexOf()
  - 22 Explain the following methods of strings with examples
    - a) getChars()
    - b) getBytes()
  - 23 Explain the various methods involved in strings to extract the substrings?
  - 24 Write a java program to convert the uppercase letters to lowercase and vice versa  
Sample Input: sri VASAVI  
Sample Output SRI vasavi
  - 25 Describe the various methods used for character replacements in a string?
  - 26 Explain the various methods used for comparison of strings?
  - 27 Explain the following methods of stringBuffer class examples
    - a) capacity()
    - b) insert()
  - 28 Write a java program to find all possible combinations for a given string  
Sample Input: abc  
Sample output: abc bac cab acb bca cba
  - 29 Write a java program to find the number of characters, words in a given string  
Sample Input: Sri Vasavi Engineering College  
Sample output:No of characters:26 No of words:4
  - 30 Write a program the reads a string and rewrite it in alphabetical order  
Sample Input: STRING Sample Output: GINEST

## UNIT III

- 1 Write a program to explain how variables are inherited in a class?
- 2 Write a program and explain the concept of hiding a variable?
- 3 With the help of a java program explain the use of the super keyword?
- 4 Write a java program to illustrate the inheritance of methods?
- 5 What are the various types of inheritance, Explain with examples?
- 6 Write a java program to explain the concept of method overriding?
- 7 Explain how super keyword is used in overriding the methods?
- 8 Explain the use of super() method in invoking a constructor?
- 9 What is an Abstract classes, Explain with examples?
- 10 Write a java program to illustrate the use of Abstract methods?
- 11 Write a java program to illustrate the impact of final modifier?



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- 12 Define the concept of base class and derived class with a sample java program?
- 13 When does a base class variable get hidden, Give reasons?
- 14 Explain with an example how we can access a hidden base class variable?
- 15 Describe the syntax of single inheritance in java?
- 16 Compare and contrast overriding and overloading methods?
- 17 Explain with example when do we declare a method or class final?
- 18 Explain with example when do we declare a method or class abstract?
- 19 What is inheritance how does it help us in creating new classes quickly?
- 20 How do we pass the arguments in the constructor of a base class Explain with example?
- 21 Write a program to find the area of a rectangle using the concept of method overriding?
- 22 Explain the member access rules in detail?
- 23 How do we implement dynamic method dispatch, Explain with a sample java program?
- 24 Explain the concept of object class in detail?
- 25 Write a sample java program to explain about defining and using static members?
- 26 Explain the Nesting of methods in detail with an example?
- 27 What is multilevel inheritance, Explain?
- 28 Explain Hierarchal Inheritance with an example?
- 29 Explain in detail about finalizer methods()?
- 30 Write a java program to find the area of a circle using the concept of super keyword and super method?
  
- 31 What is an Interface? Explain the structure of interface with an example?
- 32 With an example explain how interfaces are implemented?
- 33 With a sample program explain the concept of Inference Inheritance?
- 34 Define package and show how the packages are implemented?
- 35 With the help of a java program illustrate the concept of import statement?
- 36 Write a java program to illustrate the package access control Identifiers?
- 37 Write a java program to illustrate the public access control modifier?
- 38 Explain how is the concept of interface used to indirectly represent the multiple inheritances?
- 39 What do you mean by multiple inheritance of an interface Explain?
- 40 With a java program explain about extending interfaces concept?
- 41 Write a java program to show how the interface variables are accessed?
- 42 What are the major differences and similarities between interface and a class explain?
- 43 Discuss the various levels of access protections available for the packages and their implementations?
- 44 Name and explain about any 5 built in packages?
- 45 Explain about the naming conventions used for a package?
- 46 With a sample java program explain how a class is added to a package?
- 47 With a sample program explain concepts used for designing a package?
- 48 How do we add a class or an interface to a package?
- 49 Explain with an example to show how the methods in a package are accessed?
- 50 Explain the concept of Understanding there CLASS PATH?



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- 51 What is an exception? Give an example.
- 52 List the two distinct advantages of user define exceptions handling mechanisms?
- 53 How does “try... catch” mechanism handle an exception?
- 54 At which point in the program will the execution resume after the error is handled?
- 55 What the use is of Finally block, explain with example?
- 56 Explain the usage of throws using an example?
- 57 Differentiate between throws and throw keywords?
- 58 Why do we need custom exceptions, give reasons?
- 59 Briefly describe the method of defining and using a custom exception?
- 60 Is it essential to catch all types of exceptions, Give reasons to your answer?
- 61 How many catch blocks can we use with one try block, Give reasons to your answer??

## UNIT 1V

- 1 Define thread? Name and explain different states in the lifecycle of threads?
- 2 Differentiate multiprocessing and multithreading? What is to be done to implement in a program?
- 3 What java interface must be implemented by all threads, Explain with examples?
- 4 Explain the methods used for starting and stopping the threads?
- 5 How do we set priorities to threads, explain with example?
- 6 Describe the complete life cycle of threads?
- 7 What is synchronization, when do we use it in multithreading?
- 8 Write a java program for producer consumer problem to illustrate the concept of multithreading?
- 9 What is a deadlock? What harmful effect does it have?
- 10 Which methods are useful in effecting inter thread communication?
- 11 Explain about notify(), notifyall() and join() in threads?
- 12 Write a java program to generate square roots of the first 30 natural numbers using runnable interface
- 13 Write a java code to define the thread in the thread class to find the factorials of first 20 natural numbers
- 14 Write a sample java code to demonstrate Sting Tokenizer class?
- 15 Mention any 5 classes and its methods in java.io package?

## UNIT V

- 1 What is an Event? Explain the role of Event handler in AWT?
- 2 What is a listener? What useful role does the listener play in AWT?
- 3 List and explain the different situations in which the Action Event is generated?
- 4 List and explain the different situations in which the item Event is generated?
- 5 What is an Applet? Explain how does an Applet differ from the application?
- 6 Briefly Explain the Life cycle of an Applet?



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- 7 With a sample java code explain the method of creating and executing an Applet?
- 8 Write an Applet to receive the value of the parameter message from the html file and display it
- 9 Define the purpose of the following Events
  - a) Focus Event
  - b) Text Event
  - c) Container Event
  - d) Window Event
  - e) Key Event
- 10 Mention and explain any five event handling methods for Mouse Event?
- 11 Mention and explain any five event handling methods for Window Event?
- 12 Mention and explain the event handling methods for Key Event?
- 13 List and explain about any five event listeners in AWT?
- 14 Describe briefly about delegation event model?
- 15 Explain about adapter classes in detail?
- 16 Mention and explain any five event handling methods for Component Event?
- 17 Mention and explain any five event handling methods for Container Event?
- 18 Explain any five methods used in container class?
- 19 What is a panel? How it is used for organizing the things in a controlled way?
- 20 Write a java code to explain frames in an AWT?
- 21 Are the classes frame and dialogs are subclasses of the window class? Explain.
- 22 List and explain about the various methods used in the font class?
- 23 List and explain about the various methods used in the colour class?
- 24 List and explain about the various drawing methods used in graphics class?
- 25 Write a java code to draw horizontal, vertical and diagonal lines by making use of graphics methods
- 26 Write a java code to Rectangle, Square and Rhombus by making use of graphics methods?
- 27 Write a java code to draw Ellipses and Circles by making use of graphics methods?
- 28 Write a java code to draw circle inside a square and a square inside a circle?

## UNIT VI

- 1 Write a java code to explain the concept of Label control in AWT?
- 2 Write a java code to explain the concept of Buttons control in AWT?
- 3 Write a java code to explain the concept of Text fields control in AWT?
- 4 Write a java code to explain the concept of Text Area control in AWT?
- 5 Write a java code to explain the concept of Checkbox in AWT?
- 6 Write a java code to explain the concept of Checkbox group in AWT?
- 7 Write a java code to explain the concept of List control in AWT?
- 8 Write a java code to explain the concept of Choice control in AWT?
- 9 Write a java code to explain the concept of Scrollbars control in AWT?
- 10 Briefly explain the roles played by Menubar, Menu and MenuItem classes?
- 11 Write a java code to explain the concept of Flow Layout in AWT?
- 12 Write a java code to explain the concept of Border Layout in AWT?
- 13 Write a java code to explain the concept of Grid Layout in AWT?
- 14 Write a java code to explain the concept of Card Layout in AWT?
- 15 Write a java code to explain the concept of GridBag Layout in AWT?
- 16 How does the grid layout differ from the border layout? Explain.