

1) D .

This program terminates normally without printing any output in the console
Since there is no terminal operation provided (such as `count` , `forEach` , `reduce`, or `collect`),
this pipeline is not evaluated and hence the `peek` does not print any output to the console.

2) B .

This program prints: " aaaa" Because the `Consonants::removeVowels` returns true when
there is a vowel passed, only those characters are retained in the stream by the filter
method. Hence, this program prints "aaaa".

3) F .

This program prints: true The predicate `str -> str.length() > 5` returns false for all the
elements because the length of each string is 2. Hence, the `filter()` method results in an
empty stream and the `peek()` method does not print anything.
The `allMatch()` method returns true for an empty stream and does not evaluate the given
predicate. Hence this program prints true

4) A .

Compiler error: Cannot find symbol "sum" in interface `Stream<Integer>` Data and calculation
methods such as `sum()` and `average()` are not available in the `Stream<T>` interface; they are
available only in the primitive type versions `IntStream`, `LongStream`, and `DoubleStream`. To
create an `IntStream` , one solution is to use `mapToInt()` method instead of `map()` method in
this program. If `mapToInt()` were used, this program would compile without errors, and when
executed, it will print 6 to the console.

5) D.

is the correct answer as this program compiles without errors, and when run, it prints 100 in
console. Why other options are wrong: A. An interface can be defined inside a class B. The
signature of the `equals` method matches that of the `equal` method in `Object` class; hence it is
not counted as an abstract method in the functional interface C. It is acceptable to omit the
parameter type when there is only one parameter and the parameter and return type are
inferred from the `LambdaFunction` abstract method declaration `int apply(int j)`

6)

C . This program prints: mo miny meeny eeny This is a proper definition of a lambda
expression. Since the second argument of `Collections.sort()` method takes the functional
interface `Comparator` and a matching lambda expression is passed in this code. Note that
second argument is compared with the first argument in the lambda expression (`str1`, `str2`) ->
`str2.compareTo(str1)` . For this reason, the comparison is performed in descending order.

7)

D. This code segment does not print anything on the console The `limit()` method is an
intermediate operation and not a terminal operation. Since there is no terminal operation in

this code segment, elements are not processed in the stream and hence it does not print anything on the console.

8) C.

The program prints the following: Brazil China India Russia. For the `sort()` method, null value is passed as the second argument, which indicates that the elements' "natural ordering" should be used. In this case, natural ordering for Strings results in the strings sorted in ascending order. Note that passing null to the `sort()` method does not result in a `NullPointerException`.

9) C

This program prints: 11 This program compiles without any errors.

The variable `words` point to a stream of Strings.

The call `mapToInt(String::length)` results in a stream of Integers with the length of the strings. One of the overloaded versions of `reduce()` method takes two arguments: `T reduce(T identity, BinaryOperator<T> accumulator)`; The first argument is the identity value, which is given as the value 0 here. The second operand is a `BinaryOperator` match for the lambda expression `(len1, len2) -> len1 + len2`. The `reduce()` method thus adds the length of all the three strings in the stream, which results in the value 11.

10) B

This program prints: [1, 4, 9, 16, 25] The `replaceAll()` method (added in Java 8 to the `List` interface) takes an `UnaryOperator` as the argument. In this case, the unary operator squares the integer values. Hence, the program prints [1, 4, 9, 16, 25].