



Module 3: Board Questions Practice



1. Write a Java expression for the following: $ax^5 + bx^3 + c$. [2017]
2. What are the values stored in variables r1 and r2: [2017]
 - (i) `double r1 = Math.abs(Math.min(-2.83, -5.83));`
 - (ii) `double r2 = Math.sqrt(Math.floor(16.3));`
3. Name the operators listed below: [2017]
 - (i) `<`
 - (ii) `++`
 - (iii) `&&`
 - (iv) `?:`
4. State the number of bytes occupied by char and int data types. [2017]
5. Classify the following as primitive or non-primitive datatypes: [2018]
 - (i) char
 - (ii) arrays
 - (iii) int
 - (iv) Classes
6. `System.out.print("BEST "); System.out.println("OF LUCK");` Choose the correct option for the output of the above statements [2018]
 - (i) BEST OF LUCK
 - (ii) BEST
OF LUCK

Solutions

1. `a* Math.pow(x,5) +b*Math.pow(x,3)+c`
2. (i) 5.83 (ii) 4.0
3. (i) relational operator (ii) unary increment operator (iii) logical operator (iv) ternary or conditional operator
4. char – 2 bytes , int – 4 bytes
5. char – primitive array – non-primitive int – primitive class – non primitive
6. (i) BEST OF LUCK

1. Write a Java expression for the following: $\frac{\sqrt{3x+x^2}}{a+b}$ [2018]
2. What is the value of y after evaluating the expression given below?
y+= ++y + y-- + -- y; when int y=8 [2018]
3. Give the output of the following: [2018]
 - (i) Math.floor (-4.7)
 - (ii) Math.ceil(3.4) + Math.pow(2, 3)
4. Write the output for the following: System.out.println("Incredible"+"\\n"+"world"); [2018]
5. Write the memory capacity (storage size) of short and float data type in bytes. [2019]
6. Identify and name the following tokens: [2019]
 - (i) public
 - (ii) 'a'
 - (iii) ==
 - (iv) { }
7. What are the various types of errors in Java. [2019]
8. Write a Java expression for the following: $|x^2 + 2xy|$. [2019]
9. Give the output of the following: Math.sqrt(Math.max(9,16)). [2019]
10. Evaluate the following expression if the value of x=2, y=3 and z=1. Expression is:- v=x+ --z+ y++ +y [2019]

Solutions

1. `Math.sqrt(3*x+Math.pow(x,2))/(a+b);`
2. 33
3. i. -5.0 ii. 12.0
4. Incredible
world
5. short – 2 bytes float – 4 bytes
6. (i) Keyword (ii) character literal /constants (iii) operator (iv) separator/punctuator
7. Syntax error , Logical error, Runtime error
8. `Math.abs(Math.pow(x,2)+ 2*x*y)`
9. 4.0
10. `v = 9`

1. Name the type of error (syntax, runtime or logical error) in each case given below: [2016]
 - (i) `Math.sqrt (36 – 45)`
 - (ii) `int a;b;c;`
2. What are the types of casting shown by the following examples: [2016]
 - (i) `char c = (char)120;`
 - (ii) `int x = 't';`
3. Give the output of the following Math functions : [2016]
 - (i) `Math.ceil(4.2)`
 - (ii) `Math.abs(-4)`
4. Write down java expression for : $T = \sqrt{A^2 + B^2 + C^2}$.
5. What are keywords? Give an example [2016]
6. Write one difference between primitive data types and composite data types. [2016]
7. Give the output of the following expression : `a+= a++ + ++a + --a + a--` ; when a = 7 [2016]
8. Write an expression in Java for $\cos x + \sqrt{a^2 + b^2}$. [2015]
9. What is the result produced by `2 – 10*3 + 100/11`? Show the steps. [2015]
10. `int x =20, y = 10, z;` What is the value of z in `z = ++x * (y – –) – y` ? [2015]
11. What will be the output of the following code? `float x = 7.87;` [2015]
`System.out.println(Math.ceil(x)); System.out.println(Math.floor(x));`

Solutions

1. (i) Runtime error (ii) Syntax error
2. (i) explicit type casting (ii) implicit type casting
3. (i) 5.0 (ii) 4
4. `Math.sqrt(Math.pow(A,2)+ Math.pow(B,2)+ Math.pow(C,2))`
5. Keywords are the words that convey a special meaning to the language Compiler. These are reserved for special purpose and must not be used as normal identifiers. Examples: public, class, etc.

6. Primitive Data Type	Composite Data Type
<ul style="list-style-type: none">• Fundamental Data type• Size is fixed	<ul style="list-style-type: none">• Constructed using primitive data types.• Size depends on the member variables/instance Variables
<ul style="list-style-type: none">• Primitive data type is passed by value	<ul style="list-style-type: none">• Composite data type is passed by reference.

7. `a = 7 + 7 + 9 + 8 + 8 = 39`
8. `Math.cos(x) + Math.sqrt(a*a+b*b);`
9. -37
10. 201
11. 8.0 ; 7.0