Region / State Practice

Note: Correct responses are based on Java, **J2sdk v 1.8.x**, from Sun Microsystems, Inc. All provided code segments are intended to be syntactically correct, unless otherwise stated (i. e. error is an answer choice) and any necessary Java 2 Standard Packages have been imported. Ignore any typographical errors and assume any undefined variables are defined as used. **For all output statements, assume that the System class has been statically imported… *import static java.lang.System.\*;***

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| QUESTION 1  What is 1111112 plus 9310 ?  A. 11120410 B. 15810 C. 9E16 D. 100111002 E. 100010012 | |
| QUESTION 2  What is output by the code to the right? A. 57.0 B. 1.0 C. 57.29  D. -1.21 E. 1.28 | int x = 9, y = 7;  double z = x / y + y \* x - y; out.println(z); |
| QUESTION 3  What is output by the code to the right? Assume X is a space.   1. PETEY10PETEY 2. PETEYXXXXXPETEY 3. PETEYPETEYXXXXX 4. PETEYkXXXXXXXXX 5. PETEYXXXXXXXXXk | String k = "PETEY"; out.printf("PETEY%10s",k); |
| QUESTION 4  What is output by line the code on the right?   1. BOTTLEOFWATER 2. TLEOFW C. LEOFWA   D. LEOFWAT E. TLEOFWA | String x = "BOTTLEOFWATER";  x = x.substring(4,10); out.println(x); |
| QUESTION 5  What values for a and b will make the output to the right always  false?   1. a = false, b = true 2. a is always false 3. a and b are always different values 4. a = true, b = false 5. b is always true | boolean a, b, c; c = !a && b;  System.out.println(c); |
| QUESTION 6  Which of the following code will create a random integer value in the range of [-17,20)?   1. int x = (int)(Math.random(37)) - 17; 2. int x = (int) Math.random()\*37 - 17; 3. int x = (int)(Math.random()\*37) - 17; 4. int x = (int)(Math.random(37) – 17); 5. more than one of these | |
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| QUESTION 7 What is output by the code to the right?   1. -4 2. 2 3. 1 4. -1 5. 4 | int x = 2;  int y = x\*2; int z = x-6+y; x = y\*z/x-3;  out.println(x-z+y); |
| QUESTION 8  What is output by the code to the right?   1. can 2. we 3. piece 4. make 5. little | String x = "", word = "EVERY"; switch(word.charAt(0)){  case 'A': x = "little";  case 'V': x = "piece";  case 'E': x = "we";  case 'R': x = "can";  case 'Y': x = "make";  }  out.println(x); |
| QUESTION 9  What is output by the code to the right?   1. FRONTRONTONTNTT 2. FRONT 3. RONT 4. FRONTFRONFROFRF 5. output is an infinite loop | String s = "FRONT"; do  {  out.print(s); s.substring(1);  }while(!s.isEmpty()); out.println(); |
| QUESTION 10  What is output by the code to the right?   1. 5 2. 2 3. 0 4. 8 5. index out of bounds exception | int[] list = {8,6,3,2,0,2,4,1,5};  out.print(list[list[list[0]]]); |
| QUESTION 11  Which of the following values could be read in using a Scanner and the method next()?  I. micro II. 76.4 III. !a|b  A. I only B. I, II, and III C. II only D. I & II E. I & III | |
| QUESTION 12  What is output by the code to the right?  A. 19  B. 2400  C. 30 D. 1680 E. 240 | **int** x = 5;  **for**(**int** i=6; i<10; i+=2) x \*= i;  **out**.println(x); |

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| QUESTION 13  What is the order of precedence for the operations on the right from highest precedent to lowest precedent?   1. IV, V, II, III, I 2. III, IV, II, I, V 3. I, III, V, IV, II 4. I, II, III, IV, V 5. I, II, III, V, IV | I. [] access array element  II. + additive  III. + unary plus   1. / multiplicative 2. () cast |
| QUESTION 14  What is the memory size of the short primitive data type?   1. 32-bit IEEE floating point 2. 8-bit two’s compliment 3. 64-bit two’s compliment 4. 32-bit signed two’s compliment 5. 16-bit signed two’s compliment | |
| QUESTION 15  What is output by the code to the right? A. [6, 0, 9, 1, 0, 3]  B. [9, 0, 3, 6, 6]  C. [0, 2, 3, 6, 6]  D. [9, 2, 3, 6, 2]  E. There is no output due to a run-time error | ArrayList<Integer> list; list = new ArrayList<>(); list.add(2);  list.add(3);  list.add(6);  list.set(0, 9);  list.add(1, 0); list.remove(2); list.add(list.get(3)); out.println(list); |
| QUESTION 16  Which of the following correctly replaces <\*1> in the code to the right such that obj is instantiated?   1. A obj = A(); 2. A obj = A(4, 7); 3. A obj = new A(4, 7); 4. A obj = new A(); 5. more than one of these are correct | class A {  private int x,y;  public A(int a, int b) { x = 2 \* a;  y = 3 \* b;  }  public void myst(int a) { x /= a;  y /= a;  }  public String toString() { return x + " " + y;  }  }  //////////////////////////////////  //CLIENT CODE  <\*1>  obj.myst(6); out.println(obj); |
| QUESTION 17  Assume that obj has been instantiated by one of the previous instantiations. What is the most likely output from the code to the right?  A. 8 21   1. 0 1 2. 4 7 3. 1 3 4. 1 4 |

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| QUESTION 18  What is output by //line 1 in the code on the right?  A. 8 B. 3  C. 9 D. 2  E. 4 | int[] list = {1,6,4,5,2,8,3,2,9};  int[][] mat = new int[3][5]; for(int i=0; i<3; i++)  for(int j=0; j<5; j++) mat[i][j]=list[i+j]%9;  out.println(mat[2][4]); //line 1  for(int i=0; i<3; i++) for(int j=0; j<2; j++)  mat[i][4-j]=mat[i][j];  for(int i=0; i<3; i++) //line 2  {  for(int j=0; j<5; j++) out.print(mat[i][j]+" ");  out.println();  } |
| QUESTION 19  What is output by the loop at //line 2 in the code to the right? A. 1 6 4 6 1  6 4 5 4 6  4 5 2 5 4  B. 2 5 4 5 2  8 2 5 2 8  3 8 6 8 3  C. 1 6 4 5 2  6 4 5 2 8  4 5 2 8 3  D. 1 6 4 5 2  6 4 5 2 8  1 6 4 5 2  E. 4 5 6 8 3  6 4 5 2 8  4 5 6 8 3 |
| QUESTION 20  What is output by the code to the right?  A. 11000000 B. 11110101  C. 96 D. 437  E. 245 | int x = 244; int y = 193;  out.println(x|y); |
| QUESTION 21  What is stored in list after the method call myst(x,6)if x was defined as int[] x = {3, 1, 8, 1, 3, 4, 5} ?  A. [3, 7, 8, 7, 9, 14, 5]  B. [3, 13, 8, 7, 9, 10, 11]  C. [9, 1, 20, 1, 15, 4, 11]  D. [9, 7, 14, 7, 9, 10, 11]  E. [3, 1, 8, 1, 3, 4, 5] | public static void myst(int[] list,  int y)  {  for(int i=1; i<list.length; i++) if(list[i-1]<list[i])  list[i-1]+=y; else  list[i]+=y;  } |
| QUESTION 22  What could be stored in x such that the method to the right sets x =  {9, 14, 13, 12, 11, 10, 9}?  A. [9, 8, 13, 6, 11, 4, 9]  B. [9, 14, 13, 12, 11, 10, 9]  C. [9, 8, 7, 6, 5, 4, 3]  D. [3, 14, 7, 12, 5, 10, 3]  E. none of these are possible |

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| QUESTION 23  What is output by line //line 1 in the code on the right? A. 102 162  B. 102 132  C. 64 162  D. 102 112  E. 64 132 | class Dis  {  private int x;  public static int count = 25;  public Dis(int val)  {  x = count + val; count+=25;  }  public void work(int val, int num)  {  x+=val; count-=num;  }  public int get()  {  return x;  }  public String toString()  {  return get()+" "+count;  }  }  class Gia extends Dis  {  private int x;  public Gia(int dig)  {  super(dig); x = dig; count+=10;  }  public void work(int val, int num)  {  x-=val; count+=num;  }  }  /////////////////////////////////  //CLIENT CODE  Dis one = new Dis(39); Gia two = new Gia(26); Dis three = new Gia(36); Gia four = new Gia(48); one.work(38, 23);  System.out.println(one); //line 1  two.work(24, 30);  System.out.println(two); //line 2  three.work(19, 42);  System.out.println(four); //line 3 |
| QUESTION 24  What is output by line //line 2 in the code on the right? A. 2 162  B. 2 142  C. 2 132  D. 76 162  E. 76 132 |
| QUESTION 25  What is output by line //line 3 in the code on the right? A. 48 132  B. 168 162  C. 168 204  D. 168 132  E. 48 162 |

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| QUESTION 26  What is output by the code to the right?   1. HELLOIS 2. HITAOTOATIH 3. HITAOTUNHSEEYTE 4. HITAOTUNHSE 5. There is no output due to a run-time error | String[] list = {"HELLO","IS", "THERE","ANYONE","OUT","THERE"};  int i=0;  boolean go = false; while(!list[i].isEmpty())  {  out.print(list[i].charAt(0)); list[i] = list[i].substring(1); if(i == list.length-1 || i == 0)  go = !go; if(go)  i++;  else  i--;  } |
| QUESTION 27  What is output by the code on the right? A. [48, 29, 29]  B. [29, 8]  C. [48, 29]  D. [29, 14, 8]  E. There is no output due to a run-time error | Queue<Integer> stuff;  stuff = new LinkedList<>(); stuff.offer(48); stuff.offer(29); stuff.offer(14); stuff.offer(8); stuff.offer(stuff.poll()); stuff.offer(stuff.peek()); stuff.offer(stuff.poll()); stuff.remove(); stuff.remove(); out.println(stuff); |
| QUESTION 28  What is returned by the method call myst2(14,4)?   1. 28 2. 37 3. 27 4. 38 5. 26 | public static int myst2(int x, int y)  {  if(x>y)  return myst2(x-2,y)+5; if(x>0)  return myst2(x,y-3)+2; return 1;  } |
| QUESTION 29  What is returned by the method call myst2(8,9)?   1. 27 2. 7 3. 8 4. 30 5. There is no output due to a run-time error |
| QUESTION 30  What is output by the code on the right?  A. 41 B. 39 C. 16 D. 33 E. 57 | System.out.println(49^24); |

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| QUESTION 31  What would be printed out if an in-order traversal is used on the tree to the right?  A. 3 2 7 2 2 4 0 6 7  B. 0 2 2 2 3 4 6 7 7  C. 3 2 2 7 7 4 2 6 0  D. 7 2 6 3 7 4 0 2 2  E. 7 2 3 7 2 6 4 2 0 | 7  2 6  3 7 4 0  2 2 |
| QUESTION 32  What is output by the code on the right?   1. [E, D, D, C, C] 2. [A, E, E, D, B, D] 3. [C, D] 4. [E, D, D, C, C, B] 5. There is no output due to a run-time error | Stack<String> st;  st = new Stack<String>(); Stack<String> at;  at = new Stack<String>(); st.push("A");  st.push("B");  st.push("C");  st.push("D");  st.push("E");  for (int i=0; i<=5; i++)  {  at.push(st.peek()); if(i%2==0)  st.pop(); if(i%3==0)  st.push(at.pop()); if(i%4==0)  at.push(st.remove(0));  }  out.println(at); |
| QUESTION 33  What is output by line //line 1 in the code on the right?   1. B C B A A 2. B C B D A A 3. A B D E S 4. B C B D A 5. There is no output due to a run-time error | TreeMap<String, String> map; map = new TreeMap<>();  map.put("E", "D");  map.put("A", "B");  map.put("D", "B");  map.put("E", "A");  map.put("S", "A");  map.put("B", "C"); out.println(map.values()); //line 1  String x = "S"; String path = ""; do  {  path+=x;  x = map.get(x);  }while(x!=null); out.println(path); //line 2 |
| QUESTION 34  What is output by line //line 2 in the code on the right?   1. SABCBAS 2. SABCD 3. SABC 4. SABCDE 5. There is no output due to an infinite loop |



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| QUESTION 35  What is output by the code on the right?   1. 1 2. 23 C. 4215 D. 3256   E. null | String word = "1.23.4215.3256.3"; String[] list = word.split("\\."); out.print(list[2]); |
| QUESTION 36  Simplify the Boolean algebra statement on the right   1. 1 2. !ABC 3. 0 4. B + !AC 5. A + B + !ABC | A + B(!AC + B) + !A |
| QUESTION 37  What is the equivalent equation to the circuit to the right?   1. !A + A!B + B 2. A!A ^ B!B 3. A ^ !AB ^ !B 4. A!A + B!B 5. A + !AB + !B | A  B |
| QUESTION 38  Convert the infix notation equation to the right into a postfix notation equation.   1. EFG2HI+-^-/ 2. /^-+EFG2-HI 3. /^-+-EFG2HI 4. EF+G-^2HI/- 5. EF+G-2^HI-/ | (E+F-G)^2/(H-I) |
| QUESTION 39  *OPEN ENDED QUESTION – Find the answer and write it on your answer sheet. If you are using a ScanTron form, write the question number and the answer on the bottom of the ScanTron.*  What does the signed byte data type look like when storing the decimal value to the right?  bit bit bit bit bit bit bit bit | -12210 |

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| QUESTION 40  *OPEN ENDED QUESTION – Fill in the blank spaces with the proper bits (1 or 0) and write it on your answer sheet. If you are using a ScanTron form, write the question number and the answer on the bottom of the ScanTron.*  Evaluate the expression to the right.  bit bit bit bit bit bit bit bit |  | (LSHIFT-1 10110100)AND(RCIRC-4 00101100) |