

Unit IV

JAVA AS OBJECT ORIENTED PROGRAMMING LANGUAGE

MULTIPLE CHOICE QUESTIONS

1. What is the range of data type short in Java?
(a) -128 to 127 (b) -32768 to 32767
(c) -2147483648 to 2147483647 (d) None of the mentioned

Answer : b

Explanation : Short occupies 16 bits in memory. Its range is from -32768 to 32767.

2. What is the range of data type byte in Java?
(a) -128 to 127 (b) -32768 to 32767
(c) -2147483648 to 2147483647 (d) None of the mentioned

Answer : a

Explanation : Byte occupies 8 bits in memory. Its range is from -128 to 127.

3. Which of the following are legal lines of Java code?
1. `int w = (int)888.8;` 2. `byte x = (byte)100L;`
3. `long y = (byte)100;` 4. `byte z = (byte)100L;`
(a) 1 and 2 (b) 2 and 3
(c) 3 and 4 (d) All statements are correct.

Answer : d

Explanation : Statements (1), (2), (3), and (4) are correct. (1) is correct because when a floating-point number (a double in this case) is cast to an int, it simply loses the digits after the decimal. (2) and (4) are correct because a long can be cast into a byte. If the long is over 127, it loses its most significant (leftmost) bits. (3) actually works, even though a cast is not necessary, because a long can store a byte.

4. An expression involving byte, int, and literal numbers is promoted to which of these?
(a) int (b) long (c) byte (d) float

Answer : a

Explanation : An expression involving bytes, ints, shorts, literal numbers, the entire expression is promoted to int before any calculation is done.

5. Which of these literals can be contained in a data type float variable?
(a) 1.7e-308 (b) 3.4e-038 (c) 1.7e+308 (d) 3.4e-050

Answer : b

Explanation : Range of data type float is 3.4e-038 to 3.4e+308.

6. Which data type value is returned by all transcendental math functions?
(a) int (b) float (c) double (d) long

Answer : c

Explanation : None.

7. What is the output of this program?

```
class average {  
    public static void main(String args[])  
    {  
        double num[] = {5.5, 10.1, 11, 12.8, 56.9, 2.5};  
        double result;  
        result = 0;  
        for (int i = 0; i < 6; ++i)  
            result = result + num[i];  
        System.out.print(result/6);  
    }  
}
```

- (a) 16.34 (b) 16.566666644
(c) 16.46666666666667 (d) 16.46666666666666

Answer : c

Explanation : None.

Output :

\$ javac average.java

\$ java average

16.46666666666667

8. What is the output of this program?

```
class conversion {  
    public static void main(String args[])  
    {  
        double a = 295.04;  
        int b = 300;  
        byte c = (byte) a;  
        byte d = (byte) b;  
        System.out.println(c + " " + d);  
    }  
}
```

- (a) 38 43 (b) 39 44 (c) 295 300 (d) 295.04 300

Answer : b

Explanation : Type casting a larger variable into a smaller variable results in modulo of larger variable by range of smaller variable. b contains 300 which is larger than byte's range i : e -128 to 127 hence d contains 300 modulo 256 i : e 44.

Output :

```
$ javac conversion.java
```

```
$ java conversion
```

```
39 44
```

9. What is the output of this program?

```
class increment {  
    public static void main(String args[])  
    {  
        int g = 3;  
        System.out.print(++g * 8);  
    }  
}
```

(a) 25

(b) 24

(c) 32

(d) 33

Answer : c

Explanation : Operator ++ has more preference than *, thus g becomes 4 and when multiplied by 8 gives 32.

Output :

```
$ javac increment.java
```

```
$ java increment
```

```
32
```

10. What is the output of this program?

```
class area {  
    public static void main(String args[])  
    {  
        double r, pi, a;  
        r = 9.8;  
        pi = 3.14;  
        a = pi * r * r;  
        System.out.println(a);  
    }  
}
```

(a) 301.5656

(b) 301

(c) 301.56

(d) 301.56560000

Answer : a

Explanation : None.

Output :

```
$ javac area.java
```

```
$ java area
```

```
301.5656
```

11. What is the numerical range of a char in Java?

- (a) -128 to 127 (b) 0 to 256
(c) 0 to 32767 (d) 0 to 65535

Answer : d

Explanation : Char occupies 16-bit in memory, so it supports 2^{16} i.e from 0 to 65535.

12. Which of these coding types is used for data type characters in Java?

- (a) ASCII (b) ISO-LATIN-1
(c) UNICODE (d) None of the mentioned

Answer : c

Explanation : Unicode defines fully international character set that can represent all the characters found in all human languages. Its range is from 0 to 65536.

13. Which of these values can a boolean variable contain?

- (a) True and False (b) 0 and 1 (c) Any integer value (d) true

Answer : a

Explanation : Boolean variable can contain only one of two possible values, true and false.

14. Which of these occupy first 0 to 127 in Unicode character set used for characters in Java?

- (a) ASCII (b) ISO-LATIN-1
(c) None of the mentioned (d) ASCII and ISO-LATIN1

Answer : d

Explanation : First 0 to 127 character set in Unicode are same as those of ISO-LATIN-1 and ASCII.

15. Which one is a valid declaration of a boolean?

- (a) boolean b1 = 1; (b) boolean b2 = 'false';
(c) boolean b3 = false; (d) boolean b4 = 'true'

Answer : c

Explanation : Boolean can only be assigned true or false literals.

16. What is the output of this program?

```
class array_output {  
    public static void main(String args[])  
    {  
        char array_variable [] = new char[10];  
        for (int i = 0; i < 10; ++i) {  
            array_variable[i] = 'i';  
            System.out.print(array_variable[i] + " " );  
            i++;  
        }  
    }  
}
```

- (a) i i i i i (b) 0 1 2 3 4
(c) i j k l m (d) None of the mentioned

Answer : a

Explanation : None.

Output :

\$ javac array_output.java

\$ java array_output

i i i i i

17. What is the output of this program?

```
class mainclass {  
    public static void main(String args[])  
    {  
        char a = 'A';  
        a++;  
        System.out.print((int)a);  
    }  
}
```

- (a) 66 (b) 67 (c) 65 (d) 64

Answer : a

Explanation : ASCII value of 'A' is 65, on using ++ operator character value increments by one.

Output :

\$ javac mainclass.java

\$ java mainclass

66

18. What is the output of this program?

```
class mainclass {  
    public static void main(String args[])  
    {  
        boolean var1 = true;  
        boolean var2 = false;  
        if (var1)  
            System.out.println(var1);  
        else  
            System.out.println(var2);  
    }  
}
```

- (a) 0 (b) 1 (c) true (d) false

Answer : c

Explanation : None.

Output :

\$ javac mainclass.java

\$ java mainclass

true

19. What is the output of this program?

```
class booloperators {  
    public static void main(String args[])  
    {  
        boolean var1 = true;  
        boolean var2 = false;  
        System.out.println((var2 & var2));  
    }  
}
```

- (a) 0 (b) 1 (c) true (d) false

Answer : d

Explanation : boolean '&' operator always returns true or false. var1 is defined true and var2 is defined false hence their '&' operator result is false.

Output :

\$ javac booloperators.java

\$ java booloperators

false

20. What is the output of this program?

```
class asciicodes {  
    public static void main(String args[])  
    {  
        char var1 = 'A';  
        char var2 = 'a';  
        System.out.println((int)var1 + " " + (int)var2);  
    }  
}
```

- (a) 162 (b) 65 97 (c) 67 95 (d) 66 98

Answer : b

Explanation : ASCII code for 'A' is 65 and for 'a' is 97.

Output :

\$ javac asciicodes.java

\$ java asciicodes

65 97

21. Which of these is data type long literal?

- (a) 0x99fffl (b) ABCDEFG (c) 0x99ffa (d) 99671246

Answer : a

Explanation : Data type long literals are appended by an upper or lowercase L. 0x99fffl is hexadecimal long literal.

22. Which of these can be returned by the operator & ?

- (a) Integer (b) Boolean
(c) Character (d) Integer or Boolean

Answer : d

Explanation : We can use binary ampersand operator on integers/chars (and it returns an integer) or on booleans (and it returns a boolean).

23. Literals in java must be preceded by which of these?

- (a) L (b) l (c) D (d) L and l

Answer : d

Explanation : Data type long literals are appended by an upper or lowercase L.

24. Literal can be of which of these data types?

- (a) integer (b) float
(c) boolean (d) all of the mentioned

Answer : d

Explanation : None

25. Which of these can not be used for a variable name in Java?

- (a) identifier
- (b) keyword
- (c) identifier and keyword
- (d) None of the mentioned

Answer : b

Explanation : Keywords are specially reserved words which can not be used for naming a user defined variable, example : class, int, for etc.

26. What is the output of this program?

```
class evaluate {  
    public static void main(String args[])  
    {  
        int a[] = {1,2,3,4,5};  
        int d[] = a;  
        int sum = 0;  
        for (int j = 0; j < 3; ++j)  
            sum += (a[j] * d[j + 1]) + (a[j + 1] * d[j]);  
        System.out.println(sum);  
    }  
}
```

- (a) 38
- (b) 39
- (c) 40
- (d) 41

Answer : c

Explanation : None

Output :

\$ javac evaluate.java

\$ java evaluate

40

27. What is the output of this program?

```
class array_output {  
    public static void main(String args[])  
    {  
        int array_variable [] = new int[10];  
        for (int i = 0; i < 10; ++i) {  
            array_variable[i] = i/2;  
            array_variable[i]++;  
            System.out.print(array_variable[i] + " ");  
            i++;  
        }  
    }  
}
```


- (a) 0 2 4 6 8 (b) 1 2 3 4 5
(c) 0 1 2 3 4 5 6 7 8 9 (d) 1 2 3 4 5 6 7 8 9 10

Answer : b

Explanation : When an array is declared using new operator then all of its elements are initialized to 0 automatically. for loop body is executed 5 times as whenever controls comes in the loop i value is incremented twice, first by i++ in body of loop then by ++i in increment condition of for loop.

Output :

\$ javac array_output.java

\$ java array_output

1 2 3 4 5

28. What is the output of this program?

```
class variable_scope {
    public static void main(String args[])
    {
        int x;
        x = 5;
        {
            int y = 6;
            System.out.print(x + " " + y);
        }
        System.out.println(x + " " + y);
    }
}
```

- (a) 5 6 5 6 (b) 5 6 5
(c) Runtime error (d) Compilation error

Answer : d

Explanation : Second print statement doesn't have access to y , scope y was limited to the block defined after initialization of x.

Output :

\$ javac variable_scope.java

Exception in thread "main" java.lang.Error : Unresolved compilation problem : y cannot be resolved to a variable.

29. Which of these is incorrect string literal?

- (a) "Hello World" (b) "Hello\nWorld"
(c) "\"Hello World\"" (d) "Helloworld"

Answer : d

Explanation : All string literals must begin and end in same line.

30. What is the output of this program?

```
class dynamic_initialization {  
    public static void main(String args[])  
    {  
        double a, b;  
        a = 3.0;  
        b = 4.0;  
        double c = Math.sqrt(a * a + b * b);  
        System.out.println(c);  
    }  
}
```

- (a) 5.0 (b) 25.0
(c) 7.0 (d) Compilation Error

Answer : a

Explanation : Variable c has been dynamically initialized to square root of $a * a + b * b$, during run time.

Output :

\$ javac dynamic_initialization.java

\$ java dynamic_initialization

5.0

31. Which of these operators is used to allocate memory to array variable in Java?

- (a) malloc (b) alloc
(c) new (d) new malloc

Answer : c

Explanation : Operator new allocates block of memory specified by the size of array, and gives the reference of memory allocated to the array variable.

32. Which of these is an incorrect array declaration?

- (a) int arr[] = new int[5] (b) int [] arr = new int[5]
(c) int arr[] arr = new int[5] (d) int arr[] = int [5] new

Answer : d

Explanation : Operator new must be succeeded by array type and array size.

33. What will this code print?

```
int arr[] = new int [5];
```

```
System.out.print(arr);
```

- (a) 0 (b) value stored in arr[0].
(c) 00000 (d) Garbage value

Answer : d

Explanation : arr is an array variable, it is pointing to array of integers. Printing arr will print garbage value. It is not same as printing arr[0].

34. Which of these is an incorrect Statement?

- (a) It is necessary to use new operator to initialize an array.
- (b) Array can be initialized using comma separated expressions surrounded by curly braces.
- (c) Array can be initialized when they are declared.
- (d) None of the mentioned.

Answer : a

Explanation : Array can be initialized using both new and comma separated expressions surrounded by curly braces example : int arr[5] = new int[5]; and int arr[] = { 0, 1, 2, 3, 4};

35. Which of these is necessary to specify at time of array initialization?

- (a) Row
- (b) Column
- (c) Both Row and Column
- (d) None of the mentioned

Answer : a

Explanation : None.

36. What is the output of this program?

```
class array_output {  
    public static void main(String args[])  
    {  
        int array_variable [] = new int[10];  
        for (int i = 0; i < 10; ++i) {  
            array_variable[i] = i;  
            System.out.print(array_variable[i] + " ");  
            i++;  
        }  
    }  
}
```

- (a) 0 2 4 6 8
- (b) 1 3 5 7 9
- (c) 0 1 2 3 4 5 6 7 8 9
- (d) 1 2 3 4 5 6 7 8 9 10

Answer : a

Explanation : When an array is declared using new operator then all of its elements are initialized to 0 automatically. for loop body is executed 5 times as whenever controls comes in the loop i value is incremented twice, first by i++ in body of loop then by ++i in increment condition of for loop.

Output :

```
$ javac array_output.java
```

```
$ java array_output
```

```
0 2 4 6 8
```

37. What is the output of this program?

```
class multidimention_array {  
    public static void main(String args[])  
    {  
        int arr[][] = new int[3][];  
        arr[0] = new int[1];  
        arr[1] = new int[2];  
        arr[2] = new int[3];  
        int sum = 0;  
        for (int i = 0; i < 3; ++i)  
            for (int j = 0; j < i + 1; ++j)  
                arr[i][j] = j + 1;  
        for (int i = 0; i < 3; ++i)  
            for (int j = 0; j < i + 1; ++j)  
                sum += arr[i][j];  
        System.out.print(sum);  
    }  
}
```

(a) 11

(b) 10

(c) 13

(d) 14

Answer : b

Explanation : arr[][] is a 2D array, array has been allotted memory in parts. 1st row contains 1 element, 2nd row contains 2 elements and 3rd row contains 3 elements. each element of array is given i + j value in loop. sum contains addition of all the elements of the array.

Output :

```
$ javac multidimention_array.java
```

```
$ java multidimention_array
```

```
10
```

38. What is the output of this program?

```
class evaluate {  
    public static void main(String args[])  
    {  
        int arr[] = new int[] {0 , 1, 2, 3, 4, 5, 6, 7, 8, 9};  
        int n = 6;  
        n = arr[arr[n] / 2];  
        System.out.println(arr[n] / 2);  
    }  
}
```

- (a) 3 (b) 0 (c) 6 (d) 1

Answer : d

Explanation : Array arr contains 10 elements. n contains 6 thus in next line n is given value 2 printing arr[2]/2 i.e 2/2 = 1.

Output :

\$ javac evaluate.java

\$ java evaluate

1

39. What is the output of this program?

```
class array_output {  
    public static void main(String args[])  
    {  
        char array_variable [] = new char[10];  
        for (int i = 0; i < 10; ++i) {  
            array_variable[i] = 'i';  
            System.out.print(array_variable[i] + "");  
        }  
    }  
}
```

- (a) 1 2 3 4 5 6 7 8 9 10 (b) 0 1 2 3 4 5 6 7 8 9 10
(c) i j k l m n o p q r (d) i i i i i i i i i i

Answer : d

Explanation : None.

Output :

\$ javac array_output.java

\$ java array_output

i i i i i i i i i i

40. What is the output of this program?

```
class array_output {
    public static void main(String args[])
    {
        int array_variable[][] = {{ 1, 2, 3}, { 4 , 5, 6}, { 7, 8, 9}};
        int sum = 0;
        for (int i = 0; i < 3; ++i)
            for (int j = 0; j < 3; ++j)
                sum = sum + array_variable[i][j];
        System.out.print(sum / 5);
    }
}
```

- (a) 8 (b) 9 (c) 10 (d) 11

Answer : b

Explanation : None.

Output :

```
$ javac array_output.java
```

```
$ java array_output
```

9

41. Which of these selection statements test only for equality?

- (a) if (b) switch
(c) if and switch (d) None of the mentioned

[View Answer](#)

Answer : b

Explanation : switch statements checks for equality between the controlling variable and its constant cases.

42. Which of these are selection statements in Java?

- (a) if() (b) for() (c) continue (d) break

Answer : a

Explanation : continue and break are jump statements, and for is an looping statement.

43. Which of the following loops will execute the body of loop even when condition controlling the loop is initially false?

- (a) do-while (b) while
(c) for (d) None of the mentioned

Answer : a

Explanation : None.

44. Which of these jump statements can skip processing remainder of code in its body for a particular iteration?

(a) break (b) return (c) exit (d) continue

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Answer : d

Explanation : None.

45. Which of these statement is correct?

(a) Switch statement is more efficient than a set of nested ifs.
(b) Two case constants in the same switch can have identical values.
(c) Switch statement can only test for equality, whereas if statement can evaluate any type of boolean expression.
(d) It is possible to create a nested switch statements.

Answer : b

Explanation : No two case constants in the same switch can have identical values.

46. What is the output of this program?

```
class selection_statements {  
    public static void main(String args[])  
    {  
        int var1 = 5;  
        int var2 = 6;  
        if ((var2 = 1) == var1)  
            System.out.print(var2);  
        else  
            System.out.print(++var2);  
    }  
}
```

(a) 1 (b) 2 (c) 3 (d) 4

Answer : b

Explanation : var2 is initialised to 1. The conditional statement returns false and the else part gets executed.

Output :

\$ javac selection_statements.java

\$ java selection_statements

2

- (a) 1 3 5 7 (b) 2 4 6 8
(c) 1 3 5 7 9 (d) 1 2 3 4 5 6 7 8 9

Answer : c

Explanation : Whenever y is divisible by x remainder body of loop is skipped by continue statement, therefore if condition y == 8 is never true as when y is 8, remainder body of loop is skipped by continue statements of first if. Control comes to print statement only in cases when y is odd.

Output :

```
$ javac jump_statments.java
```

```
$ java jump_statments
```

```
1 3 5 7 9
```

49. What is the output of this program?

```
class Output {  
    public static void main(String args[])  
    {  
        int x, y = 1;  
        x = 10;  
        if (x != 10 && x / 0 == 0)  
            System.out.println(y);  
        else  
            System.out.println(++y);  
    }  
}
```

- (a) 1 (b) 2
(c) Runtime error owing to division by zero in if condition.
(d) Unpredictable behavior of program.

Answer : b

Explanation : Operator short circuit and, &&, skips evaluating right hand operand if left hand operand is false thus division by zero in if condition does not give an error.

Output :

```
$ javac Output.java
```

```
$ java Output
```

```
2
```

50. What is the output of this program?

```
class Output {  
    public static void main(String args[])  
    {  
        int a = 5;  
        int b = 10;  
        first: {  
            second: {  
                third: {  
                    if (a == b >> 1)  
                        break second;  
                }  
                System.out.println(a);  
            }  
            System.out.println(b);  
        }  
    }  
}
```

(a) 5 10

(b) 10 5

(c) 5

(d) 10

Answer : d

Explanation : $b \gg 1$ in if returns 5 which is equal to a i.e 5, therefore body of if is executed and block second is exited. Control goes to end of the block second executing the last print statement, printing 10.

Output :

\$ javac Output.java

\$ java Output

10

51. What is stored in the object obj in following lines of code?

box obj;

(a) Memory address of allocated memory of object.

(b) NULL

(c) Any arbitrary pointer

(d) Garbage

Answer : b

Explanation : Memory is allocated to an object using new operator. box obj; just declares a reference to object, no memory is allocated to it hence it points to NULL.

52. Which of these keywords is used to make a class?

- (a) class
- (b) struct
- (c) int
- (d) None of the mentioned

Answer : a

Explanation : None.

53. Which of the following is a valid declaration of an object of class Box?

- (a) Box obj = new Box();
- (b) Box obj = new Box;
- (c) obj = new Box();
- (d) new Box obj;

Answer : a

Explanation : None.

54. Which of these operators is used to allocate memory for an object?

- (a) malloc
- (b) alloc
- (c) new
- (d) give

Answer : c

Explanation : Operator new dynamically allocates memory for an object and returns a reference to it. This reference is address in memory of the object allocated by new.

55. Which of these statement is incorrect?

- (a) Every class must contain a main() method.
- (b) Applets do not require a main() method at all.
- (c) There can be only one main() method in a program.
- (d) main() method must be made public.

Answer : a

Explanation : Every class does not need to have a main() method, there can be only one main() method which is made public.

56. What is the output of this program?

```
class main_class {  
    public static void main(String args[])  
    {  
        int x = 9;  
        if (x == 9) {  
            int x = 8;  
            System.out.println(x);  
        }  
    }  
}
```

- (a) 9 (b) 8
(c) Compilation error (d) Runtime error

Answer : c

Explanation : Two variables with the same name can't be created in a class.

Output :

```
$ javac main_class.java
```

```
Exception in thread "main" java.lang.Error : Unresolved compilation problem :  
Duplicate local variable x
```

57. Which of the following statements is correct?

- (a) Public method is accessible to all other classes in the hierarchy
(b) Public method is accessible only to subclasses of its parent class
(c) Public method can only be called by object of its class.
(d) Public method can be accessed by calling object of the public class.

Answer : a

Explanation : None.

58. What is the output of this program?

```
class box {  
    int width;  
    int height;  
    int length;  
}  
class mainclass {  
    public static void main(String args[])  
    {  
        box obj = new box();  
        obj.width = 10;  
        obj.height = 2;  
        obj.length = 10;  
        int y = obj.width * obj.height * obj.length;  
        System.out.print(y);  
    }  
}
```

- (a) 12 (b) 200 (c) 400 (d) 100

Answer : b

Explanation : None.

Output :

\$ javac mainclass.java

\$ java mainclass

200

59. What is the output of this program?

```
class box {
    int width;
    int height;
    int length;
}
class mainclass {
    public static void main(String args[])
    {
        box obj1 = new box();
        box obj2 = new box();
        obj1.height = 1;
        obj1.length = 2;
        obj1.width = 1;
        obj2 = obj1;
        System.out.println(obj2.height);
    }
}
```

(a) 1

(b) 2

(c) Runtime error

(d) Garbage value

Answer : a

Explanation : When we assign an object to another object of same type, all the elements of right side object gets copied to object on left side of equal to, =, operator.

Output :

\$ javac mainclass.java

\$ java mainclass

1

60. What is the output of this program?

```
class box {  
    int width;  
    int height;  
    int length;  
}  
class mainclass {  
    public static void main(String args[])  
    {  
        box obj = new box();  
        System.out.println(obj);  
    }  
}
```

- (a) 0 (b) 1
(c) Runtime error (d) Garbage value

Answer : d

Explanation : Object obj of box class contains reference to the memory which was given to its class instances. Printing obj will print the address of the memory.

Output :

\$ javac mainclass.java

\$ java mainclass

box@130671e

61. Which of these class is superclass of String and StringBuffer class?

- (a) java.util (b) java.lang
(c) ArrayList (d) None of the mentioned

Answer : b

Explanation : None.

62. Which of these operators can be used to concatenate two or more String objects?

- (a) + (b) += (c) & (d) ||

Answer : a

Explanation : operator + is used to concatenate strings, Example String s = "i " + "like " + "java"; String s contains "I like java".

63. Which of these method of class String is used to obtain length of String object?

- (a) get() (b) Sizeof() (c) lengthof() (d) length()

Answer : d

Explanation : Method length() of string class is used to get the length of the object which invoked method length().

64. Which of these method of class String is used to extract a single character from a String object?

- (a) CHARAT()
- (b) chatat()
- (c) charAt()
- (d) ChatAt()

Answer : c

Explanation : None.

65. Which of these constructors is used to create an empty String object?

- (a) String()
- (b) String(void)
- (c) String(0)
- (d) None of the mentioned

Answer : a

Explanation : None.

66. Which of these is an incorrect statement?

- (a) String objects are immutable, they cannot be changed.
- (b) String object can point to some other reference of String variable.
- (c) StringBuffer class is used to store string in a buffer for later use.
- (d) None of the mentioned.

Answer : c

Explanation : StringBuffer class is used to create strings that can be modified after they are created.

67. What is the output of this program?

```
class String_demo {  
    public static void main(String args[])  
    {  
        char chars[] = {'a', 'b', 'c'};  
        String s = new String(chars);  
        System.out.println(s);  
    }  
}
```

- (a) a
- (b) b
- (c) c
- (d) abc

Answer : d

Explanation : String(chars) is a constructor of class string, it initializes string s with the values stored in character array chars, therefore s contains "abc".

Output :

\$ javac String_demo.java

\$ java String_demo

abc

68. What is the output of this program?

```
class String_demo {  
    public static void main(String args[])  
    {  
        int ascii[] = { 65, 66, 67, 68};  
        String s = new String(ascii, 1, 3);  
        System.out.println(s);  
    }  
}
```

- (a) ABC (b) BCD (c) CDA (d) ABCD

Answer : b

Explanation : ascii is an array of integers which contains ascii codes of Characters A, B, C, D. String(ascii, 1, 3) is an constructor which initializes s with Characters corresponding to ascii codes stored in array ascii, starting position being given by 1 and ending position by 3, Thus s stores BCD.

Output :

\$ javac String_demo.java

\$ java String_demo

BCD

69. What is the output of this program?

```
class String_demo {  
    public static void main(String args[])  
    {  
        char chars[] = {'a', 'b', 'c'};  
        String s = new String(chars);  
        String s1 = "abcd";  
        int len1 = s1.length();  
        int len2 = s.length();  
        System.out.println(len1 + " " + len2);  
    }  
}
```

- (a) 3 0 (b) 0 3 (c) 3 4 (d) 4 3

Answer : d

Explanation : None.

Output :

\$ javac String_demo.java

\$ java String_demo

4 3

70. What is the output of this program?

```
class A {  
    int i;  
    int j;  
    A() {  
        i = 1;  
        j = 2;  
    }  
}  
class Output {  
    public static void main(String args[])  
    {  
        A obj1 = new A();  
        System.out.print(obj1.toString());  
    }  
}
```

- (a) true (b) false
(c) String associated with obj1 (d) Compilation Error

Answer : c

Explanation : toString() is method of class Object, since it is superclass of every class, every object has this method. toString() returns the string associated with the calling object.

Output :

\$ javac Output.java

\$ java Output

A@1cd2e5f

71. Which of the following is not a keyword in java?

- (a) static (b) Boolean
(c) void (d) private

Answer : b

Explanation : Boolean is a class and is not a keyword.

72. Can we have two public classes in one java file?

- (a) True (b) False

Answer : b

Explanation : No, a java file can contain only one public class.

73. What is the default value of Long variable?
(a) 0 (b) 0.0 (c) 0L (d) not defined

Answer : c

Explanation : Long variable has default value of 0L if defined as an instance/static variable.

74. What is the default value of Object variable?
(a) undefined (b) 0 (c) null (d) not defined

Answer : c

Explanation : Object variable has default value of null if defined as an instance/static variable.

75. What is instance variable?
(a) Instance variables are static variables within a class but outside any method.
(b) Instance variables are variables defined inside methods, constructors or blocks.
(c) Instance variables are variables within a class but outside any method.
(d) None of the above.

Answer : c

Explanation : Instance variables are variables within a class but outside any method. These variables are instantiated when the class is loaded.

76. What is JIT compiler?
(a) JIT improves the runtime performance of computer programs based on bytecode.
(b) JIT is an application development framework.
(c) JIT is an implementation of the Java Virtual Machine which executes Java programs.
(d) None of the above.

Answer : a

Explanation : JIT, Just In-Time Compiler, improves the runtime performance of computer programs based on bytecode.

77. Method Overloading is an example of
(a) Static Binding. (b) Dynamic Binding.
(c) Both of the above. (d) None of the above.

Answer : a

Explanation : Method Overloading is example of static binding.

78. What invokes a thread's run() method?
- (a) JVM invokes the thread's run() method when the thread is initially executed.
 - (b) Main application running the thread.
 - (c) start() method of the thread class.
 - (d) None of the above.

Answer : a

Explanation : After a thread is started, via its start() method of the Thread class, the JVM invokes the thread's run() method when the thread is initially executed.

79. What will happen if static modifier is removed from the signature of the main method?
- (a) Compilation Error.
 - (b) RunTime Error : NoSuchMethodError.
 - (c) Program will compile and run without any output.
 - (d) Program will compile and run to show the required output.

Answer : b

Explanation : Program throws "NoSuchMethodError" error at runtime.

80. This is the parent of Error and Exception classes.
- (a) Throwable
 - (b) Catchable
 - (c) MainError
 - (d) MainException

Answer : a

Explanation : Throwable is the parent of both Error and Exception class.

81. What is the return type of Constructors?
- (a) int
 - (b) float
 - (c) void
 - (d) None of the mentioned

Answer : d

Explanation : Constructors does not have any return type, not even void.

82. Which keyword is used by method to refer to the object that invoked it?
- (a) import
 - (b) catch
 - (c) abstract
 - (d) this

Answer : d

Explanation : This keyword can be used inside any method to refer to the current object. This is always a reference to the object on which the method was invoked.

83. Which of the following is a method having same name as that of its class?
- (a) finalize
 - (b) delete
 - (c) class
 - (d) constructor

Answer : d

Explanation : A constructor is a method that initializes an object immediately upon creation. It has the same name as that of class in which it resides.

84. Which operator is used by Java run time implementations to free the memory of an object when it is no longer needed?

(a) delete (b) free
(c) new (d) None of the mentioned

[View Answer](#)

Answer : d

Explanation : Java handles deallocation of memory automatically, we do not need to explicitly delete an element. Garbage collection only occurs during execution of the program. When no references to the object exist, that object is assumed to be no longer needed, and the memory occupied by the object can be reclaimed.

85. Which function is used to perform some action when the object is to be destroyed?

(a) finalize() (b) delete()
(c) main() (d) None of the mentioned

[View Answer](#)

Answer : a

Explanation : None.

86. What is the output of this program?

```
class box {  
    int width;  
    int height;  
    int length;  
    int volume;  
    box() {  
        width = 5;  
        height = 5;  
        length = 6;  
    }  
    void volume() {  
        volume = width*height*length;  
    }  
}  
class constructor_output {  
    public static void main(String args[])  
    {  
        box obj = new box();  
        obj.volume();  
        System.out.println(obj.volume);  
    }  
}
```

- (a) 100 (b) 150 (c) 200 (d) 250

Answer : b

Explanation : None.

Output :

\$ javac constructor_output.java

\$ java constructor_output

150

87. What is the output of this program?

```
class equality {
    int x;
    int y;
    boolean isequal() {
        return(x == y);
    }
}
class Output {
    public static void main(String args[])
    {
        equality obj = new equality();
        obj.x = 5;
        obj.y = 5;
        System.out.println(obj.isequal);    }
}
```

- (a) false (b) true (c) 0 (d) 1

Answer : b

Explanation : None.

Output :

\$ javac Output.java

\$ java Output

true

88. What is the output of this program?

```
class box {
    int width;
    int height;
    int length;
```


90. What is the output of this program?

```
class area {  
    int width;  
    int length;  
    int area;  
    void area(int width, int length) {  
        this.width = width;  
        this.length = length;  
    }  
}  
class Output {  
    public static void main(String args[])  
    {  
        area obj = new area();  
        obj.area(5 , 6);  
        System.out.println(obj.length + " " + obj.width);  
    }  
}
```

- (a) 0 0 (b) 5 6 (c) 6 5 (d) 5 5

Answer : c

Explanation : This keyword can be used inside any method to refer to the current object. this is always a reference to the object on which the method was invoked.

Output :

\$ javac Output.java

\$ java Output

6 5

91. Java Programming was designed by ____.

- (a) Microsoft (b) Mozilla Corporation
(c) Sun Microsystems (d) Amazon Inc.

Answer : c

92. The beginning, Java was created in order to -

- (a) Connect many household machines
(b) Perform Operations on the Internet
(c) Create Strong Programming alternative to C++
(d) Create high performance OS

Answer : a

Explanation : Basic aim of java was to solve the problem of connecting many household machines together.

93. Earlier name of Java Programming language was

- (a) OAK (b) Netbean (c) D (d) Eclipse

Answer : a

94. Which of the following personality is called as father of Java Programming language -

- (a) Larry Page (b) None of these
(c) Bjarne Stroustrup (d) James Gosling

Answer : d

Explanation : Creator of Java : James Gosling (the father of Java)

95. Why OAK was renamed to Java ?

- (a) Because there was another language called Oak
(b) None of these
(c) Because the language was unsuccessful, so they created another version and changed its name to java.
(d) Because the name was not relevant to the language they created

Answer : a

Explanation : As there was another language called Oak, they decided to rename OAK. New name was given to OAK

96. Java was publicly released in ____.

- (a) May 27, 1993 (b) May 27, 1992 (c) May 27, 1995 (d) May 27, 1994

Answer : c

97. After first public release java was targeted at ____.

- (a) Search Engine Development (b) Desktop Development
(c) Operating System Development (d) Internet development

Answer : d

98. Applet was having early support from ____.

- (a) Microsoft Internet Explorer (b) Google
(c) Netscape Communications (d) Opera Mini

Answer : c

99. Which kind of language java is ?

- (a) Event Driven (b) Procedural
(c) Object Oriented (d) None of these

Answer : c

100. The first public implementation was ____.

- (a) Java Premium 1.0 (b) Java 1.1 (c) Java 1.0 (d) Java 0.1

Answer : c

