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| --- | --- | --- | --- | --- | --- | --- |
| **1.**  **Define**  **Overloaded Methods** |  | **1.**  **Overloaded Methods**  **Same method name, different parameters** |  | **2.**  **Define and provide an example of an Off By One Error** |  | **2.**  **OBOE - loop iterates one more or one less time. Ex: Find sum of 10 integers**  int sum = 0;  for(k=0;k<=10;k++)  sum+= Keyboard.readInt(); |
|  |  |  |  |  |  |  |
| **3.**  **What keyword is needed so that a method is called from the class name and not an object reference?** |  | **3.**  **static** |  | **4.**  **Using the Random class, write a statement(s) to generate a random number between**  **4 and 12, inclusive.** |  | **4.**  Random r = new  Random();  r.nextInt(9)+4 |
|  |  |  |  |  |  |  |
| **5.**  **Using the Math class, write a statement(s) to generate a random number between**  **3 and 10, inclusive.** |  | **5.**  (int)  (Math.random()\*8)+3 |  | **6.**  **Given double variables a, b and c, the sides of a right triangle, write a statement to calculate the length of the hypotenuse.** |  | **6.**  c=Math.sqrt  (Math.pow(a,2) +  Math.pow(b,2) ) |
|  |  |  |  |  |  |  |
| **7.**  **Rewrite**  !(c && d)  **using DeMorgan’s Law** |  | **7.**  !c || !d |  | **8.**  **Rewrite**  **!(!p || q)**  **using DeMorgan’s Law** |  | **8.**  p && !q |
| **9.**  **List the operators in the order they are executed.**  5 + 10 % 7 \* 4 - 2 |  | **9.**    **% \* + -** |  | **10.**  **What is the result of**  3 \* 4 % 5 + 6 / 8 |  | **10.**  2 |
| **11.**  **What statement terminates a loop before it completes all iterations?** |  | **11.**  **break** |  | **12.**  **What statement immediately cause a loop to skip to the next iteration?** |  | **12.**  **continue** |
|  |  |  |  |  |  |  |
| **13.**  **What is the output?**  int n=0;  if (n!=0 && r/n <0)  S.O.P (“Hello”);  else  S.O.P (“World”); |  | **13.**  World |  | **14.**  **Which version causes an error?**  **(a)**  double x = 1.234;  int y = x;  **(b)**  int x = 1234;  double y = x; |  | **14.**  **(a)** |
|  |  |  |  |  |  |  |
| **15.**  **What is the value of k at the indicated**  **int k;**  for(k=0; k<5; k++){  S.O.P (“hello”);  //what is k here  S.O.P (“world”);  ) |  | **15**  **0** |  | **16.**  **if** b **is false, what value must** a **have to make**  a && !b  **an expression that evaluates to** **true** |  | **16.**  **true** |
|  |  |  |  |  |  |  |
| **17.**  **List the logical operators in order of precedence** |  | **17.**  **!**  **&&**  **||** |  | **18.**  **int a = 4;**  **int b = 6;**  **int c = ?**  **What must c be so that**  a < b && !(a==c)  **evaluates to true** |  | **Any value except 4** |
|  |  |  |  |  |  |  |