Bitwise Operator MCQ

1) Identify the Bitwise NOT operator in Java below.

A) !

B) &

C) ~

D) None of the above

2) Bitwise operators in Java work with?

A) boolean data like true or false

B) Real numbers like float or double

C) Individual bits of integers like byte, short, int, long and char

D) All the above

3) Find operators that work as both Logical operators and Bitwise operators in Java?

A) &, &=

B) |, |=

C) ^, ^=

D) All the above

4) If relational operators are present in an expression, what type of other operators may be used?

A) Logical operators

B) Bitwise operators

C) A and B

D) None of the above

5) What is the name of << bitwise operator in Java?

A) Right Shift Operator

B) Left Shift Operator

C) Left Shift Fill Zero operator

D) Right Shift Fill Zero operator

6) What is this >> bitwise operator in Java?

A) Left shift operator

B) Right shift operator

C) Left Shift Fill Zero operator

D) Right Shift Fill Zero operator

7) What is this >>> bitwise operator in Java?

A) Left Shift operator

B) Left Shift Fill Zero operator

C) Right Shift Operator

D) Right Shift Fill Zero operator

8) Left Shift (<<) in Java is equivalent to?

A) Subtracting the number by 2

B) Dividing the number by 2

C) Multiplying the number by 2

D) Adding the number by 2

9) Right Shift >> in Java is equivalent to?

A) Multiplying the number by 2

B) Dividing the number by 2`

C) Subtracting the number by 2

D) Adding the number by 2

10) What is the output of the Java code snippet?

```
byte a = 0b0000_0001;
System.out.println(~a);
```

A) -1

B) -2

C) 254

D) +127

11) What does this Java code snippet prints?

```
int b=45;
String str="";
while(b > 0){
    str = str + b%2;
    b = b/2;
}
StringBuilder sb = new StringBuilder(str);
sb.reverse();
System.out.println(sb.toString());
```

A) Prints the remainder of a number

B) Prints Binary representation of a number

C) Prints Octal representation of a number

D) Prints Hexadecimal representation of a number

12) What is the output of the Java code snippet?

```
System.out.println(0b0000_1000);
```

A) 0b0000_1000

B) 1000

C) 8

D) 9

13) What is the output of a Bitwise AND (&) operation if both the inputs/operands are 1s?

A) 0

B) 1

C) 0 or 1

D) None of the above

14) What is the output of a Bitwise OR (|) operation if both the inputs are 1s?

A) 0

B) 1

C) 0 or 1

D) None of the above

15) What is the output of a Bitwise AND (&) operation if one of the inputs/operands is 0?

A) 0

B) 1

C) 0 or 1

D) None of the above

16) What is the output of a Bitwise OR (|) operation if one of the inputs/operands is 1?

A) 0

B) 1

C) 0 or 1

D) None of the above

17) What is the output of a Bitwise AND (&) operation if one of the inputs/operands is 1?

A) 0

B) 1

C) 0 or 1

D) None of the above

18) What is the output of a Bitwise OR (|) operation if one of the inputs/operands is 0?

A) 0

B) 1

C) 0 or 1

D) None of the above

19) What is the output of a Bitwise Exclusive OR (^) operation if both of the inputs/operands are 0s or 1s?

A) 0

B) 1

C) 0 or 1

D) None of the above

20) What is the output of a Bitwise Exclusive OR (^) operation if both the inputs/operands are different?

A) 0

B) 1

C) 0 or 1

D) None of the above

21) Which of these is not a bitwise operator?

a) &

b) &=

c) |=

d) <=

22) Which operator is used to invert all the digits in a binary representation of a number?

a) ~

b) <<<

c) >>>

d) ^

23) On applying Left shift operator, <<, on integer bits are lost one they are shifted past which position bit?

a) 1

b) 32

c) 33

d) 31

24) Which right shift operator preserves the sign of the value?

a) <<

b) >>

c) <<=

d) >>=

25) Which of these statements are incorrect?

a) The left shift operator, <<, shifts all of the bits in a value to the left specified number of times

b) The right shift operator, >>, shifts all of the bits in a value to the right specified number of times

c) The left shift operator can be used as an alternative to multiplying by 2

d) The right shift operator automatically fills the higher order