

Aryan College

BCA Second Year – Java Programming

Unit 1

1. What do you mean by the term free form language? [2015]
2. What do you understand from bytecode? [2014] [2015] [2016]
3. What do you understand from Object Oriented Programming? [2014]
4. What is Polymorphism in Java? [2014]
5. What is conceptual difference between Abstraction and Encapsulation? [2013]
6. How does Java implement the portability of code? [2013]
7. What is JVM? [2012][2014][2016][2017]
8. Differentiate between Java and C++ ? [2015][2017]
9. Explain all data types in detail ? [2016][2017]
10. How can you implement an array in Java, whose size may change during execution of a program? [2012]
11. What is Array? Explain types of array with suitable example. [2015]
12. What is JDK? [2017]
13. What is an object? [2017]
14. How many types of visibility modes are used in Java? [2017]
15. What is OOP? Explain OOP features in detail. [2017]

Unit 2

1. What do you understand by ternary operator? [2015]
2. What is Error? [2015]
3. What is Autoboxing and Unboxing? [2015]
4. Explain finalizer method? [2015]
5. What are command line arguments? Explain with an example. [2014]
6. What is Numeric promotion? [2013]
7. What is garbage collector? [2013] [2016]
8. How CLASSPATH is set for packages? [2012]
9. How inheritance is implemented by interface? [2012]
10. What is the role of finally? [2012] [2016]
11. What are the limitations of Applet? [2012]
12. How object reference is different from actual object? [2012]
13. Define instanceof operator. [2012] [2016]
14. Explain this keyword [2016]
15. Explain super keyword [2014] [2016]
16. Explain static members with an example [2014] [2016][2017]
17. Explain abstract class and abstract method. [2016]
18. Define relational operators and Boolean logic operators. [2012]
19. What is the difference between type conversion and typecasting in Java? [2012]
20. What is Synchronization ? [2016]
21. What is interface? Explain how to create an interface. [2013] [2015]

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22. What is the main difference between local and remote applet? [2015]
23. Explain all uses of final keyword with an example. [2014]
24. Differentiate between throw and throws with an example. [2012] [2014]
25. What are packages? How packages can be created. Explain import statement with an example. [2014] [2017]
26. What is For Each loop in Java? Write a program which shows addition of two 2 X 2 matrices. [2014]
27. How parameters are passed to an Applet? [2013]
28. What are constructors and how they are used? [2013]
29. Write short notes on the following : [2013]
- a. New
 - b. This
30. A class declared in a package has the following form : [2012]
- Class sample in pack
- ```
{

 Int mem-1;

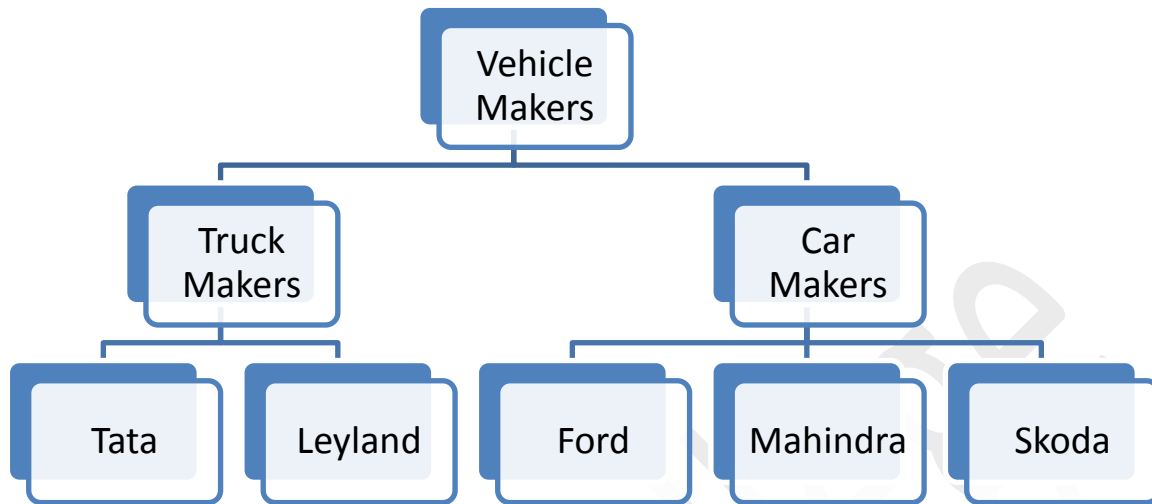
 Public int mem-2;

 Protected int mem-3;

 Private int mem-4;

}
```
- Explain how these members are accessed from a class outside this package.
31. Briefly explain : [2012]
- a. Thread synchronization
  - b. Thread execution
32. Write a detailed note on byte streams and character streams in Java. [2012]
33. Write a code for an applet to generate a bar chart for given data in one dimensional array of size 5. [2012]
34. What is Multithreading and how Java implements it? [2016] [2017]
35. Explain difference between synchronized method and synchronized block with a suitable program. [2016]
36. Explain Thread and its life cycle. Write a program to create digital clock. [2013] [2016]
37. What is Exception? Explain Exception handling in Java. Write a program to create custom Exception in Java [2016] [2017]
38. What is Applet? What is the difference between applet programming and programming. Write an Applet program to generate a form that accepts following data : Username & Password [2016] [2017]
39. Implement the following class hierarchy in Java. Use appropriate data members and member functions for the classes. [2012]

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}

40. Write short notes on :  
a. Method overloading [2013] [2015]  
b. Method overriding with an example [2014] [2015][2017]  
c. Super keyword.
41. What are Applets? Explain life cycle of an applet? Also describe how to create an applet with suitable example. [2015]
42. What are packages? Define Java API packages? Explain how to create a package with suitable example. [2015]
43. What is wrapper class? Explain all conversion methods of wrapper class for handling primitive data types and objects. [2014] [2015]
44. What is Exception handling? Explain the concept of multiple catch statements. Write a program which implements finally block? [2014]
45. What is need of Synchronization in Multithreading? Explain synchronized method with an example. [2014]
46. What are Threads? How threads can be created in Java? Explain the concept of thread priority with an example. Explain life Cycle of Thread. [2014]
47. What is inheritance? Explain different types of Inheritance with example. [2013] [2014]
48. What is Multithreading? Write a Java program which makes sure that both the threads will be running alternatively irrespective of the scheduling strategy. (Sleep() method is use) [2013]
49. What is an Exception? Explain the procedure to handle Exception. [2013]

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50. What is package? Write steps to create and run a package. Also give advantages of package? [2013]  
51. Write a program in Java to find the root of a Quadratic equation by using the equation: [2013]

$$\text{Roots} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

57. Write an Applet program to generate a form that accepts the following data from user: [2014]

Name , Address

The user can select his age group from under 20, 20-50 and above 50 years and select working or Non-Working from a checklist. Add buttons to save the data and reset the data. When the user clicks the Save button, a Dialog box should open up stating that the data has been saved. And when the user clicks the Reset button, the data in the components should be Reset.

58. What is the difference between class and interface. Explain it with program. [2016]  
59. What is Runnable interface. [2016]  
60. What are types of constructors in Java? [2017]  
61. What is the difference between break and continue? [2017]  
62. What is multilevel hierarchy in Java? [2017]  
63. Write a Java program to check whether the given number is prime or not. [2017]  
64. Write a Java program for transpose of a matrix. [2017]

## Unit 3

1. What is AWT? [2014]  
2. What is the rendering process? [2013]  
3. What is Event? [2016]  
4. Differentiate between Vector and Wrapper classes. [2015]  
5. Explain string concatenation and toString() method with an example. [2014]  
6. Explain paint methods to draw rectangles, round rectangle and arcs. Give details of each parameter used in these methods [2012]  
7. Write a program in Java first by using the String class and then by using the peer class of String i.e. StringBuffer class and thus show the differences between them. [2012] [2014] [2015] [2016]  
8. What is AWT? What are the components of AWT? Write a program to create simple AWT example by extending Frame class. [2013] [2016]  
9. Write a short note on Stack class. [2017]  
10. What do you understand from the term GUI? Write a program to generate following output: [2014] [2015]

Frame 1 :

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| User Name                             | <input type="text" value="AV"/>        |
| Password                              | <input type="password" value="*****"/> |
| <input type="button" value="Submit"/> | <input type="button" value="Cancel"/>  |

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Frame 2 :

Enter Name

Gender ☒ Male ☐ Female

Course ☒ BCA ☒ BBA

## Unit 4

1. What is CORBA? [2015]
2. What is ODBC? [2012] [2015] [2016]
3. What is RMI? [2015] [2016]
4. What is CGI? Explain its structure with suitable example. [2012] [2015] [2016] [2017]
5. What is JDBC? [2014]
6. Write short note on structure of CGI. [2012] [2013]
7. What is Bean Serialization. [2013] [2016]
8. Explain CORBA services and its products. [2013]
9. Why we use JDBC. explain 5 steps to connect the database? [2016]
10. Give difference between distributed and non-distributed Java programs. [2012]
11. Explain CORBA Services. [2016]
12. Explain Bean Serialization. [2016]
13. Explain RMI. [2016]
14. What is Java Beans? What is its architecture? What are advantages of it? [2017]