1) The float and double data type both carry decimal numbers but float is smaller (32 bits) than double data type (64 bits). **Hence, the correct option is (A).**

2) When any smaller data type is type-casted into a larger data type, automatic conversion happens. Hence, the correct option is (b). **Hence, the correct option is (B).**

3) The output will be 24I as these variables are printed in a same line. **Hence, the correct option is (D).**

4) The program will throw a compile time error as it cannot convert from int to short. **Hence, the correct (C).**

5) The output will be -127 because the maximum range of byte is 127, but it's cyclic in nature. **Hence, the correct option is (A).**

6) To make a character array, we declare it in the following way:
char[] ch = new char[5];
Hence, the correct option is (B).

7) The output of the program will be 120 128 14 as the binary conversion of 016 is 14. **Hence, the correct option is (B).**

8) When any array is passed to a method, a reference of the array is received. **Hence, the correct option is (A).**

9) a[i] = a[(a[i]+3)%a.length]

Where a.length =5;

a[0] = a[(a[0]+3)%5];
a[0] = a[(0+3)%5] ;
a[0] = a[3] = 1

when i = 1;

a[1]=a[(a[1]+3)%5];
a[1]=a[(2+3)%5];
a[1]=a[0];
a[1]=1;

Therefore a[1] is equal to 1. Hence, the correct option is (B).

10) The object with new keyword is created during run-time. **Hence, the correct option is (A).**

11) A package is a collection of classes and interfaces. **Hence, the correct option is (C).**

12) Static keyword makes a variable belong to a class,rather than being defined for each instance of the class. **Hence, the correct option is (B).**

13) Only the solution class will be able to access and change the value of the variable res as it is set as private. **Hence, the correct option is (B).**

14) The toString() method is defined in java.lang.Object. **Hence, the correct option is (A).**

15) The output will be "bc" as substring method returns value from starting index(1) till last index-1. **Hence, the correct option is (B).**

16) The indexOf method returns the index within this string of the first occurrence of the specified character., if no such character is found, then -1 is returned. **Hence, the correct option is (D).**

17) The output will be onetwo as the concat method concatenates two strings. **Hence, the correct option is (C).**

18) Every time, the new keyword is used, a new object is created. Therefore, for the first two statements, two objects are produced. Then, the declaration of a string creates another object after that. The fourth statement doesn't generate an extra object because the string "FlipRobo" already exists.
Hence, the correct option is (B).

19) The program will throw a compile error as ++a is not valid identifier. **Hence, the correct option is (B).**

20) AS 1 + 1 + 1 + 1 + 1 will be equal to 5, the output will be TRUE. Hence, the correct option is (A).
21) The output will be 50 as x was initially 5 then x= x*(7+3) which equals 50. **Hence, the correct option is (A).**

22) The void is the return type of a method that does not return any value. **Hence, the correct option is (B).**

23) The floor method returns the largest double value that is less than or equal to the argument. **Hence, the correct option is (B).**

24) A constructor can only be called when an object of a class is created, hence static cannot be used for constructor. **Hence, the correct option is (D).**

25) An instance variable is a variable declared outside the body of all methods. Any method in the class can access its value. **Hence, the correct option is (B).**

26) The output will be 6 because here, the if statement does nothing. The continue statement just iterates through the loop and increments the value of i. When i = 6 the loop gets terminated. **Hence, the correct option is (D).**

27) All the given for loops will infinitely. **Hence, the correct option is (D).**

28) The catch block catches and handles the exception. **Hence, the correct option is (A).**

29) The Arithmetic exception throws all the number based exceptions. **Hence, the correct option is (C).**

30) System class is defined in java.lang.package.**Hence, the correct option is (A).**

- **Mehak Mattoo**