HOMEWORK 3

Question	Answer	Explanation
1	B	Primitive and enumerated types can be usable for switch statement but floating-point type are not usable.
2	A	In the beginning, meal is equal to 5 and tip is equal to 2. There is an if statement to define the total. If meal is higher than 6, the tip will increase. If meal is lower than 6, the tip will decrease. Since the if statement, tip will decrease and it will be equal to 1. End of the if statement, total will be 6.
3	C	Firstly, a new String "john" object is created. Secondly, the new keyword is used and a new String object is created. The == on them evaluates to false because of these objects are not same. The equals() test on them result is true because the referred values are equivalent.
4	D	The code does not compile because there are two else statement. First else statement must be else if to compile the code. If it is happen, output will be "Plan B".
5	C	Default statement does not take a value, unlike a case statement.
6	B	thatNumber is assign to 3 because 5 is equal to 5. In the second line, thatNumber will be 4 because of the increase but third line will be never work because if statement is false.
7	B	There is a break statement in switch statement to finish the switch statement.
8	C	Ternary operators are used to replace short if-then-else statement.
9	C	The code does not compile because of the line 4. candidateA and candidateB are numbers so && operation cannot usable for numbers. It is just usable for Boolean.
10	A	pterodactyl is assigned to 6 and triceratops is assigned to 3. After that end of the if statement, triceratops will decrease and it will be 2 because pterodactyl % 3 is equal to 0 and if statement's result is false. End of the if statement, result will be 2.
11	D	An if-then statement can execute a single statement or a block {}.
12	D	There is no connection between first if statement and second if statement so the result will be "Not enough" end of the first statement and it will be also "Too many" end of the else statement. Second if statement must be else if to compile the code correctly.
13	B	Break statement is not must for case statement. It is optional for case statements.
14	D	&& operator for the Boolean expressions x and y corresponds to this relationship because x and y must be both true to the result is true. Otherwise, all result will be false like the relationship table.
15	C	Java does not automatically convert integers to Boolean values for use in if-then statements. The statement if(jumps) evaluates to if(0), and since 0 is not a Boolean value, the code does not compile.
16	B	The pre-increment[++v], operator increases the value of a variable by 1 and returns the new value, while the post-decrement[v--] operator decreases the value of a variable by 1 and returns the original value.
17	B	tiger is assigned to 2 and lion is assigned to 3. Output is assigned to 13 because of the operation sequence. winner is 13 3+(2*(2+3)) end of the operation.
18	B	Switch statements do not support long values. Long cannot be converted to int without loosing data.
19	D	The code is not compiled because day is an integer and it is not Boolean expression.
20	C	The code is not compiled because there are no balanced parentheses.
21	B	Output will be 11789 because Java evaluates + from left to right.
22	B	The – operator is used to find the difference between two numbers, while the % operator is used to find the remainder when one number is divided by another.
23	B	dog is assigned to 11 and cat is assigned to 3. partA will be 3 because partA is integer. partB will be 2 because it is mod operation. Output is 11 because newDog = 2 + (3*3).
24	B	All switch statements will work because there is no break statement. Firstly eaten will be 1 by increasing 1 and secondly it will be 3 by increasing 2. Finally it will be 2 by decreasing 1 from 3.
25	C	The code does not compile because data types are incompatible. One of them is String. Other one is int.
26	A	Given two non-null String objects with reference names apples == and oranges, if apples oranges evaluates to true, then apples equals() oranges must also evaluate to true.
27	B	For a given non-null String myTestVariable, false is the resulting value of executing the statement myTestVariable.equals(null).
28	D	The code does not compile because of the second if-else statement. streets is not a Boolean expression so cannot be used in logical && operator. To compile the code, it must be (streets > 1000 && intersections > 1000). If it is like that, output will be two 1's.
29	B	The & operator always evaluates both operands, while the && operator may only evaluate the left

		operand.
30	C	x is assigned to 5 and y Is assigned to 6 because w = true in the beginning. After that w is assigned true again because it is assigned to !z. The output is (5+6) and (5).
31	A	The literal “bob” and the String created with the new keyword. Created second object is assigned to the variable bob. The second variable “notBob” is assigned to the bob variable. They are the same object.
32	B	Value is equal to 12. Because the operations will be in this order: a. (6*3) = 18 b. 18%(1+1) c. 12 + 0
33	D	In the XOR operator: if p=true and q=false, result is true. If p=false and q=false, result is false.
34	C	Sound, logic and nothing are possible outputs but the application throws an exception at runtime isn’t possible output.
35	C	The operators +, /, *, %, and ++ are listed in the same or increasing level of operator precedence.
36	D	The ^ operator can only be applied to boolean values.
37	C	x || y matches the relationship because it represents the overlap of x and y.
38	D	The value of a case statement must be constant, a literal value or final variable.
39	C	>= and < operators represents greater than or equal to and which operator is strictly less than.
40	B	Turtle is assigned to 30 because of the operation orders: a. (3+2) / 5 b. 2+1 c. 10*3 = 30 Hare is assigned to 25 because turtle is not less than hare so the output is “Turtle wins!”
41	A	All sent thresholds are less than 5 so output will be 0(0+0+0+0).
42	A	In the beginning, spinner is assigned to false and roller is assigned to true. And then, spinner assigned to true in the if statement so output is “up”.
43	D	The || operator is true if either of the operands are true, while the ! operator flips a Boolean value.
44	A	characters is assigned to 5 and story is assigned to 3 in the beginning. In if else statement, movieRating is equal to 2.0 because characters is not less than 4 and story is greater than 1.
45	B	A switch statement can have any number of, case statements and at most one default statements.
46	A	“Go Outside”, ”Stay Inside” and exception are possible outputs but nothing is printed is not possible for this situation.
47	D	It is not possible to use (!) operator for numeric value. It is just usable for Boolean values so the code doesn’t compile.
48	C	If either operand is true, the disjunctive logical || operator evaluates to true.
49	A	The operators -, +, /, *, and % are listed in the same or increasing level of operator precedence.
50	C	The code does not compile because of the line p1. The expressions are of type int, but the assignment is to the String.

Reference

Scott S, Jeanne B.: OCA/OCP Java SE 8 Programmer Practice Tests. Indiana, USA: 2017.