ATMIC NETWORKS
YOUR GUIDE TO GLOBAL CERTIFIATION

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Question: 1

Given the definition of the Vehicle class:

```
Class Vehhicle {
int distance;//line n1
Vehicle (int x) {
this distance = x;
}
public void increSpeed(int time) {//line n2
int timeTravel = time;//line n3
class Car {
int value = 0;
public void speed () {
value = distance /timeTravel;
System.out.println ("Velocity with new speed"+value+"kmph"); }
}
new Car().speed();
}
}
```

and this code fragment:

```
Vehicle v = new Vehicle (100);
v.increSpeed(60);
```

What is the result?

A. Velocity with new speed
B. A compilation error occurs at line n1.
C. A compilation error occurs at line n2.
D. A compilation error occurs at line n3.

Answer: A

Explanation:

Question: 2

Given:

```
IntStream stream = IntStream.of (1,2,3);
IntFunction<Integer> inFu= x -> y -> x*y;//line n1
IntStream newStream = stream.map(inFu.apply(10));//line n2
newStream.forEach(System.out::print);
```

Which modification enables the code fragment to compile?

A. Replace line n1 with:IntFunction<UnaryOperator> inFu = x -> y -> x*y;
B. Replace line n1 with:IntFunction<IntUnaryOperator> inFu = x -> y -> x*y;
C. Replace line n1 with:BiFunction<IntUnaryOperator> inFu = x -> y -> x*y;
D. Replace line n2 with:IntStream newStream = stream.map(inFu.applyAsInt (10));

Answer: B

Explanation:

Question: 3

Given the code fragment:

```
List<Integer> values = Arrays.asList (1, 2, 3); values.stream () .map(n -> n*2)//line n1
.peek(System.out::print)//line n2 .count();
```

What is the result?

A. 246
B. The code produces no output.
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: A

Explanation:

Question: 4

Given the code fragment:

```
public class Foo {
public static void main (String [ ] args) {

Map<Integer, String> unsortMap = new HashMap< > ( );
unsortMap.put (10, “z”);
unsortMap.put (5, “b”);
```

```
unsortMap.put (1, “d”);
unsortMap.put (7, “e”);
unsortMap.put (50, “j”);

Map<Integer, String> treeMap = new TreeMap <Integer, String> (new
Comparator<Integer> ( ) {
@Override public int compare (Integer o1, Integer o2) {return o2.compareTo (o1); } } );

treeMap.putAll (unsortMap);

for (Map.Entry<Integer, String> entry : treeMap.entrySet () ) {
System.out.print (entry.getValue () + “ “);
}
}
}
```

What is the result?

A. A compilation error occurs.
B. d b e z j
C. j z e b d
D. z b d e j

Answer: C

Explanation:

Question: 5

Which two reasons should you use interfaces instead of abstract classes? (Choose two.)

A. You expect that classes that implement your interfaces have many common methods or fields, or require access modifiers other than public.
B. You expect that unrelated classes would implement your interfaces.
C. You want to share code among several closely related classes.
D. You want to declare non-static on non-final fields.
E. You want to take advantage of multiple inheritance of type.

Answer: B,E

References:

Question: 6

Given:

```
public class Counter {
```

```
public static void main (String[ ] args) {
int a = 10;
int b = -1;
assert (b >=1) : “Invalid Denominator”;
int c = a / b;
System.out.println (c);
}
}
```

What is the result of running the code with the –ea option?

A. -10
B. 0
C. An AssertionError is thrown.
D. A compilation error occurs.

Answer: C

Explanation:

Question: 7

Given:

```
class Bird {
public void fly () { System.out.print(“Can fly”); }
}
class Penguin extends Bird {
public void fly () { System.out.print(“Cannot fly”); } }
```

and the code fragment:

```
class Birdie {
public static void main (String [ ] args) {
fly( ( ) -> new Bird ( ));
fly (Penguin : : new);
}
/* line n1 */
}
```

Which code fragment, when inserted at line n1, enables the Birdie class to compile?

A. static void fly (Consumer<Bird> bird) {bird :: fly ();}

B. static void fly (Consumer<? extends Bird> bird) {bird.accept( ) fly ();}
C. static void fly (Supplier<Bird> bird) {bird.get( ) fly ();}
D. static void fly (Supplier<? extends Bird> bird) {LOST

Answer: C

Explanation:

Question: 8

Given:

```
1. abstract class Shape {
2. Shape ( ) { System.out.println (“Shape”); }
3. protected void area ( ) { System.out.println (“Shape”); }
4. }
5.
6. class Square extends Shape {
7. int side;
8. Square int side {
9. /* insert code here */
10. this.side = side;
11. }
12. public void area ( ) { System.out.println (“Square”); }
13. }
14. class Rectangle extends Square {
15. int len, br;
16. Rectangle (int x, int y) {
17. /* insert code here */
18. len = x, br = y;
19. }
20. void area ( ) { System.out.println (“Rectangle”); }
21. }
```

Which two modifications enable the code to compile? (Choose two.)

A. At line 1, remove abstract
B. At line 9, insert super ( );
C. At line 12, remove public
D. At line 17, insert super (x);
E. At line 17, insert super (); super.side = x;
F. At line 20, use public void area ( ) {

Answer: D,F

Explanation:

Question: 9

Given:

```
class Sum extends RecursiveAction { //line n1 static final int THRESHOLD_SIZE = 3;
int stIndex, lstIndex;
int [ ] data;
public Sum (int [ ]data, int start, int end) { this.data = data;
this stIndex = start;
this. lstIndex = end;
}
protected void compute ( ) { int sum = 0;
if (lstIndex – stIndex <= THRESHOLD_SIZE) { for (int i = stIndex; i < lstIndex; i++) { sum += data [i];
}
System.out.println(sum);
} else {
new Sum (data, stIndex + THRESHOLD_SIZE, lstIndex).fork( ); new Sum (data, stIndex,
Math.min (lstIndex, stIndex + THRESHOLD_SIZE) ).compute ();
}
}
}
```

and the code fragment:

```
ForkJoinPool ηPool = new ForkJoinPool ( ); int data [ ] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10} ηPool.invoke (new Sum (data,
0, data.length));
```

and given that the sum of all integers from 1 to 10 is 55. Which statement is true?

A. The program prints several values that total 55.
B. The program prints 55.
C. A compilation error occurs at line n1.
D. The program prints several values whose sum exceeds 55.

Answer: C

Explanation:

Question: 12

Given the code fragment:

```
Path file = Paths.get (“courses.txt”);
// line n1
```

Assume the courses.txt is accessible.

Which code fragment can be inserted at line n1 to enable the code to print the content of the courses.txt file?

A. List<String> fc = Files.list(file);fc.stream().forEach (s - > System.out.println(s));
B. Stream<String> fc = Files.readAllLines (file);fc.forEach (s - > System.out.println(s));
C. List<String> fc = readAllLines(file);fc.stream().forEach (s - > System.out.println(s));
D. Stream<String> fc = Files.lines (file);fc.forEach (s - > System.out.println(s));

Answer: D

Explanation:

Question: 13

Given the code fragment:

```
public void recDelete (String dirName) throws IOException { File [ ] listOfFiles = new File (dirName) .listFiles();
if (listOfFiles ! = null && listOfFiles.length >0) {
for (File aFile : listOfFiles) {
if (aFile.isDirectory ()) {

recDelete (aFile.getAbsolutePath ());
} else {
if (aFile.getName ().endsWith (".class"))
aFile.delete ();
}
}
}
}
```

Assume that Projects contains subdirectories that contain .class files and is passed as an argument to the recDelete () method when it is invoked.

What is the result?

A. The method deletes all the .class files in the Projects directory and its subdirectories.
B. The method deletes the .class files of the Projects directory only.
C. The method executes and does not make any changes to the Projects directory.
D. The method throws an IOException.

Answer: A

Explanation:

Question: 14

Given the code fragments:

```
4.  void doStuff() throws ArithmeticException, NumberFormatException, Exception {
5.  if (Math.random() >-1 throw new Exception ("Try again");
6.  }
```

and

```
24.  try {
25.  doStuff ( ):
26.  } catch (ArithmeticException | NumberFormatException | Exception e) {
27.  System.out.println (e.getMessage()); }
28.  catch (Exception e) {
29.  System.out.println (e.getMessage()); }
30.  }
```

Which modification enables the code to print Try again?

A. Comment the lines 28, 29 and 30.
B. Replace line 26 with:} catch (Exception | ArithmeticException | NumberFormatException e) {
C. Replace line 26 with:} catch (ArithmeticException | NumberFormatException e) {
D. Replace line 27 with:throw e;

Answer: C

Explanation:

Question: 15

Given the definition of the Country class:

```
public class country {
public enum Continent {ASIA, EUROPE}
String name;
Continent region;

public Country (String na, Continent reg) { name = na, region = reg;
}
public String getName () {return name;}
public Continent getRegion () {return region;}
}
```

and the code fragment:

```
List<Country> couList = Arrays.asList (
new Country ("Japan", Country.Continent.ASIA),
new Country ("Italy", Country.Continent.EUROPE),
new Country ("Germany", Country.Continent.EUROPE));
```

```
Map<Country.Continent, List<String>> regionNames = couList.stream () .collect(Collectors.groupingBy (Country
::getRegion, Collectors.mapping(Country::getName, Collectors.toList())));
System.out.println(regionNames);
```

What is the output?

A. {EUROPE = [Italy, Germany], ASIA = [Japan]}
B. {ASIA = [Japan], EUROPE = [Italy, Germany]}
C. {EUROPE = [Germany, Italy], ASIA = [Japan]}
D. {EUROPE = [Germany], EUROPE = [Italy], ASIA = [Japan]}

Answer: B

Explanation:

Question: 16

Given the code fragment:

```
Map<Integer, String> books = new TreeMap<>(); books.put (1007, "A");

books.put (1002, "C");
books.put (1001, "B");
books.put (1003, "B");
System.out.println (books);
```

What is the result?

A. {1007 = A, 1002= C, 1001 = B, 1003 =B}
B. {1001 = B, 1002= C, 1003 = B, 1007 =A}
C. {1002 = C, 1003= B, 1007 = A}
D. {1007 = A, 1001= B, 1003 = B, 1002 =C}

Answer: B

References:

Question: 17

Given:

```
class Book {
int id;
String name;
public Book (int id, String name) {
this.id = id;
this.name = name;
}
public boolean equals (Object obj) { //line n1
```

```
boolean output = false;
Book b = (Book) obj;
if (this.name.equals(b name))}
output = true;
}
return output;
}
}
```

and the code fragment:

```
Book b1 = new Book (101, "Java Programing");
Book b2 = new Book (102, "Java Programing");
System.out.println (b1.equals(b2)); //line n2
```

Which statement is true?

A. The program prints true.
B. The program prints false.
C. A compilation error occurs. To ensure successful compilation, replace line n1 with:boolean equalsBook obj) {
D. A compilation error occurs. To ensure successful compilation, replace line n2 with:System.out.println (b1.equals((Object) b2));

Answer:A

(

Explanation:

Question: 18

Given the content of /resourses/Message.properties:

welcome1="Good day!"

and given the code fragment:

```
Properties prop = new Properties ();
FileInputStream fis = new FileInputStream ("/resources/Message.properties");
prop.load(fis);
System.out.println(prop.getProperty("welcome1"));
System.out.println(prop.getProperty("welcome2", "Test"));//line n1
System.out.println(prop.getProperty("welcome3"));
```

What is the result?

A. Good day!Testfollowed by an Exception stack trace
B. Good day!followed by an Exception stack trace
C. Good day!Testnull
D. A compilation error occurs at line n1.

Answer: C

Explanation:

Question: 19

Which action can be used to load a database driver by using JDBC3.0?

A. Add the driver class to the META-INF/services folder of the JAR file.
B. Include the JDBC driver class in a jdbc.properties file.
C. Use the java.lang.Class.forName method to load the driver class.
D. Use the DriverManager.getDriver method to load the driver class.

Explanation:

Question: 20

Given the code fragment:

```
Path p1 = Paths.get("/Pics/MyPic.jpeg");
System.out.println (p1.getNameCount() +
":" + p1.getName(1) +
":" + p1.getFileName());
```

Assume that the Pics directory does NOT exist. What is the result?

A. An exception is thrown at run time.
B. 2:MyPic.jpeg: MyPic.jpeg
C. 1:Pics:/Pics/ MyPic.jpeg
D. 2:Pics: MyPic.jpeg

Answer: B

Explanation:

Question: 21

Given the code fragments:

```
class MyThread implements Runnable {
private static AtomicInteger count = new AtomicInteger (0);
public void run () {
int x = count.incrementAndGet();
System.out.print (x+" ");
}
}
```

and

```
Thread thread1 = new Thread(new MyThread());
Thread thread2 = new Thread(new MyThread());
Thread thread3 = new Thread(new MyThread());

Thread [] ta = {thread1, thread2, thread3};
for (int x= 0; x < 3; x++) {
ta[x].start();
}
```

Which statement is true?

A. The program prints 1 2 3 and the order is unpredictable.
B. The program prints 1 2 3.
C. The program prints 1 1 1.
D. A compilation error occurs.

Answer: A

Explanation:

Question: 22

Given the code fragment:

```
public static void main (String [ ] args) throws IOException {
BufferedReader br = new BufferedReader (new InputStremReader (System.in));
System.out.print ("Enter GDP: ");
//line 1
}
```

Which code fragment, when inserted at line 1, enables the code to read the GDP from the user?

A. int GDP = Integer.parseInt (br.readline());
B. int GDP = br.read();
C. int GDP = br.nextInt();
D. int GDP = Integer.parseInt (br.next());

Answer: A

Explanation:

Question: 23

Given the code fragment:

```
Path source = Paths.get ("/data/december/log.txt");
Path destination = Paths.get("/data");
Files.copy (source, destination);
```

and assuming that the file /data/december/log.txt is accessible and contains:

10-Dec-2014 – Executed successfully

What is the result?

A. A file with the name log.txt is created in the /data directory and the content of the /data/december/log.txt file is copied to it.
B. The program executes successfully and does NOT change the file system.
C. A FileNotFoundException is thrown at run time.
D. A FileAlreadyExistsException is thrown at run time.

Answer: D

Explanation:

Question: 24

Given:

```
class Student {
String course, name, city;
public Student (String name, String course, String city) { this.course = course; this.name = name; this.city = city;
}
public String toString() {
return course + ":" + name + ":" + city;
}
```

and the code fragment:

```
List<Student> stds = Arrays.asList(
new Student ("Jessy", "Java ME", "Chicago"),
new Student ("Helen", "Java EE", "Houston"),
new Student ("Mark", "Java ME", "Chicago"));
stds.stream()
.collect(Collectors.groupingBy(Student::getCourse))
.forEach(src, res) -> System.out.println(scr));
```

What is the result?

A. [Java EE: Helen:Houston][Java ME: Jessy:Chicago, Java ME: Mark:Chicago] B. Java EEJava ME
C. [Java ME: Jessy:Chicago, Java ME: Mark:Chicago][Java EE: Helen:Houston] D. A compilation error occurs.

Answer: B

Explanation:

Question: 25

Given the code fragments:

```
interface CourseFilter extends Predicate<String> {
public default boolean test (String str) {
return str.equals ("Java");

}
}
```

and

```
List<String> strs = Arrays.asList("Java", "Java EE", "Java ME");
Predicate<String> cf1 = s - > s.length() > 3;
Predicate cf2 = new CourseFilter() { //line n1
public boolean test (String s) {
return s.contains ("Java");
}
};
long c = strs.stream()
.filter(cf1)
.filter(cf2//line n2
.count();
System.out.println(c);
```

What is the result?

A. 2
B. 3
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: B

Explanation:

Question: 26

Given:

```
public class Emp {
String fName;
String lName;
public Emp (String fn, String ln) {
fName = fn;
lName = ln;
}
public String getfName() { return fName; } public String getlName() { return lName; } }
```

and the code fragment:

```
List<Emp> emp = Arrays.asList ( new Emp ("John", "Smith"),
new Emp ("Peter", "Sam"),
new Emp ("Thomas", "Wale"));
emp.stream()
//line n1
.collect(Collectors.toList());
```

Which code fragment, when inserted at line n1, sorts the employees list in descending order of fName and then ascending order of lName?

A. .sorted (Comparator.comparing(Emp::getfName).reserved().thenComparing(Emp::getlName))
B. .sorted (Comparator.comparing(Emp::getfName).thenComparing(Emp::getlName))
C. .map(Emp::getfName).sorted(Comparator.reserveOrder())
D. .map(Emp::getfName).sorted(Comparator.reserveOrder().map(Emp::getlName).reserved

Answer: B

Explanation:

Question: 27

Given:

```
public enum USCurrency {
PENNY (1),
NICKLE(5),
DIME (10),
QUARTER(25);

private int value;

public USCurrency(int value) {
this.value = value;
}
public int getValue() {return value;}
}
public class Coin {
public static void main (String[] args) {
USCurrency usCoin =new USCurrency.DIME;
System.out.println(usCoin.getValue());
}
}
```

Which two modifications enable the given code to compile? (Choose two.)

A. Nest the USCurrency enumeration declaration within the Coin class.
B. Make the USCurrency enumeration constructor private.
C. Remove the new keyword from the instantion of usCoin.
D. Make the getter method of value as a static method.
E. Add the final keyword in the declaration of value.

Answer: B,C

Question: 28

Given:

```
class ImageScanner implements AutoCloseable { public void close () throws Exception {
System.out.print (“Scanner closed.”);
}
public void scanImage () throws Exception {
System.out.print (“Scan.”);
throw new Exception(“Unable to scan.”);
}
}
class ImagePrinter implements AutoCloseable {
public void close () throws Exception { System.out.print (“Printer closed.”);
}
public void printImage () {System.out.print(“Print.”); }
}
```

and this code fragment:

```
try (ImageScanner ir = new ImageScanner(); ImagePrinter iw = new ImagePrinter()) { ir.scanImage();
iw.printImage();
} catch (Exception e) {
System.out.print(e.getMessage());
}
```

What is the result?

A. Scan.Printer closed. Scanner closed. Unable to scan.
B. Scan.Scanner closed. Unable to scan.
C. Scan. Unable to scan.
D. Scan. Unable to scan. Printer closed.

Answer: A

Explanation:

Question: 29

Given the structure of the STUDENT table:

Student (id INTEGER, name VARCHAR)

Given:

```
public class Test {
static Connection newConnection =null;
public static Connection get DBConnection () throws SQLException {
try (Connection con = DriveManager.getConnection(URL, username, password)) { newConnection = con;
}
return newConnection;
}
public static void main (String [] args) throws SQLException {
get DBConnection ();
Statement st = newConnection.createStatement();
st.executeUpdate("INSERT INTO student VALUES (102, 'Kelvin')");
}
}
```

Assume that:

The required database driver is configured in the classpath.

The appropriate database is accessible with the URL, userName, and passWord exists.

The SQL query is valid.

What is the result?

A. The program executes successfully and the STUDENT table is updated with one record.
B. The program executes successfully and the STUDENT table is NOT updated with any record.
C. A SQLException is thrown as runtime.
D. A NullPointerException is thrown as runtime.

Answer: C

Explanation:

Question: 30

Given the code fragments:

```
class Employee {
Optional<Address> address;
Employee (Optional<Address> address) { this.address = address;

}
public Optional<Address> getAddress() { return address; }
}

class Address {
String city = "New York";
public String getCity { return city: }
```

```
public String toString() {
return city;
}
}
```

and

```
Address address = null;
Optional<Address> addrs1 = Optional.ofNullable (address);
Employee e1 = new Employee (addrs1);
String eAddress = (addrs1.isPresent()) ? addrs1.get().getCity() : "City Not available";
```

What is the result?

A. New York
B. City Not available
C. null
D. A NoSuchElementException is thrown at run time.

Answer: B

Explanation:

Question: 31

Given the code fragment:

```
Stream<Path> files = Files.walk(Paths.get(System.getProperty("user.home")));
files.forEach (fName -> {//line n1
try {
Path aPath = fName.toAbsolutePath();//line n2
System.out.println(fName + ":"
+ Files.readAttributes(aPath, Basic.File.Attributes.class).creationTime ());
} catch (IOException ex) {
ex.printStackTrace();
});
```

What is the result?

A. All files and directories under the home directory are listed along with their attributes.
B. A compilation error occurs at line n1.
C. The files in the home directory are listed along with their attributes.
D. A compilation error occurs at line n2.

Answer: A

Explanation:

Question: 32

Given:

```
class Vehicle { int vno;
String name;

public Vehicle (int vno, String name) { this.vno = vno,;
this.name = name;
}
public String toString () { return vno + ":" + name;
}
}
```

and this code fragment:

```
Set<Vehicle> vehicles = new TreeSet <> (); vehicles.add(new Vehicle (10123, "Ford"));
vehicles.add(new Vehicle (10124, "BMW"));
System.out.println(vehicles);
```

What is the result?

A. 10123 Ford10124 BMW
B. 10124 BMW10123 Ford
C. A compilation error occurs.
D. A ClassCastException is thrown at run time.

Answer: D

Explanation:

Question: 33

Given that course.txt is accessible and contains:

```
Course : : Java
```

and given the code fragment:

```
public static void main (String[ ] args) {
int i;
char c;
try (FileInputStream fis = new FileInputStream ("course.txt"); InputStreamReader isr = new
InputStreamReader(fis);) { while (isr.ready()) { //line n1
isr.skip(2);
i = isr.read ();
c = (char) i;
System.out.print(c);
}
} catch (Exception e) {
e.printStackTrace();
}
}
```

What is the result?

A. ur :: va
B. ueJa
C. The program prints nothing.
D. A compilation error occurs at line n1.

Answer: B

Explanation:

Question: 34

Given:

```
public class Test<T> {
private T t;
public T get () {
return t;
}
public void set (T t) {
this.t = t;
}
public static void main (String args [ ] ) { Test<String> type = new Test<>();
Test type 1 = new Test ();//line n1
type.set("Java");
type1.set(100);//line n2
System.out.print(type.get() + " " + type1.get());
}
}
```

What is the result?

A. Java 100
B. java.lang.string@<hashcode>java.lang.Integer@<hashcode>
C. A compilation error occurs. To rectify it, replace line n1 with:Test<Integer> type1 = new Test<>();
D. A compilation error occurs. To rectify it, replace line n2 with:type1.set (Integer(100));

Answer: A

Explanation:

Question: 35

Given the definition of the Vehicle class:

```
class Vehicle {
String name;
void setName (String name) { this.name = name;
}
String getName() { return name;
} }
```

Which action encapsulates the Vehicle class?

A. Make the Vehicle class public.
B. Make the name variable public.
C. Make the setName method public.
D. Make the name variable private.
E. Make the setName method private.
F. Make the getName method private.

Answer: D

Explanation:

Question: 36

Given:

```
public class product {
int id; int price;
public Product (int id, int price) {
this.id = id;
this.price = price;
```

```
}
public String toString() { return id + ":" + price; }
}
```

and the code fragment:

```
List<Product> products = Arrays.asList(new Product(1, 10),
new Product (2, 30),
new Product (2, 30));
Product p = products.stream().reduce(new Product (4, 0), (p1, p2) -> { p1.price+=p2.price;
return new Product (p1.id, p1.price);});
products.add(p);
products.stream().parallel()
.reduce((p1, p2) - > p1.price > p2.price ? p1 : p2) .ifPresent(System.out: :println);
```

What is the result?

A. 2 : 30
B. 4 : 0
C. 4 : 70
D. 4 : 602 : 303 : 201 : 10
E. The program prints nothing.

Answer: C

Explanation:

Question: 37

Given the code fragments:

```
public class Book implements Comparator<Book> {
String name;
double price;
public Book () {}
public Book(String name, double price) {
this.name = name;
this.price = price;
}
public int compare(Book b1, Book b2) {
return b1.name.compareTo(b2.name);
}
public String toString() {
return name + ":" + price;
}
}
```

and

```
List<Book>books = Arrays.asList (new Book ("Beginning with Java", 2), new book ("A
Guide to Java Tour", 3));
Collections.sort(books, new Book());
System.out.print(books);
```

What is the result?

A. [A Guide to Java Tour:3.0, Beginning with Java:2.0]
B. [Beginning with Java:2, A Guide to Java Tour:3]
C. A compilation error occurs because the Book class does not override the abstract method compareTo().
D. An Exception is thrown at run time.

Answer: A

Explanation:

Question: 38

Given the code fragment:

```
List<String> listVal = Arrays.asList("Joe", "Paul", "Alice", "Tom");
System.out.println (
// line n1
);
```

Which code fragment, when inserted at line n1, enables the code to print the count of string elements whose length is greater than three?

A. listVal.stream().filter(x -> x.length()>3).count()
B. listVal.stream().map(x -> x.length()>3).count()
C. listVal.stream().peek(x -> x.length()>3).count().get()
D. listVal.stream().filter(x -> x.length()>3).mapToInt(x -> x).count()

Answer: A

Explanation:

Question: 39

Given the code fragments:

```
class Caller implements Callable<String> {
String str;
public Caller (String s) {this.str=s;}
public String call()throws Exception { return str.concat ("Caller");} }
class Runner implements Runnable {
String str;
public Runner (String s) {this.str=s;}
public void run () { System.out.println (str.concat ("Runner"));} }
```

and

```
public static void main (String[] args) InterruptedException, ExecutionException { ExecutorService es =
Executors.newFixedThreadPool(2);
Future f1 = es.submit (new Caller ("Call"));
Future f2 = es.submit (new Runner ("Run"));
String str1 = (String) f1.get();
String str2 = (String) f2.get();//line n1
System.out.println(str1+ ":" + str2);
}
```

What is the result?

A. The program prints:Run RunnerCall Caller : nullAnd the program does not terminate.
B. The program terminates after printing:Run RunnerCall Caller : Run
C. A compilation error occurs at line n1.
D. An Execution is thrown at run time.

Answer: A

Explanation:

Question: 40

Given:

```
public class Canvas implements Drawable {
public void draw () { }
}
public abstract class Board extends Canvas { }

public class Paper extends Canvas { protected void draw (int color) { }
}
public class Frame extends Canvas implements Drawable { public void resize () { }
}
public interface Drawable { public abstract void draw ();
```

}

Which statement is true?

A. Board does not compile.
B. Paper does not compile.
C. Frame does not compile.
D. Drawable does not compile.
E. All classes compile successfully.

Answer: E

Explanation:

Question: 41

Given the code fragment:

```
List<String> str = Arrays.asList (“my”, “pen”, “is”, “your’, “pen”);
Predicate<String> test = s -> { int i = 0;
boolean result = s.contains (“pen”);
System.out.print(i++) + “:”);
return result;
};
str.stream()
.filter(test)
.findFirst()
.ifPresent(System.out ::print);
```

What is the result?

A. 0 : 0 : pen
B. 0 : 1 : pen
C. 0 : 0 : 0 : 0 : 0 : pen
D. 0 : 1 : 2 : 3 : 4 :
E. A compilation error occurs.

Answer: A

Explanation:

Question: 42

Given the code fragment:

```
List<String> empDetails = Arrays.asList("100, Robin, HR",
"200, Mary, AdminServices",
"101, Peter, HR");
empDetails.stream()
.filter(s-> s.contains("1"))
.sorted()
.forEach(System.out::println); //line n1
```

What is the result?

A. 100, Robin, HR101, Peter, HR
B. E. A compilation error occurs at line n1.
C. 100, Robin, HR101, Peter, HR200, Mary, AdminServices
D. 100, Robin, HR200, Mary, AdminServices101, Peter, HR

Answer: A

Explanation:

Question: 43

Given:

```
interface Rideable {Car getCar (String name); }

class Car {
private String name;
public Car (String name) {
this.name = name;
}
}
```

Which code fragment creates an instance of Car?

A. Car auto = Car ("MyCar"): : new;
B. Car auto = Car : : new;Car vehicle = auto : : getCar("MyCar");
C. Rideable rider = Car : : new;Car vehicle = rider.getCar("MyCar");
D. Car vehicle = Rideable : : new : : getCar("MyCar");

Answer: C

Explanation:

Question: 44

Which statement is true about the single abstract method of the java.util.function.Function interface?

A. It accepts one argument and returns void.
B. It accepts one argument and returns boolean.
C. It accepts one argument and always produces a result of the same type as the argument.
D. It accepts an argument and produces a result of any data type.

Answer: D

Explanation:

Question: 45

Which statement is true about the DriverManager class?

A. It returns an instance of Connection.
B. It executes SQL statements against the database.
C. It only queries metadata of the database.
D. it is written by different vendors for their specific database.

Answer: A

Explanation:

The DriverManager returns an instance of Doctrine\DBAL\Connection which is a wrapper around the underlying driver connection (which is often a PDO instance).
References:

Question: 46

Given the code fragment:

```
List<Integer> nums = Arrays.asList (10, 20, 8):
System.out.println (
//line n1
);
```

Which code fragment must be inserted at line n1 to enable the code to print the maximum number in the nums list?

A. nums.stream().max(Comparator.comparing(a -> a)).get()
B. nums.stream().max(Integer : : max).get()
C. nums.stream().max()
D. nums.stream().map(a -> a).max()

Answer: A

Explanation:

Question: 47

Given:

```
public final class IceCream {
public void prepare() {}
}
public class Cake {
public final void bake(int min, int temp) {}
public void mix() {}
}
public class Shop {
private Cake c = new Cake ();
private final double discount = 0.25;
public void makeReady () { c.bake(10, 120); }
}
public class Bread extends Cake {
public void bake(int minutes, int temperature) {} public void addToppings() {}
}
```

Which statement is true?

A. A compilation error occurs in IceCream.
B. A compilation error occurs in Cake.
C. A compilation error occurs in Shop.
D. A compilation error occurs in Bread
E. All classes compile successfully.

Answer: D

Explanation:

Question: 48

Which two statements are true about localizing an application? (Choose two.)

A. Support for new regional languages does not require recompilation of the code.
B. Textual elements (messages and GUI labels) are hard-coded in the code.
C. Language and region-specific programs are created using localized data.
D. Resource bundle files include data and currency information.
E. Language codes use lowercase letters and region codes use uppercase letters.

Answer: A,E

References:

Question: 49

Which statement is true about java.util.stream.Stream?

A. A stream cannot be consumed more than once.
B. The execution mode of streams can be changed during processing.
C. Streams are intended to modify the source data.
D. A parallel stream is always faster than an equivalent sequential stream.

Answer: B

Explanation:

Question: 50

The data.doc, data.txt and data.xml files are accessible and contain text.
Given the code fragment:

```
Stream<Path> paths = Stream.of (Paths. get("data.doc"),
Paths. get("data.txt"),
Paths. get("data.xml"));
paths.filter(s-> s.toString().endWith("txt")).forEach(
s -> {
try {
Files.readAllLines(s)
.stream()
.forEach(System.out::println); //line n1
} catch (IOException e) {
System.out.println("Exception");
}
}
);
```

What is the result?

A. The program prints the content of data.txt file.
B. The program prints:Exception<<The content of the data.txt file>>Exception
C. A compilation error occurs at line n1.
D. The program prints the content of the three files.

Answer: A

Explanation:

Question: 51

Given:

```
final class Folder {//line n1
//line n2
public void open () {
System.out.print("Open");
}
}
public class Test {
public static void main (String [] args) throws Exception {
try (Folder f = new Folder()) {
f.open();
}
}
}
```

Which two modifications enable the code to print Open Close? (Choose two.)

A. Replace line n1 with:class Folder implements AutoCloseable {
B. Replace line n1 with:class Folder extends Closeable {
C. Replace line n1 with:class Folder extends Exception {
D. At line n2, insert:final void close () {System.out.print("Close");}
E. At line n2, insert:public void close () throws IOException {System.out.print("Close");}

Answer: A,E

Explanation:

Question: 52

You want to create a singleton class by using the Singleton design pattern.
Which two statements enforce the singleton nature of the design? (Choose two.)

A. Make the class static.
B. Make the constructor private.
C. Override equals() and hashCode() methods of the java.lang.Object class.
D. Use a static reference to point to the single instance.

E. Implement the Serializable interface.

Answer: B,D

Explanation:

Question: 53

Given the code fragment:

```
9. Connection conn = DriveManager.getConnection(dbURL, userName, passWord);
10. String query = "SELECT id FROM Employee";
11. try (Statement stmt = conn.createStatement()) {
12. ResultSet rs = stmt.executeQuery(query);
13. stmt.executeQuery("SELECT id FROM Customer");
14. while (rs.next()) {
15. //process the results
16. System.out.println("Employee ID: "+ rs.getInt("id"));
17.}
18. } catch (Exception e) {
19. System.out.println ("Error");
20. }
```

Assume that:

The required database driver is configured in the classpath.

The appropriate database is accessible with the dbURL, userName, and passWord exists.

The Employee and Customer tables are available and each table has id column with a few records and the SQL queries are valid.

What is the result of compiling and executing this code fragment?

A. The program prints employee IDs.

B. The program prints customer IDs.

C. The program prints Error.

D. compilation fails on line 13.

Answer: C

Explanation:

Question: 54

Given the code fragment:

```
List<Integer> codes = Arrays.asList (10, 20);
UnaryOperator<Double> uo = s -> s +10.0; codes.replaceAll(uo);
codes.forEach(c -> System.out.println(c));
```

What is the result?

A. 20.030.0
B. 1020
C. A compilation error occurs.
D. A NumberFormatException is thrown at run time.

Answer: C

Explanation:

Question: 55

Given:

```
public class Customer {
private String fName;
private String lName;
private static int count;
public customer (String first, String last) {fName = first, lName = last; ++count;}
static { count = 0; }
public static int getCount() {return count; }
}

public class App {
public static void main (String [] args) {
Customer c1 = new Customer("Larry", "Smith");
Customer c2 = new Customer("Pedro", "Gonzales");
Customer c3 = new Customer("Penny", "Jones");
Customer c4 = new Customer("Lars", "Svenson");
c4 = null;
c3 = c2;
System.out.println (Customer.getCount());
}
}
```

What is the result?

A. 0
B. 2
C. 3
D. 4
E. 5

Answer: D

Explanation:

Question: 56

Given:

Item table

- ID, INTEGER: PK
- DESCRIP, VARCHAR(100)
- PRICE, REAL
- QUANTITY< INTEGER

And given the code fragment:

```
9.  try {
10. Connection conn = DriveManager.getConnection(dbURL, username, password);
11. String query = "Select * FROM Item WHERE ID = 110";
12. Statement stmt = conn.createStatement();
13. ResultSet rs = stmt.executeQuery(query);
14.  while(rs.next()) {
1.  .System.out.println("ID:" + rs.getInt("Id"));
2.  .System.out.println("Description:" + rs.getString("Descrip"));
3.  .System.out.println("Price:" + rs.getDouble("Price"));
18. System.out.println(Quantity:" + rs.getInt("Quantity"));
19.}
20.  } catch (SQLException se) {
21.  System.out.println("Error");
22.  }
```

Assume that:
The required database driver is configured in the classpath.
The appropriate database is accessible with the dbURL, userName, and passWord exists.
The SQL query is valid.

What is the result?

A. An exception is thrown at runtime.
B. Compilation fails.
C. The code prints Error.
D. The code prints information about Item 110.

Answer: D

Explanation:

Question: 57

Given:

```
class Worker extends Thread {
CyclicBarrier cb;
```

```
public Worker(CyclicBarrier cb) { this.cb = cb; }
public void run () {
try {
cb.await();
System.out.println("Worker...");
} catch (Exception ex) { }
}
}
class Master implements Runnable { //line n1
public void run () {
System.out.println("Master...");
}
}
```

and the code fragment:

```
Master master = new Master();
//line n2
Worker worker = new Worker(cb);
worker.start();
```

You have been asked to ensure that the run methods of both the Worker and Master classes are executed.
Which modification meets the requirement?

A. At line n2, insert CyclicBarrier cb = new CyclicBarrier(2, master);
B. Replace line n1 with class Master extends Thread {
C. At line n2, insert CyclicBarrier cb = new CyclicBarrier(1, master);
D. At line n2, insert CyclicBarrier cb = new CyclicBarrier(master);

Answer: C

Explanation:

Question: 58

Given the code fragment:

```
String str = "Java is a programming language";
ToIntFunction<String> indexVal = str: : indexOf; //line n1 int x = indexVal.applyAsInt("Java");//line n2
System.out.println(x);
```

What is the result?

A. 0
B. 1
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: A

Explanation:

Question: 59

Given the code fragment:

```
List<String> codes = Arrays.asList (“DOC”, “MPEG”, “JPEG”);
codes.forEach (c -> System.out.print(c + “ “));
String fmt = codes.stream()
.filter (s-> s.contains (“PEG”))
.reduce((s, t) -> s + t).get();
System.out.println(“\n” + fmt);
```

What is the result?

A. DOC MPEG JPEGMPEGJPEG
B. DOC MPEG MPEGJPEGMPEGMPEGJPEG
C. MPEGJPEGMPEGJPEG
D. The order of the output is unpredictable.

Answer: A

Explanation:

Question: 60

Given the code fragment:

```
List<String> nL = Arrays.asList(“Jim”, “John”, “Jeff”);
Function<String, String> funVal = s -> “Hello : “.contact(s);
nL.Stream()
.map(funVal)
.peek(System.out::print);
```

What is the result?

A. Hello : Jim Hello : John Hello : Jeff
B. Jim John Jeff
C. The program prints nothing.
D. A compilation error occurs.

Answer: C

Explanation:

Question: 61

Given:

```
public interface Moveable<Integer> {
public default void walk (Integer distance) {System.out.println("Walking");)
public void run(Integer distance);
}
```

Which statement is true?

A. Moveable can be used as below:Moveable<Integer> animal = n - > System.out.println("Running" + n);animal.run(100);animal.walk(20);
B. Moveable can be used as below:Moveable<Integer> animal = n - > n + 10;animal.run(100);animal.walk(20);
C. Moveable can be used as below:Moveable animal = (Integer n) - > System.out.println(n);animal.run(100);Moveable.walk(20);
D. Movable cannot be used in a lambda expression.

Answer: A

Explanation:

Question: 62

Which two code blocks correctly initialize a Locale variable? (Choose two.)

A. Locale loc1 = "UK";
B. Locale loc2 = Locale.getInstance("ru");
C. Locale loc3 = Locale.getLocaleFactory("RU");
D. Locale loc4 = Locale.UK;
E. Locale loc5 = new Locale ("ru", "RU");

Answer: D,E

Explanation:

Question: 63

Given:

```
class FuelNotAvailException extends Exception { }
class Vehicle {
void ride() throws FuelNotAvailException {//line n1
System.out.println("Happy Journey!");
}
}
class SolarVehicle extends Vehicle {
public void ride () throws Exception {//line n2
```

```
super ride ();
}
}
```

and the code fragment:

```
public static void main (String[] args) throws FuelNotAvailException, Exception { Vehicle v = new
SolarVehicle ();
v. ride();
}
```

Which modification enables the code fragment to print Happy Journey!?

A. Replace line n1 with public void ride() throws FuelNotAvailException {
B. Replace line n1 with protected void ride() throws Exception {
C. Replace line n2 with void ride() throws Exception {
D. Replace line n2 with private void ride() throws FuelNotAvailException {

Answer: B

Explanation:

Question: 64

Given the definition of the Emp class:

```
public class Emp
private String eName;
private Integer eAge;

Emp(String eN, Integer eA) {
this.eName = eN;
this.eAge = eA;
}
public Integer getEAge () {return eAge;} public String getEName () {return eName;} }
```

and code fragment:

```
List<Emp>li = Arrays.asList(new Emp("Sam", 20), New Emp("John", 60), New Emp("Jim", 51));
Predicate<Emp> agVal = s -> s.getEAge() > 50;//line n1
li = li.stream().filter(agVal).collect(Collectors.toList());
Stream<String> names = li.stream()map.(Emp::getEName);//line n2 names.forEach(n ->
System.out.print(n + " "));
```

What is the result?

A. Sam John Jim
B. John Jim

C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: B

Explanation:

Question: 65

For which three objects must a vendor provide implementations in its JDBC driver? (Choose three.)

A. Time
B. Date
C. Statement
D. ResultSet
E. Connection
F. SQLException
G. DriverManager

Answer: C,D,E

Explanation:

Database vendors support JDBC through the JDBC driver interface or through the ODBC connection. Each driver must provide implementations of java.sql.Connection, java.sql.Statement, java.sql.PreparedStatement, java.sql.CallableStatement, and java.sql.Re sultSet. They must also implement the java.sql.Driver interface for use by the generic java.sql.DriverManager interface.

Question: 66

Given the code fragment:

```
LocalDate valentinesDay =LocalDate.of(2015, Month.FEBRUARY, 14);
LocalDate nextYear = valentinesDay.plusYears(1);
nextYear.plusDays(15); //line n1
System.out.println(nextYear);
```

What is the result?

A. 2016-02-14
B. A DateTimeException is thrown.
C. 2016-02-29
D. A compilation error occurs at line n1.

Answer: A

Explanation:

Question: 67

Given the code fragment:

```
BiFunction<Integer, Double, Integer> val = (t1, t2) -> t1 + t2;//line n1
System.out.println(val.apply(10, 10.5));
```

What is the result?

A. 20
B. 20.5
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: C

Explanation:

Question: 68

Which statement is true about java.time.Duration?

A. It tracks time zones.
B. It preserves daylight saving time.
C. It defines time-based values.
D. It defines date-based values.

Answer: C

References:

Question: 69

Given the code fragment:

UnaryOperator<Integer> uo1 = s -> s*2;line n1 List<Double> loanValues = Arrays.asList(1000.0, 2000.0);
loanValues.stream()
.filter(lv -> lv >= 1500)
.map(lv -> uo1.apply(lv))
.forEach(s -> System.out.print(s + " "));

What is the result?

A. 4000.0
B. 4000
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: D

Explanation:

Question: 70

You have been asked to create a ResourceBundle which uses a properties file to localize an application.
Which code example specifies valid keys of menu1 and menu2 with values of File Menu and View Menu?

A. <key name = 'menu1">File Menu</key><key name = 'menu2">View Menu</key>
B. <key>menu1</key><value>File Menu</value><key>menu2</key><value>View Menu</value>
C. menu1, File Menu, menu2, View Menu
D. menu1 = File Menumenu2 = View Menu

Answer: D

Explanation:

Question: 71

Given the records from the Employee table:

eid	ename
■11	Tam
112	Jerry
113	Dons d

and given the code fragment:
try {
Connection conn = DriverManager.getConnection (URL, userName, passWord);
Statement st = conn.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
ResultSet.CONCUR_UPDATABLE);

```
st.execute("SELECT*FROM Employee");
ResultSet rs = st.getResultSet();
while (rs.next()) {
if (rs.getInt(1) ==112) {
rs.updateString(2, "Jack");
}
}
rs.absolute(2);
System.out.println(rs.getInt(1) + " " + rs.getString(2));
} catch (SQLException ex) {
System.out.println("Exception is raised");
}
```

Assume that:

The required database driver is configured in the classpath.

The appropriate database accessible with the URL, userName, and passWord exists. What is the result?

A. The Employee table is updated with the row:112 Jackand the program prints:112 Jerry
B. The Employee table is updated with the row:112 Jackand the program prints:112 Jack
C. The Employee table is not updated and the program prints:112 Jerry
D. The program prints Exception is raised.

Answer: C

Explanation:

Question: 72

Given:

```
class RateOfInterest {
public static void main (String[] args) {
int rateOfInterest = 0;
String accountType = "LOAN";
switch (accountType) {
case "RD";
rateOfInterest = 5;
break;
case "FD";
rateOfInterest = 10;
break;
default:
assert false: "No interest for this account"; //line n1
}
System.out.println ("Rate of interest:" + rateOfInterest);
}
}
```

and the command:

```
java –ea RateOfInterest
```

What is the result?

A. Rate of interest: 0
B. An AssertionError is thrown.
C. No interest for this account
D. A compilation error occurs at line n1.

Answer: B

Explanation:

Question: 73

Given the code fragment:

```
class CallerThread implements Callable<String> {
String str;
public CallerThread(String s) {this.str=s;}
public String call() throws Exception {
return str.concat("Call");
}
}
```

and

```
public static void main (String[] args) throws InterruptedException, ExecutionException {
ExecutorService es = Executors.newFixedThreadPool(4); //line n1
Future f1 = es.submit (newCallerThread("Call"));
String str = f1.get().toString();
System.out.println(str);
}
```

Which statement is true?

A. The program prints Call Call and terminates.
B. The program prints Call Call and does not terminate.
C. A compilation error occurs at line n1.
D. An ExecutionException is thrown at run time.

Answer: B

Explanation:

Question: 74

Given the code fragment:

```
public class FileThread implements Runnable {
String fName;
public FileThread(String fName) { this.fName = fName; }
public void run () System.out.println(fName);}
public static void main (String[] args) throws IOException, InterruptedException { ExecutorService executor =
Executors.newCachedThreadPool();
Stream<Path> listOfFiles = Files.walk(Paths.get("Java Projects"));
listOfFiles.forEach(line -> {
executor.execute(new FileThread(line.getFileName().toString())); //
line n1
});
executor.shutdown();
executor.awaitTermination(5, TimeUnit.DAYS);//
line n2
}
}
```

The Java Projects directory exists and contains a list of files.
What is the result?

A. The program throws a runtime exception at line n2.
B. The program prints files names concurrently.
C. The program prints files names sequentially.
D. A compilation error occurs at line n1.

Answer: B

Explanation:

Question: 75

Given:

```
class CheckClass {
public static int checkValue (String s1, String s2) { return s1 length() – s2.length();
}
}
```

and the code fragment:

```
String[] strArray = new String [] {"Tiger", "Rat", "Cat", "Lion"}
//line n1
for (String s : strArray) { System.out.print (s + " ");
```

}

Which code fragment should be inserted at line n1 to enable the code to print Rat Cat Lion Tiger?

A. Arrays.sort(strArray, CheckClass : : checkValue);
B. Arrays.sort(strArray, (CheckClass : : new) : : checkValue);
C. Arrays.sort(strArray, (CheckClass : : new).checkValue);
D. Arrays.sort(strArray, CheckClass : : new : : checkValue);

Answer: A

Explanation:

Question: 76

Given the code fragments:

```
class TechName {
String techName;
TechName (String techName) { this.techName=techName;
} }
```

and

```
List<TechName> tech = Arrays.asList ( new TechName("Java-"), new TechName("Oracle DB-"), new TechName("J2EE-") );
Stream<TechName> stre = tech.stream();
//line n1
```

Which should be inserted at line n1 to print Java-Oracle DB-J2EE-

A. stre.forEach(System.out::print);
B. stre.map(a-> a.techName).forEach(System.out::print);
C. stre.map(a-> a).forEachOrdered(System.out::print);
D. stre.forEachOrdered(System.out::print);

Answer: B

Explanation:

Question: 77

Given that /green.txt and /colors/yellow.txt are accessible, and the code fragment:

```
Path source = Paths.get("/green.txt);
Path target = Paths.get("/colors/yellow.txt);
Files.move(source, target, StandardCopyOption.ATOMIC_MOVE);
```

Files.delete(source);

Which statement is true?

A. The green.txt file content is replaced by the yellow.txt file content and the yellow.txt file is deleted.
B. The yellow.txt file content is replaced by the green.txt file content and an exception is thrown.
C. The file green.txt is moved to the /colors directory.
D. A FileAlreadyExistsException is thrown at runtime.

Answer: D

Explanation:

Question: 78

Given:

```
interface Doable {
public void doSomething (String s);
}
```

Which two class definitions compile? (Choose two.)

A. public abstract class Task implements Doable {public void doSomethingElse(String s) { }}
B. public abstract class Work implements Doable {public abstract void doSomething(String s) { }public void doYourThing(Boolean b) { }}
C. public class Job implements Doable {public void doSomething(Integer i) { }}
D. public class Action implements Doable {public void doSomething(Integer i) { }public String doThis(Integer j) { }}
E. public class Do implements Doable {public void doSomething(Integer i) { }public void doSomething(String s) { }public void doThat (String s) { }}

Answer: A,E

Explanation:

Question: 79

Given the code fragment:

```
List<Integer> list1 = Arrays.asList(10, 20);
List<Integer> list2 = Arrays.asList(15, 30);
//line n1
```

Which code fragment, when inserted at line n1, prints 10 20 15 30?

A. Stream.of(list1, list2).flatMap(list -> list.stream()).forEach(s -> System.out.print(s + " "));
B. Stream.of(list1, list2).flatMap(list -> list.intStream()).forEach(s -> System.out.print(s + " "));
C. list1.stream().flatMap(list2.stream().flatMap(e1 -> e1.stream()).forEach(s -> System.out.println(s + " "));
D. Stream.of(list1, list2).flatMapToInt(list -> list.stream()).forEach(s -> System.out.print(s + " "));

Answer: A

Explanation:

Question: 80

Given the code fragment:

```
public static void main (String[] args) throws IOException {
BufferedReader brCopy = null;
try (BufferedReader br = new BufferedReader (new FileReader("employee.txt"))) { //
line n1
br.lines().forEach(c -> System.out.println(c));
brCopy = br;//line n2
}
brCopy.ready(); //line n3;
}
```

Assume that the ready method of the BufferedReader, when called on a closed BufferedReader, throws an exception, and employee.txt is accessible and contains valid text.
What is the result?

A. A compilation error occurs at line n3.
B. A compilation error occurs at line n1.
C. A compilation error occurs at line n2.
D. The code prints the content of the employee.txt file and throws an exception at line n3.

Answer: D

Explanation:

Question: 81

Given:

Book.java:

```
public class Book {
private String read(String bname) { return "Read" + bname }
}
```

EBook.java:

```
public class EBook extends Book {
public class String read (String url) { return "View" + url }
}
```

Test.java:

```
public class Test {
public static void main (String[] args) {
Book b1 = new Book();
b1.read("Java Programing");
Book b2 = new EBook();
b2.read("http://ebook.com/ebook");
}
}
```

What is the result?

A. Read Java ProgrammingView http:/ ebook.com/ebook
B. Read Java ProgrammingRead http:/ ebook.com/ebook
C. The EBook.java file fails to compile.
D. The Test.java file fails to compile.

Answer: D

Explanation:

Question: 82

Given the code fragment:

```
ZonedDateTime depart = ZonedDateTime.of(2015, 1, 15, 3, 0, 0, 0, ZoneID.of("UTC-7"));
ZonedDateTime arrive = ZonedDateTime.of(2015, 1, 15, 9, 0, 0, 0, ZoneID.of("UTC-5"));
long hrs = ChronoUnit.HOURS.between(depart, arrive); //line n1 System.out.println("Travel time is" +
hrs + "hours");
```

What is the result?

A. Travel time is 4 hours
B. Travel time is 6 hours
C. Travel time is 8 hours
D. An exception is thrown at line n1.

Answer: A

Explanation:

Question: 83

Given the code fragment:

```
Path path1 = Paths.get("/app/./sys/");
Path res1 = path1.resolve("log");
Path path2 = Paths.get("/server/exe/");
Path res1 = path1.resolve("/readme/");
System.out.println(res1);
System.out.println(res2);
```

What is the result?

A. /app/sys/log/readme/server/exe
B. /app/log/sys/server/exe/readme
C. /app/./sys/log/readme
D. /app/./sys/log/server/exe/readme

Answer: C

Explanation:

Question: 84

Given the code fragment:

```
List<String> colors = Arrays.asList(“red”, “green”, “yellow”);
Predicate<String> test = n - > {
System.out.println(“Searching...”);
return n.contains(“red”);
};
colors.stream()
.filter(c -> c.length() > 3)
.allMatch(test);
```

What is the result?

A. Searching...
B. Searching...Searching...
C. Searching...Searching...Searching...
D. A compilation error occurs.

Answer: A

Explanation:

Question: 85

Given:

```
class UserException extends Exception { }
class AgeOutOfLimitException extends UserException { }
```

and the code fragment:

```
class App {
public void doRegister(String name, int age)
throws UserException, AgeOutOfLimitException {
if (name.length () < 6) {
```

```
throw new UserException ();
} else if (age >= 60) {
throw new AgeOutOfLimitException ();
} else {
System.out.println("User is registered.");
}
}
public static void main(String[ ] args) throws UserException {

App t = new App ();
t.doRegister("Mathew", 60);
}
}
```

What is the result?

A. User is registered.
B. An AgeOutOfLimitException is thrown.
C. A UserException is thrown.
D. A compilation error occurs in the main method.

Answer: B

Explanation:

Question: 86

Given the code fragment:

```
Fath pathl = Paths.get("/software/./sys/readme.txt");
Path path2 = pathl.normalize();
Path path3 = path2.relativize(pathl);
System.out.print(pathl.getNameCount() ) ;
System.out.print(" : " + path2.getNameCount());
System, out .print (" : " 4- path3. getNameCount ()) ;
```

What is the result?

A. 5 : 3 : 6
B. 6 : 5 : 6
C. 3 : 3 : 4
D. 4 : 4 : 4

Answer: D

Explanation:

Question: 87

Given:

```
class Product {String name; int qty;
    public String toString(){ return name;
    }
    public Product(String name, int qty) { this.name = name;
        this.qty = qty;
    }
    static class ProductFilter {
        public boolean isAvailable(Product p) { // line
        nl
            return p.qty >= 10;
        }
    }
```

and the code fragment:

```
List<Product> products = Arrays.asList( new Product("MotherBoard",
    5), new Product("Speaker", 20));
products.stream() .filter(Product.ProductFilter::isAvailable) //
    line n2 .forEach(p -> System.out.printin(p));
```

Which modification enables the code fragment to print Speaker?

A. Implement Predicate in the Product.ProductFilter class and replace line n2 with .filter (p -> p.ProductFilter.test (p))
B. Replace line n1 with:public static boolean isAvailable (Product p) {
C. Replace line n2 with:.filter (p -> p.ProductFilter: :isAvailable (p))
D. Replace line n2 with:.filter (p -> Product: :ProductFilter: :isAvailable ())

Answer: B

Explanation:

Question: 88

Given the content:

Mes sages Bundle .properties file:

username = Enter User Name
password = Enter Password

MessagesBundle_fr_FR.properties file:

username = Entrez le nom d[1]utilisateur **password = Entrez le mot de passe**

and the code fragment:

```
Locale currentLocale = new Locale.Builder().setRegion("FR").setLanguage("fr").build()
ResourceBundle messages = ResourceBundle.getBundleCMessagesBundle", currentLocale);
Enumeration<String> names = messages.getKeys();
while (names.hasMoreElements()) {
     String key = names.nextElement();
     String name = messages.getString(key);
     System.out.printin(key + " = " + name);
)
```

What is the result?

A. username = Entrez le nom d'utilisateurpassword = Entrez le mot de passe
B. username = Enter User Namepassword = Enter Password
C. A compilation error occurs.
D. The program prints nothing.

Answer: A

Explanation:

Question: 89

Given:

```
public class StfMan {
    public static void doStuff(String s) {
        ' if (s – null) {
                threw new NullPointerException();
            try {
                ——
        } finally {
            System*out.printin("-finally-");
                }

        System.cut.printIn("-doStuff-");

            }
    public static void main (String[] args) { try {
            doStuff(null);
        }
        } catch (NullPointerException npe) {
            System.cut.printin("-catch-");

3

            }

    }
```

What is the result?

A. –catch--finally--dostuff-
B. –catch-
C. –finally--catch-
D. –finally-dostuff--catch-

Answer: C

Explanation:

Your Code ...

```
1 ■ public class StrMan {
2       public static void doStufffString s) { try {
3                   if (s == null) {
4                               throw new NullPointerExceptionQ;
5
6           } finally {
7                 System.out.printlnC'-findly "J;
8
9           System, out^rihtI n(h - doStu ff -");
10          }
11      public static void main (String^ args) { try {
12                  doStuffCnull);
13          } cutch £NullPot nterException npe) {
14                System.out.println("-catch-');
15
16
17          }
18      }
19  }
```

Commandline Arguments ...

Stdin Inputs...

Result...

CPU Ti^: @<22 serfs), Memory: *3S28& kilabytc(s)*

Exe

-finally- -cotch-

Question: 90

Given:

```
public class Foo {
    public void methods(String s) { System.out.printin("Foo " + s ); }

public class Bar extends Foo {
    public void methods (String s) { System, out.printin (''Bar " + s) ; }
I
public class Baz extends Bar {
    public void methods(String s) { System.out.printin("Baz " + s); } }

public class Daze extends Baz{
    private Bar bb = new Bar();
    public void methodB(String s) {
        bb.methods(s);
        super.methods(s) ;
    )

public class Testclass {
    public static void main(String[] args) {
        Baz d = new Daze();
        d.methods("Hello");
    }
```

What is the result?

A. Bar HelloFoo Hello
B. Bar HelloBaz Hello
C. Baz Hello
D. A compilation error occurs in the Daze class.

Answer: B

Explanation:

Question: 91

Given the content of the employee.txt file:
Every worker is a master.

Given that the employee.txt file is accessible and the file allemp.txt does NOT exist, and the code fragment:

```
try {
```

```
List<String>    content    =    Files.readAllLines(Paths.get("employee.txt"))
content.stream{).forEach(line -> { try {
        Files.write(
              Paths.get("allemp.txt”),
              line -getByces(),
              StandardOpenOption.APPEND

    } catch (lOException e) { System.out.printin("Exception 1”); }

) catch (lOException e) { System.out•printin("Exception 2"); )
```

What is the result?

A. Exception 1
B. Exception 2
C. The program executes, does NOT affect the system, and produces NO output.
D. allemp.txt is created and the content of employee.txt is copied to it.

Answer: A

Explanation:

Question: 92

Given:

```
public class Job {
    String name;
    Integer cost;
    Job(String  name.  Integer  cost)  {
        this.name = name; this.cost = cost;
    }
    String getName() { return name; } int getCostO { return cost; ) public
    static void main (String [] args) { Job jl = new Job("IT", null);
        DoubleSupplier jSl = jl::getCost;
        System.out.printin(jl.getName() + ":" + jSl.getAsDouble())

}
```

What is the result?

A. IT:null
B. A NullPointerException is thrown at run time.
C. A compilation error occurs.
D. IT:0.0

Answer: D

Explanation:

Question: 93

Given the code fragment:

```
 List<String>  li  =  Arrays.asList("Java",  "J2EE",  "J2ME",  "JSTL",  "JSP",  "Oracle  DB")
Predicate<String> val = p -> p.contains ("J") ,■
List<String> neLi = li.stream().filter(x -> x. length ()> 3)
      .filter(val).collect(Collectors.toList());
System.out.printInlneLi) ;
```

What is the result?

A. A compilation error occurs.
B. [Java, J2EE, J2ME, JSTL, JSP]
C. null
D. [Java, J2EE, J2ME, JSTL]

Answer: D

Explanation:

Question: 94

Given:

```
class Product {
        String pname;
        public Product(String pname) { this.pname = pname;
```

and the code fragment:

```
Product pl = new Product("PowerCharger”)
Product p2 = pl;
System,out/printIn(pl.equals(p2));
Product pS = new Product("PowerCharger")
System,out,print In(pl.equals(p3));
```

What is the result?

A. truetrue
B. falsetrue
C. falsefalse
D. truefalse

Answer: D

Explanation:

Question: 95

Given:

```
class DataConvercer (
    public void copyFlatFilesToTabies() { }
    public void closed throws Exception -
        throw new RuntimeException 0;          // line nl
    }
```

and the code fragment:

```
public static void main(String[ ] args)throws Exception { try
    (DataConverter de = new DataConverter0)          // line n2
    { de.copyFlatFilesToTables(); }
```

What is the result?

A. A compilation error occurs at line n2.
B. A compilation error occurs because the try block doesn't have a catch or finally block.
C. A compilation error occurs at line n1.
D. The program compiles successfully.

Answer: B

Explanation:

Question: 96

Given the code fragment:

```
try {
     Properties prop = new Properties ();
     prop.put("user"f userName);
     prop.put("password", password);
     Connection conn. = DriverManager.getConnection(dbURL, prop)
     if(conn 1= null){
            System.out.print("Connection Established");
     }
 } catch (Exception e) {
     System.out.print(e);
```

and the information:

The required database driver is configured in the classpath.

The appropriate database is accessible with the dbURL, username, and passWord exists.

What is the result?

A. A ClassNotFoundException is thrown at runtime.
B. The program prints nothing.
C. The program prints Connection Established.
D. A SQLException is thrown at runtime.

Answer: C

Explanation:

Question: 97

In 2015, daylight saving time in New York, USA, begins on March 8th at 2:00 AM. As a result, 2:00 AM becomes 3:00 AM.

Given the code fragment:

```
Zoneld zone = Zoneld.of("America/New_York");
ZonedDateTime dt = ZonedDateTime.of(LocalDate.of(2015, 3, 8), LocalTime.of(1, 0)
zone);
ZonedDateTime dt2 = dt.plusHours(2);
```

```
System.out.print(DateTimeFormatter.ofPattern("H:mm - ").format(dt2));
System.out.printin("difference: " + ChronoUnit.HOURS.between(dt, dt2));
```

Which is the result?

A. 3:00 – difference: 2
B. 2:00 – difference: 1
C. 4:00 – difference: 3
D. 4:00 – difference: 2

Answer: D

Explanation:

Question: 98

Given the code fragment:

```
for (Course a : Course.values()){
    System.out.print(a + " Fees " + a.getCost ()+" " ) }
```

Which is the valid definition of the Course enum?

```
enum Course { JAVA(IOO), J2ME(150) private int cost;
    public Course(int c) { this.cost = c;
    1
    int getCost() { return cost;
```

```
enum Course { JAVA(100), J2ME(150); private static int cost;
    private Course(int c) { this.cost = c;

    static int getCost() { return cost;
    }
```

```
final enum Course { JAVA(100), J2NE(1SO) private int costrpublic Course(int c) {
        this.cost = c;
    int getCost() { return cost;

    void setCost(int c) { this.cost = c;
    1
```

```
enum Course { JAVA (100), J2ME(150) private int costr
     Course (int c) { this.cost = c;

    int getCostf) {
        return cost;
```

A. Option A B. Option B C. Option C D. Option D

Answer: D

Explanation:

Question: 99

Given:

```
class Resource implements AutoCioseable { public void closet) throws
    Exception {
        System.out.print("Close-");

    public void open() {
        System.out.print("Open-");
```

and this code fragment:

```
Resource resl = new Resource();
try {
    resl.open();
    resl.close();
) catch (Exception a) {
    System, out .print In ("Exception - I1');
1
try (real = new Resource(J) { // line nl res1.open();
} catch (Exception e) {
    System, our .print In i. "Exception - 2" ;
```

What is the result?

A. Open-Close–Exception – 1Open–Close–
B. Open–Close–Open–Close–
C. A compilation error occurs at line n1.
D. Open–Close–Open–

Answer: C

Explanation:

Question: 100

Given the code fragment:

```
List<String> cs = Arrays.asList("Java", "Java EE", "Java ME") // line
nl
System.out.print(b);
```

Which code fragment, when inserted at line n1, ensures false is printed?

A. boolean b = cs.stream() .findAny() .get() .equals("Java");
B. boolean b = cs.stream() .anyMatch (w -> w.equals ("Java"));
C. boolean b = cs.stream() .findFirst() .get() .equals("Java");
D. boolean b = cs.stream() .allMatch(w -> w.equals("Java"));

Answer: B

Explanation:

Question: 101

Given the code fragment:

```
final String stxl = "Java";
StringBuffer strBuf = new StringBuffer("Course");
UnaryOperator<String> u = (str2) -> strl.concat(str2);          // line nl
UnaryOperator<String> c = (str3) -> str3.toLowerCase();
System.out.printin(u.apply(c.apply(strBuf)));                   // line n2
```

What is the result?

A. A compilation error occurs at line n1.
B. courseJava
C. Javacourse
D. A compilation error occurs at line n2.

Answer: A

Explanation:

Question: 102

Given:

```
class Engine {
    double fuelLevel;
    Engine(int fuelLevel) { this.fuelLevel = fuelLevel; }
    public void start() (
        // line nl
        System.out.printin("Started");
    }
    public void stop() { System.out.printin("Stopped"); )
```

Your design requires that:
fuelLevel of Engine must be greater than zero when the start() method is invoked.
The code must terminate if fuelLevel of Engine is less than or equal to zero.

Which code fragment should be added at line n1 to express this invariant condition?

A. assert (fuelLevel) : "Terminating...";
B. assert (fuelLevel > 0) : System.out.println ("Impossible fuel");
C. assert fuelLevel < 0: System.exit(0);
D. assert fuelLevel > 0: "Impossible fuel" ;

Answer: C

Explanation:

Question: 103

Given the code fragment:

```
List<Integer> li = Arrays.asList(10, 20, 30);
Function<Inrsger, Integsr> fn = fl -> fl + fl;
Consumer<Integer> conVal = s -> System, out .print ("Vai:" + s + " " li.
stream () .map(fn).forEach(conVal);
```

What is the result?

A. Val:20 Val:40 Val:60

B. Val:10 Val:20 Val:30
C. A compilation error occurs.
D. Val: Val: Val:

Answer: A

Explanation:

Question: 104

Given the code fragments:

```
public static Optional<String> getGountry(String loc) {
    Optional<String> couName = Optional.empty0;
    if ("Paris".equals(loc))
        couName = Optional.of("France");
    else if ("Mumbai".equals(loc))
        couName = Optional.of("India"); return couName;
)
```

and

```
Opt Iona KString> cityl — getGountry("Paris");
Optiona_<Strir.g> city2 = getGountry ("Las Vegsis") £
System,out *printIn(cityl.orElse("Not Found"));
if (city2.isPresent())
    city2.ifPresent(x -> system.out.printin{x));
else
    System.out.println(city2.orElse("Not found"));
```

What is the result?

A. FranceOptional[NotFound]
B. Optional [France]Optional [NotFound]
C. Optional[France]Not Found
D. FranceNot Found

Answer: D

Explanation:

Question: 105

Given the code fragment:

```
//line nl
Syst cm. out .println : 1?) ;
```

Which code fragment, when inserted at line n1, enables the code to print /First.txt?

A. Path iP = new Paths ("/First.txt");
B. Path iP = Paths.toPath ("/First.txt");
C. Path iP = new Path ("/First.txt");
D. Path iP = Paths.get ("/", "First.txt");

Answer: D

Explanation:

Question: 106

Given the code fragment:

```
10.  try {
11.       Connection conn = DriverManager.getConnection(dbURL, userName, password)
12.  String query = "SELECT * FROM Employee WHERE ID = 110";
13.  Statement stmt = conn.createStatement();
14.  ResultSet rs = stmt.executeQuery(query);
15.  System, out.prrntln("Employee ID: " + rs.getlnt("ID"));
16.  ) catch. (Exception se) {
17.  System.out.printin("Error");
18.  }
```

Assume that:

The required database driver is configured in the classpath.
The appropriate database is accessible with the dbURL, userName, and passWord exists
The Employee table has a column ID of type integer and the SQL query matches one record.

What is the result?

A. Compilation fails at line 14.
B. Compilation fails at line 15.
C. The code prints the employee ID.
D. The code prints Error.

Answer: A

Explanation:

Question: 107

Given the code fragment:

```
public static void main(String[] args) {
     Console console = System.console();
     char[] pass = console.readPassword("Enter password:"); // line nl
     String password = new String(pass); // line n2
```

What is the result?

A. A compilation error occurs at line n1.
B. A compilation error occurs at line n2.
C. The code reads the password without echoing characters on the console.
D. A compilation error occurs because the IOException isn't declared to be thrown or caught?

Answer: A

Explanation:

Question: 108

Locale	Currency Symbol	Currency Code
US	$	USD

and the code fragment?

```
double d = 15;
Locale 1 = new Locale("en", "US");
NumberFormat formatter = NumberFormat.getCurrencyInstance(1)
System.out.printin(formatter.format(d));
```

What is the result?

A. $15.00
B. 15 $
C. USD 15.00
D. USD $15

Answer: A

Explanation:

Question: 109

Given the code fragment:

```
St r&ain<List<St r ing» strs = Stream.of( Arrays . asList
        (11 textln, 11 text2 ,) „ Arrays.asList("text2nf
        "teXt3">);
Straam<string> bsl = stre
        . filter (h -> k .contains : "text. 1 "J j
        .flatMapfzs -> rs.streamG);
bs2 . tor Each (b -> System, out, pi int fb) .■ ;
```

What is the result?

A. text1text2
B. text1text2text2text3
C. text1
D. [text1, text2]

Answer: A

Explanation:

Question: 110

Given:

```
public interface LengthValidator {
    public boolean checkLength(String str); }
```

and

```
public class Txt {
    public static void main(String[] args) {
        boolean res = new LengthValidator() {
            public boolean checkLength(String str) {
                return str.length() > 5 && str.length() < 10;
```

```
}.checkLength("Hello"); }
```

Which interface from the java.util.function package should you use to refactor the class Txt?

A. Consumer
B. Predicate
C. Supplier
D. Function

Answer: C

References:

Question: 111

Given:

```
public class Product {
    public double applyDiscount(double price) { assert
        (price > 0); // line nl return price * 0.50;

    public static void main(String[} args) { Product p =
        new Product();
        double newPrice -
            p.applyDiscount(Double.parseDouble(args[0]))
        System.out.printIn("New Price: " + newPrice);
    }
```

and the command:

java Product 0

What is the result?

A. An AssertionError is thrown.
B. A compilation error occurs at line n1.
C. New Price: 0.0
D. A NumberFormatException is thrown at run time.

Answer: C

Explanation:

Question: 112

Given the code fragment:

```
LocalTime now = LocalTime.now();
long timeToBreakfast = 0;
LocalTime office_start = LocalTime.of(7, 30);
if (office_start.isAfter(Jow)) {
     timeToBreakfast  =  now.until(office_start,  MINUTES)  )
else (
     timeToBreakfast = now.until(office_start, HOURS);
System.out.printin(timeToBreakfast);
```

Assume that the value of now is 6:30 in the morning.

What is the result?

A. An exception is thrown at run time.
B. 0
C. 60
D. 1

Answer: C

Explanation:

Question: 113

Given the code fragments:

```
class R implements Runnable {
     public void run() { System.out.printin("Run,. ."); }

class C implements Callable<String> {
     public String call() throws Exception { return "Call..."; }
```

and

```
Executorservice es = Executors.newSingleThreadExecutor();
```

```
es. execute (new RO);                    // line nl
Future<Strmg> fl = es.submit(new C()); // line n2
System.out.printin(fl.get 0); es.shutdown();
```

What is the result?

A. The program prints Run... and throws an exception.
B. A compilation error occurs at line n1.
C. Run...Call...
D. A compilation error occurs at line n2.

Answer: C

Explanation:

Question: 114

Which two are elements of a singleton class? (Choose two.)

A. a transient reference to point to the single instance
B. a public method to instantiate the single instance
C. a public static method to return a copy of the singleton reference
D. a private constructor to the class
E. a public reference to point to the single instance

Answer: B,D

Explanation:

Question: 115

Given the code fragment:

```
Deque<String> queue = new ArrayDequeO ();
queue.add("Susan");
queue , add ("Allen'*) ;
queue.add("David”);
System.out.printin(queue.pop());
System.out.printIn(queue.remove());
System.out.printin(queue);
```

What is the result?

A. DavidDavid[Susan, Allen]
B. SusanSusan[Susan, Allen]
C. SusanAllen[David]
D. DavidAllen[Susan]
E. SusanAllen[Susan, David]

Answer: C

Explanation:

```
1   import java.util.ArrayDeque;
2
2   ' public class Program {
3   ' public static void main(StringO args} {
5
6   ArrayDeque<String> queue = new ArrayDequeoC);
7   queue.add("Susan”);
8   queue.addC"Allen");
9   queue.addC"David");
10  System.out. println(queue. pop());
11  System.out .println(queue. removeO);
12  System.out.printlnCqueue);
13  }
14  }
15
16
```

ComnandLine Arguments ...

Stdin Inputs...

0 Execute

Result..,

CPU Tine: 8.16 sec(s)t Meftiory: 29412 kilobyte^)

Susan Allen [David]

Question: 116

Given:

```
public class Vehicle { int vid;
        String vName;
        public Vehicle(int vldArg, String vNameArg) { this.vid = vidArg;
              this.vMame = vNam&Arg;
        }
        public int getVIdQ { return vid; }
        public String getVNameO [ return VName; }
        public String tcStringf) ■ return vName;
        }
```

and the code fragment:

```
List<Vehicle> vehicle = Arrays.asList(
              new Vehicle(2, "Car")/ new VehicleO, "Bike")r new
              Vehicle(1, "Truck'*));
vehicle* stream () // line nl
              .forEach(System,out::print);
```

Which two code fragments, when inserted at line n1 independently, enable the code to print TruckCarBike?

A. .sorted ((v1, v2) -> v1.getVId() < v2.getVId())
B. .sorted (Comparable.comparing (Vehicle: :getVName)).reversed ()
C. .map (v -> v.getVid()).sorted ()
D. .sorted((v1, v2) -> Integer.compare(v1.getVId(), v2.getVid()))
E. .sorted(Comparator.comparing ((Vehicle v) -> v.getVId()))

Answer: D,E

Explanation:

Question: 117

Given the code fragment:

```
List<String> valList = Arrays.asList("", "George", "", "John", "Jim") Long
newVal = valList.stream()                    // line nl
         .filter(x -> 1x.isEmpty())
         .count();                           // line n2
System.out.print(newVal);
```

What is the result?

A. A compilation error occurs at line n2.
B. 3
C. 2
D. A compilation error occurs at line n1.

Answer: A

Explanation:

Question: 118

Given the code fragment:

```
// Login time:2015-01-12T21:5S:18.817Z
Instant loginTime = Instant.now 0;
Thread.sleep(1000);

// Logout time:2015-01-12T21:58:19.880Z
Instant logoutTime = Instant.now();

loginTime - loginTime.truncatedTo(chronounit.MINUTES);      // line nl
logoutTime = logoutTime.truncatedTo(ChronoUnit.MINUTES);

if (logoutTime.isAfter(LoginTime))
     System.out.println("Logged out at:"+logoutTime); else
     System.out.println("Can*t logout");
```

What is the result?

A. A compilation error occurs at line n1.
B. Logged out at: 2015-01-12T21:58:19.880Z

C. Can't logout
D. Logged out at: 2015-01-12T21:58:00Z

Answer: D

Explanation:

Question: 119

Given the code fragment:

```
List<String> words = Arrays.asList("win", "try", "best", "luck", "do")
Predicate<String> testl = w -> {
     System.out.printin("Checking...");
     return w.equals("do");                    // line nl
);
Predicate test2 = (String w) -> w. length() >3; // line n2 words.stream()
          .filter(test2)
          .filter(testl)
          .count();
```

What is the result?

A. A compilation error occurs at line n1.
B. Checking...
C. Checking...Checking...
D. A compilation error occurs at line n2.

Answer: A

Explanation:

Question: 120

Assume customers.txt is accessible and contains multiple lines.

Which code fragment prints the contents of the customers.txt file?

A. Stream<String> stream = Files.find (Paths.get ("customers.txt"));stream.forEach((String c) -> System.out.println(c));
B. Stream<Path> stream = Files.find (Paths.get ("customers.txt"));stream.forEach(c) -> System.out.println(c));
C. Stream<Path> stream = Files.list (Paths.get ("customers.txt"));stream.forEach(c)-> System.out.println(c));

D. Stream<String> lines = Files.lines (Paths.get ("customers.txt"));lines.forEach(c) ->

System.out.println(c));

Answer: D

Explanation:

Question: 121

Given:

```
class MyClass implements AutoClcseable { int test;
    public void close () { }
    public MyClass copyobject(} ( return this; }
```

and the code fragment:

```
MyClass obi = null; try (MyClass objl = new
MyClass (H i abjl.test = 100;
    obj = objl-copyobjectO;                    // line nl

System,out.printin(obj,test); // line n2
```

What is the result?

A. An exception is thrown at line n2.
B. 100
C. A compilation error occurs because the try block is declared without a catch or finally block.
D. A compilation error occurs at line n1.

Answer: B

Question: 122

Which two methods from the java.util.stream.Stream interface perform a reduction operation?

(Choose two.)

A. count ()

B. collect ()
C. distinct ()
D. peek ()
E. filter ()

Answer: A,B

References:

Question: 123

Which code fragment is required to load a JDBC 3.0 driver?

A. Connection con = Connection.getDriver("jdbc:xyzdata://localhost:3306/EmployeeDB");
B. Class.forName("org.xyzdata.jdbc.NetworkDriver");
C. Connection con = DriverManager.getConnection("jdbc:xyzdata://localhost:3306/EmployeeDB");
D. DriverManager.loadDriver ("org.xyzdata.jdbc.NetworkDriver");

Answer: B

Explanation:

Question: 124

Given:

```
public class Foo<K, V> {
     private K key;
     private V value;

     public Foo(K key, V value) ( this.key = key; this.value = value; )

     public static <T> Food, T> twice(T value) ( return new Foo<T, T>(value, value); )

     public K getKeyO { return key; }
     public V getValue() { return value; }
```

Which option fails?

A. Foo<String, Integer> mark = new Foo<String, Integer> ("Steve", 100);
B. Foo<String, String> pair = Foo.<String>twice ("Hello World!");
C. Foo<Object, Object> percentage = new Foo<String, Integer>("Steve", 100);
D. Foo<String, String> grade = new Foo <> ("John", "A");

Answer: A

Explanation:

Question: 125

Given the code fragment:

```
List<Integer> prices = Arrays.asList(3, 4, 5);
prices.stream 0
     .filter(e -> e > 4)
     ,peek(e -> System.out.print(“Price " + e))                    // line nl
     .map(n -> n - 1)                                              // line n2
     .peek(n -> System.out.printIn(” New Price " + n) ) ;          // line n3
```

Which modification enables the code to print Price 5 New Price 4?

A. Replace line n2 with .map (n -> System.out.println (“New Price” + n –1)) and remove line n3
B. Replace line n2 with .mapToInt (n -> n – 1);
C. Replace line n1 with .forEach (e -> System.out.print (“Price” + e))
D. Replace line n3 with .forEach (n -> System.out.println (“New Price” + n));

Answer: D

Explanation:

Question: 126

Given the definition of the Book class:

```
public class Book {
     private int id;
     private String name;
     public Book(int id. String name) {this.id = id; this.name = name;}
     public int getId() { return id; }
     public String getName() { return name; }
     public void setId(int id) { this.id = id; }
     public void set Name (String name) { this, name - name; }
```

Which statement is true about the Book class?

A. It demonstrates encapsulation.
B. It is defined using the factory design pattern.
C. It is defined using the singleton design pattern.
D. It demonstrates polymorphism.
E. It is an immutable class.

Answer: A

Explanation:

Question: 127

Given the code fragment:

```
ProductCode<Number, integer? cl = new ProductCode<Number, integer?(); /* cl
instantiation */
ProductCode<Number, String? c2 = new ProductCode<Number, String>(); /* c2
instantiation */
```

You have been asked to define the ProductCode class. The definition of the ProductCode class must allow c1 instantiation to succeed and cause a compilation error on c2 instantiation.

Which definition of ProductCode meets the requirement?

A. Replace line n1 with:IntFunction<UnaryOperator> inFu = x -> y -> x*y;
B. Replace line n1 with:IntFunction<IntUnaryOperator> inFu = x -> y -> x*y;
C. Replace line n1 with:BiFunction<IntUnaryOperator> inFu = x -> y -> x*y;
D. Replace line n2 with:IntStream newStream = stream.map(inFu.applyAsInt (10));

Answer: B

Explanation:

Question: 128

Given the code fragment:

```
MspdnuBger | Jntegar> nival = new ^asLMspOO mVal. port (1,
10) ;
mVal.put|2j 20);
//Line nl
c,accept(I* 2);
mVal.forEacn(c ;
```

Which statement can be inserted into line n1 to print 1,2; 1,10; 2,20;?

A. BiConsumer<Integer,Integer> c = (i, j) -> {System.out.print (i + “,” + j+ “; “);};
B. BiFunction<Integer, Integer, String> c = (i, j) -> {System.out.print (i + “,” + j+ “; “)};

C. BiConsumer<Integer, Integer, String> c = (i, j) -> {System.out.print (i + “,” + j+ “; “)};
D. BiConsumer<Integer, Integer, Integer> c = (i, j) -> {System.out.print (i + “,” + j+ “; “);};

Answer: B

References:

Question: 129

Given the code fragment:

```
LisE<String> muns = Arrays.asList("EE”; "SE") String Ans =
nums
     .parallelstream(}
     ► reduce ("Java ”, (a, b) -> a,concattbH;
System,out, print fans) ;
```

What is the result?

A. Java EEJava EESE
B. Java EESE
C. The program prints either:Java EEJava SEorJava SEJava EE
D. Java EEJava SE

Answer: D

Explanation:

Question: 130

Given the code fragments :

```
public class Product {
     String name;
     Integer price;
     Product(String name, Integer price) ( this.name = name; this.price = price;

     public void printVal(){ System.out.print(name + " Price:" + price + " "); )
     public void setPrice(int price) ( this.price = price; } public Integer
     getPriceO ( return price; }
```

and

```
List<Product> li = Arrays.asList(new Product("TV", 1000), new Product("Refrigerator", 2000));
Consumer<Product> raise = e -> e.setPrice(e.getPrice() + 100);
li.forEach(raise);
li.streamf).forEachfProduct::printVal);
```

What is the result?

A. TV Price :110 Refrigerator Price :2100
B. A compilation error occurs.
C. TV Price :1000 Refrigerator Price :2000
D. The program prints nothing.

Answer: A

Explanation:

Question: 131

Given:

```
interface P { public void methodi(); }

interface Q extends P { public void methodl(); }
interface R extends P { public void method2();}

interface S { public default void method () { ) }

interface T { public void methodi (); public void method2(); }

interface U { public void methodi(); public abstract void method2(); }
```

Which two interfaces can you use to create lambda expressions? (Choose two.)

A. T B. R C. P D. S E. Q F. U

Answer: C,D

Explanation:

Question: 132

Given the code fragment:

```
final List<String> list = new CopyOnWriteArrayListO () ;
final AtomicInteger ai ~ new AtomicInteger(0);
final CyclicBarrier barrier = new CyclicBarrier(2# new Runnable () { public
     void run() { System.out.printin(list); }
});
Runnable r = new Runnable() {
     public void run() (
```

```
        try {
            Thread.sleep(1000 * ai.incrementAndGet());
            list.add("X");
            barrier.await();
        } catch (Exception ex) {
```

```
1
1*
new Thread(r). start ();
new Thread(r).start();
new Thread(r).start();
new Thread(r). start();
```

What is the result?

A. [X][X, X][X, X, X][X, X, X, X]
B. [X, X]
C. [X][X, X][X, X, X]
D. [X, X][X, X, X, X]

Answer: A

Explanation:

Question: 133

Given that these files exist and are accessible:

```
/ company/eap/into.txt
/company/cmp/benefits/bi.txt
```

and given the code fragment:

```
// line ni
stream. forEach (s -> System.out.print(s));
```

Which code fragment can be inserted at line n1 to enable the code to print only /company/emp?

A. Stream<Path> stream = Files.list (Paths.get ("/company"));
B. Stream<Path> stream = Files.find(Paths.get ("/company"), 1,(p,b) -> b.isDirectory (), FileVisitOption.FOLLOW_LINKS);
C. Stream<Path> stream = Files.walk (Paths.get ("/company"));
D. Stream<Path> stream = Files.list (Paths.get ("/company/emp"));

Answer: B

Explanation:

Question: 134

Given:

```
class Person {
        String name;
        int age;
        public Person(String name, int age) { this.name = name, this.age = age;
        }
        public String getName O { return name; } public int getAgefH return,
        age; )
```

and the code fragment:

```
List<Person> sts = Arrays.asList(
     new Person("Jack", 30),
     new Person("Mike Hill", 21),
     new Person("Thomas Hill", 24));
Stream<Person> resList = sts.stream().filter(s -> s.getAgef) >= 25);            // line nl
long count = resList.filter(s -> s.getName().contains("Hill")).count();
System.out.print(count);
```

What is the result?

A. 0

B. A compilation error occurs at line n1.

C. An Exception is thrown at run time.

D. 2

Answer: B

Explanation:

Question: 135

Which class definition compiles?

A. BiConsumer<Integer,Integer> c = (i, j) -> {System.out.print (i + “,” + j+ “; “);};

B. BiFunction<Integer, Integer, String> c = (i, j) -> {System.out.print (i + “,” + j+ “; “)};

C. BiConsumer<Integer, Integer, String> c = (i, j) -> {System.out.print (i + "," + j+ "; ")};
D. BiConsumer<Integer, Integer, Integer> c = (i, j) -> {System.out.print (i + "," + j+ "; ");};

Answer: B

Explanation:

Question: 136

Given the code fragment:

```
Deq^<lnt=!gei> num? = n^w Air^yHequeO () nuni3 .add(10 Ou) j
nUmS . push. (2 DC G) ;
nuitis. add (3000) ;
nums.push(4000};
Integer H = nmns.remave(J;
Ir.^sg&r 12 = nmns, pop {}.s
system,ouL.prin'ln(il + " i "+_£);
```

What is the result?

A. 4000 : 2000
B. 4000 : 1000
C. 1000 : 4000
D. 1000 : 2000

Answer: B

Explanation:

Question: 137

Given that version.txt is accessible and contains:

1234567890

and given the code fragment:

```
try (Fileinputstream fis = new FileinputStream.("version.txt")
        InputStreamReader isr = new InputStreamReader(fis);
        BufferedReader br = new BufferedReader(isr);) {
    if (br.markSupported()) {
        System, out. print ( (char) br.read() ) ;
        br.mark (2 );
        System.out.print ( (char) br.read () ) ;
```

```
            br.reset();
            System.out.print((char) br.read());
        }
} catch (Exception e) { e.printStackTrace ();
```

What is the result?

A. 121
B. 122
C. 135
D. The program prints nothing.

Answer: B

Explanation:

Question: 138

```
7. BiPredicate<String, String> bp = (String si, String s2) -> si.contains{"SG") ss
    s2.contains("Java");
8. BiFunction<String, String, Integer> bf = (String si, String s2) -> {
9.      int fee =0;
10.     if (bp.test (si, s2)) {
11.             fee = 100;
12.     )
13.     return fee;
14. };
15. int feel = bf.apply("D101SG", "Java Programming");
16. System.out.printin(feel);
```

What is the result?

A. A compilation error occurs at line 7.
B. 100
C. A compilation error occurs at line 8.
D. A compilation error occurs at line 15.

Answer: A

Explanation:

Question: 139

Given the content:

H^SjagesBundi^ . properties file:

inquiry - How are you?

.MessagesBmjdle_de_DE. properties file:

inquiry = Wie geht's?

and given the code fragment:

```
Locale currentLocale;
// line 1
ResourceBundle messages = ResourceBundle.getBundle("MessagesBundle", currentLocale)
System.out.printin(messages.getString("inquiry"));
```

Which two code fragments, when inserted at line 1 independently, enable the code to print “Wie geht’s?”

A. currentLocale = new Locale (“de”, “DE”);
B. currentLocale = new Locale.Builder ().setLanguage (“de”).setRegion (“DE”).build();
C. currentLocale = Locale.GERMAN;
D. currentlocale = new Locale();currentLocale.setLanguage (“de”);currentLocale.setRegion (“DE”);
E. currentLocale = Locale.getInstance(Locale.GERMAN,Locale.GERMANY);

Answer: B,D

Explanation:

Question: 140

Given the code fragment:

```
List<String> qwords = Arrays.asList("why ", "what ", "when ");
BinaryOperator<String> operator = (si, s2) -> sl.concat(s2);     // line nl
String sen = qwords.stream()
    .reduce("Word: ", operator);
System.out.println(sen);
```

What is the result?

A. Word: why what when
B. Word: why Word: why what Word: why what when
C. Word: why Word: what Word: when
D. Compilation fails at line n1.

Answer: A

Explanation:

Question: 141

Given:

```
interface Interface! ( public default void sayHi() (
        System.out.printIn("Hi Interface-1"I)
1

interface Interfaces {
    public default void sayHiO {
        System_rout_rprintIn("Hi interface-2");

public clasa MyClass implements Interface!, Interface! 1
    public static void main(striny[j argst {
        Interface] obj - new MyClassO;
        ob j.seyHi();
    public void aayHiO -l
        System _r out _rpri nr. in ("Hi Hyl lass") ;
```

What is the result?

A. Hi Interface-2
B. A compilation error occurs.
C. Hi Interface-1
D. Hi MyClass

Answer: D

Explanation:

Question: 142

Given:

```
class Block {
    String color;
    int size;
```

```
Block tint size. Spring color) { this.size = size;
        this,color = color;
    }
}
```

and the code fragment:

```
List<Block> blocks - new ArrayListO () ;
blocks.add(n&w Block(10, 'Green"));
blocks.add{new Block(7, "Red":);
blocks.add(new BLock(12F "Blue"));
Collections . sort (blocks4 new ColorSorterUJ ;
```

Which definition of the ColorSorter class sorts the blocks list?

A. The method deletes all the .class files in the Projects directory and its subdirectories.
B. The method deletes the .class files of the Projects directory only.
C. The method executes and does not make any changes to the Projects directory.
D. The method throws an IOException.

Answer: C

Explanation:

Question: 143

Given the code fragment:

```
public static void main(String[] args) {
        Stream.of("Java", "Unix", "Linux")
        .filter (s -> s.contains("n"))
        .peek(s -> System.out.printin("PEEK: " + s)) // line nl
```

Which two code fragments, when inserted at line n1 independently, result in the output PEEK: Unix?

A. .anyMatch ();
B. .allMatch ();
C. .findAny ();
D. .noneMatch ();
E. .findFirst ();

Answer: C,E

Explanation:

Question: 144

Given the code fragments:

```
class Person. // line nl {
        String name;
                Ear son (pt ring name) (
                        this.name - name;
        I
        H line ri

}
```

and

```
List<Person> emps = new ArrayListO () ;
/* code that adds objects of the Person class to the emps list goes here */
Collections.sort(emps);
```

Which two modifications enable to sort the elements of the emps list? (Choose two.)

A. Replace line n1 withclass Person extends Comparator<Person>
B. At line n2 insertpublic int compareTo (Person p) {return this.name.compareTo (p.name);}
C. Replace line n1 withclass Person implements Comparable<Person>
D. At line n2 insertpublic int compare (Person p1, Person p2) {return p1.name.compareTo (p2.name);}
E. At line n2 insert:public int compareTo (Person p, Person p2) {return p1.name.compareTo (p2.name);}
F. Replace line n1 withclass Person implements Comparator<Person>

Answer: B,C

Explanation:

Question: 145

Given:

```
class Person {
        private String firstName;
        private int salary;
        public Person(String fN, int sal} { this.firstName = fN;
             this.salary = sal;
```

```
    }
    public int getSalary() { return salary; 1 public String
getFirstName() { return firstName; ) }
```

and the code fragment:

```
List<Person> prog = Arrays.asList( new Person("Smith”, 1500), new
        Person("John”, 2000), new Person("Joe", 1000));
double dVal = prog.stream()
        .filter(s -> s.getFirstName().startsWith("J"))
        .mapToInt(Person::getSalary) .average()
        .getAsDouble() ;
System.out.print(dVal);
```

What is the result?

A. 0.0
B. 1500.0
C. A compilation error occurs.
D. 2000.0

Answer: B

Explanation:

Question: 146

Given the code fragment:

```
Connection con = null;
try {
        // line nl
        if(con != null){
            System.out.print("Connection Established."); }

} catch (Exception e) {
        System.out.print(e);
```

Assume that dbURL, userName, and password are valid.

Which code fragment can be inserted at line n1 to enable the code to print Connection Established?

A. Properties prop = new Properties();prop.put (“user”, userName);prop.put (“password”, password);con = DriverManager.getConnection (dbURL, prop);

B. con = DriverManager.getConnection (userName, password, dbURL);

C. Properties prop = new Properties();prop.put (“userid”, userName);prop.put (“password”, password);prop.put(“url”, dbURL);con = DriverManager.getConnection (prop);

D. con = DriverManager.getConnection (dbURL);con.setClientInfo (“user”, userName);con.setClientInfo (“password”, password);

Answer: A

Explanation:

Question: 147

Given the Greetings.properties file, containing:

```
HELLO_MSG = Helles everyone!
3OCC 5VE_y£G = Goodbye everyone!
```

and given:

```
import java.util.Enumeration;
import java.util.Locale;
import java.util.ResourceBundle;

public class ResourcesApp {
     public void loadResourceBundle() {
          ResourceBundle resource = ResourceBundle.getBundle("Greetings",Locale.US)
          System.out.println(resource.getobject(l));
     public static void main(String[] args) { new ResourcesApp().loadResourceBundle();
     J
```

What is the result?

A. Compilation fails.
B. GOODBY_MSG
C. Hello, everyone!
D. Goodbye everyone!
E. HELLO_MSG

Answer: A

Explanation:

Question: 148

Given the code fragments:

```
public class Test {
     List<String> list = null;
     public void printvalues() {
         System.out.print(getList0 );
     )
     public List<String> getList(){ return list; )
     public void setList(List<String> newList){ list = newList; ) }
```

and

```
List<String> li = Arrays.asList("Dog", "Cat", "Mouse");
Test t = new Test();
t. setList (li . streamO . collect (Collectors . toList ())
) ;
t.getList () .forEach(Test::printvalues);
```

What is the result?

A. null
B. A compilation error occurs.
C. DogCatMouse
D. [Dog, Cat, Mouse]

Answer: D

Explanation:

Question: 149

Given the records from the STUDENT table:

sid	sname	seinail
111	James	james@uni.com
112	Jane	jane@unLcom
114	John	john@uni.com

Given the code fragment:

```
public static void main(String[] args) throws SQLException { //code to load and register
     valid jdbc driver go here
     Connection con = DriverManager.getConnection(URL, username, password);
     Statement st = con.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
                                        ResultSet.CONCUR UPDATABLE);
     st.execute("SELECT * FROM student");
     ResultSet rs = st.getResultSet();
     rs.absolute(3);
     rs.moveToInsertRow() ;
     rs.updatelnt(1, 113);
     rs.updateString(2, "Jannet");
     rs.updateString(3, "jannet@uni.com");
     rs.updateRow();
     rs.refreshRow();
     System.out.printin(rs.getlnt(1) + " : " + rs.getString(2) + " : " + rs.getString
(3));
```

Assume that the URL, username, and password are valid.

What is the result?

A. The STUDENT table is not updated and the program prints:114 : John : john@uni.com
B. The STUDENT table is updated with the record:113 : Jannet : jannet@uni.comand the program prints:114 : John : john@uni.com
C. The STUDENT table is updated with the record:113 : Jannet : jannet@uni.comand the program prints:113 : Jannet : jannet@uni.com
D. A SQLException is thrown at run time.

Answer: D

Explanation:

Question: 150

Given the code fragment:

```
5. IntConsumer consumer ~ e -> System, out. print In (a) 6-
Integer Vallie = 30;
7, /* insert code fragment here */ J.
consumer.accept(result);
```

Which code fragment, when inserted at line 7, enables printing 100?

A. Function<Integer> funRef = e –> e + 10;Integer result = funRef.apply(value);
B. IntFunction funRef = e –> e + 10;Integer result = funRef.apply (10);
C. ToIntFunction<Integer> funRef = e –> e + 10;int result = funRef.applyAsInt (value);
D. ToIntFunction funRef = e –> e + 10;int result = funRef.apply (value);

Answer: A

Explanation:

Question: 151

Which two statements are true about the Fork/Join Framework? (Choose two.)

A. The RecursiveTask subclass is used when a task does not need to return a result.
B. The Fork/Join framework can help you take advantage of multicore hardware.
C. The Fork/Join framework implements a work-stealing algorithm.
D. The Fork/Join solution when run on multicore hardware always performs faster than standard sequential solution.

Answer: A,C

References:

Question: 152

Which two statements are true about synchronization and locks? (Choose two.)

A. A thread automatically acquires the intrinsic lock on a synchronized statement when executed.
B. The intrinsic lock will be retained by a thread if return from a synchronized method is caused by an uncaught exception.

C. A thread exclusively owns the intrinsic lock of an object between the time it acquires the lock and the time it releases it.

D. A thread automatically acquires the intrinsic lock on a synchronized method's object when entering that method.

E. Threads cannot acquire intrinsic locks on classes.

Answer: A,B

References:

Question: 153

Given the code fragment:

```
//line nl
Double d = str.average I).getAsDouble0;
System, out.printIn("Average = " - d) ;
```

Which should be inserted into line n1 to print Average = 2.5?

A. IntStream str = Stream.of (1, 2, 3, 4);
B. IntStream str = IntStream.of (1, 2, 3, 4);
C. DoubleStream str = Stream.of (1.0, 2.0, 3.0, 4.0);
D. Stream str = Stream.of (1, 2, 3, 4);

Answer: C

Explanation:

Question: 154

Given the structure of the Student table:

Student (id INTEGER, name VARCHAR)

Given the records from the STUDENT table:

JO	NAME
102	Edwin
103	Edward
103	Edwin

Given the code fragment:

```
Connection conn = DriverManager.getConnection(dbURL, userName, password)
Statement st = conn.createStatement();
String query - "DELETE FROM Student WHERE id - 103";
System.out.printin("Status: " + st.execute(query));
```

Assume that:

What is the result?

A. The program prints Status: true and two records are deleted from the Student table.
B. The program prints Status: false and two records are deleted from the Student table.
C. A SQLException is thrown at runtime.
D. The program prints Status: false but the records from the Student table are not deleted.

Answer: B

Explanation:

Question: 155

Given the code fragments:

```
public class Video {
        public void play() throws lOException {
            System.out.print (“Video played. *') ;
```

```
public class Game extends Video {
    public void play() throws Exception { super * play();
        System.out.print("Game played.”);
```

and

```
try {
    new Game().play();
} catch (Exception e) {
    System.put.print(e.getClass());
```

What is the result?

A. Video played.Game played.
B. A compilation error occurs.
C. class java.lang.Exception
D. class java.io.IOException

Answer: C

Explanation:

Question: 156

What is true about the java.sql.Statement interface?

A. It provides a session with the database.
B. It is used to get an instance of a Connection object by using JDBC drivers.
C. It provides a cursor to fetch the resulting data.
D. It provides a class for executing SQL statements and returning the results.

Answer: D

References:

Question: 157

Given that data.txt and alldata.txt are accessible, and the code fragment:

```
public void writeFilesQ throws lOException {
     ButferedReader br = new ButferedReader (new FileReaderCdata.txt"));
     BufferedWriter bw = new BufferedWriter(new FileWriter("alldata.txt")) String
     line = null;
     while ((line = br.readLine()) 1= null) { bw.append(line + ”\n");
     1
     // line nl
```

What is required at line n1 to enable the code to overwrite alldata.txt with data.txt?

A. br.close();
B. bw.writeln();
C. br.flush();
D. bw.flush();

Answer: D

Explanation:

Question: 158

Given:

```
class Student {
    String course, name, city;
    public Student(String name, String course, String city) (
        this.course = course; this.name = name; this.city = city;
    }
    public String toStringO { return course + ":” + name + ":" +
        city;

    public String getCoursef) { return course; } public String
    getName() (I return name; } public String getCityC) { return city;
    }
```

and the code fragment:

```
List<Student> stds = Arrays.asList(
      new Student ("Jessy", "Java ME", "Chicago"), new
      Student ("Helen", "Java EE", "Houston"), new Student
      ("Mark", "Java ME", "Chicago"));
stds.stream()
      .collect(Collectors.groupingBy(Student:zgetCourse))
      .forEach(src, res) -> System.out.println(scr));
```

What is the result?

A. [Java EE: Helen:Houston][Java ME: Jessy:Chicago, Java ME: Mark:Chicago] B. Java EEJava ME

C. [Java ME: Jessy:Chicago, Java ME: Mark:Chicago][Java EE: Helen:Houston]

D. A compilation error occurs.

Answer: D

Explanation:
Exolanation:

Your Code *.,

```
1'  public class Student {
        String course, name, city;
Z   public Student (String name, String course, String cit this.course =
3 ' course; this.name = name; this.city
4       }
5       public String toStringO {
6'  return course + "/ + name r ":" r city;
7       }
8       public String getCourse() {return course; }
9       public String getName() {return name; }
10      public String getCityO {return city; }
11
1Z      List<Student> stas = Arrays.asList (
13              new Student ("Jessy", "Java ME", "CTLCGOO"),
14               new Student ("Helen", "Java ME", "Houston"),
IS               new Student ("Murk", "Java ME", "Chicago"));
16      stds.stream()
17  .collect (Collectors.£KoupBy(Student;:getCourse))
13  .forEach (src, res) ■> System.out.println(scrj);
13  }
20
21
```

CommandLine Arguments …

Stdin Inputs...

0 Execute

Result,,,

CPU Tiifte: serfs J, *Mtnwy:* if *loby*tefs)

/Student.java:17: error: identifier? expected Eids. streamQ

A

Question: 159

Given:

```
class Counter extends Thread { int 1 = 10;
      public synchronized void display(Counter obj) { try {
                  Thread.sleep(5);
                  obj.increment(this);
                  System.out.printIn(i);
            } catch (InterruptedException ex) {   }

      public synchronized void increment (Counter obj) {

      }
public class Test {
      public static void matin (String [ ] args) { final
            Counter objl = new Counter(); final Counter obj2
            = new Counter(); new Thread(new Runnable() {
                  public void run() {obj1.display(obj2);
                  }
            }).start();
            new Thread(new Runnable() { public void run() {
            obj2.display(obj1); } }).start();
      }
```

From what threading problem does the program suffer?

A. race condition
B. deadlock
C. starvation

D. livelock

Answer: B

Explanation:

Question: 160

Given the definition of the Employee class:

```
class Employee {
      String dept, name;
      public Employee(String d, String n) { dept = d; name
            = n;

      public String toString() {
            return. getDept () + " : " + getName () ;

      public String getDept() { return dept; } public
      String getName() { return name; }
```

and this code fragment:

```
List<Employee> emps = Arrays.asList(new Employee("sales", "Ada"), new
                  Employee("sales", "Bob"), new Employee("hr", "Bob"), new
                  Employee("hr", "Eva"));
Stream<Employee> s = emps.stream() .sorted(Comparator.comparing((Employee e) ->
      e.getDept())
                                    .thenComparing((Employee e) -> e. getName ()))
List<Employee> eSorted = s.collect(Collectors.toList());
System.out.printin(eSorted) ;
```

What is the result?

A. [sales:Ada, hr:Bob, sales:Bob, hr:Eva]

B. [Ada:sales, Bob:sales, Bob:hr, Eva:hr]

C. [hr:Eva, hr:Bob, sales:Bob, sales:Ada] D. [hr:Bob, hr:Eva, sales:Ada, sales:Bob]

Answer: A

Explanation:

Question: 161

Given the code fragments:

```
class ThreadRunner implements Runnable {
public void run () { System.out.print (“Runnable”) ; } }
class ThreadCaller implements Callable {
Public String call () throws Exception {return “Callable”; ) }
```

and

```
ExecutorService es = Executors.newCachedThreadPool ();
Runnable r1 = new ThreadRunner ();
Callable c1 = new ThreadCaller ();
// line n1 es.shutdown();
```

Which code fragment can be inserted at line n1 to start r1 and c1 threads?

A. Future<String> f1 = (Future<String>) es.submit (r1);es.execute (c1);
B. es.execute (r1);Future<String> f1 = es.execute (c1) ;
C. Future<String> f1 = (Future<String>) es.execute(r1);Future<String> f2 = (Future<String>) es.execute(c1);
D. es.submit(r1);Future<String> f1 = es.submit (c1);

Answer: D

Explanation:

Question: 162

Given the code fragment:

```
List<Double> doubles = Arrays.asList (100.12, 200.32);
DoubleFunction funD = d –> d + 100.0;
doubles.stream (). forEach (funD); // line n1

doubles.stream(). forEach(e –> System.out.println(e)); // line n2
```

What is the result?

A. A compilation error occurs at line n2.
B. 200.12300.32
C. 100.12200.32
D. A compilation error occurs at line n1.

Answer: A

Explanation:

```
/ArraysAsListExomple.java:10; error: illegal character: '\u2013'
DoubleFunction funD ^ d -> d + 100.0;
```

```
A
/ArraysAsListExomple.java:10; error: not a statement DoubleFunction
funD ■ d -> d + 100.0;
A
/ArraysAsListExomple.java:12; error: illegal character: '\u2013'
doubles.stream(). forEach(e -> System.out.printing)); // line n2 A
/ArraysAsListExomple.java:12: error: illegal start of expression
doubles.stream(). forEachCe -> System.out.println(e)); // line n2
A
/ArraysAsListExomple.java:12: error: ';* expected
doubles.stream(). forEach(e -> System.out.printing)); // line n2 A

/ArraysAsListExomple.java:12: error: ' ;* expected

doubles.stream(). forEach(e -> System.out.println(e)); // line n2
A
6 errors
```

Question: 163

Given:

```
public class Product {
int id; int price;
public Product (int id, int price) { this.id = id;
this.price = price;
}
Public String toString () { return id + ":" + price;)
}
```

and the code fragment:

```
List<Product> products = new ArrayList <> (Arrays.asList(new Product(1, 10), new Product (2, 30), new Product (3, 20));
Product p = products.stream().reduce(new Product (4, 0), (p1, p2) -> { p1.price+=p2.price;
return new Product (p1.id, p1.price);});
products.add(p);
products.stream().parallel()
.reduce((p1, p2) - > p1.price > p2.price ? p1 : p2) .ifPresent(System.out: :println);
```

What is the result?

A. 4:60
B. 2:30

C. 4:602:303:201:10

D. 4:0

E. The program prints nothing

Answer: C

Explanation:

Question: 164

Given:

```
class Student {
String course, name, city;
public Student (String name, String course, String city) { this.course = course; this.name = name; this.city = city; }
public String toString() {
return course + ":" + name + ":" + city;
}
public String getCourse() {return course;}
public String getName() {return name;}
public String getCity() {return city;}
```

and the code fragment:

```
List<Student> stds = Arrays.asList(
new Student ("Jessy", "Java ME", "Chicago"),
new Student ("Helen", "Java EE", "Houston"),
new Student ("Mark", "Java ME", "Chicago"));
stds.stream()
.collect(Collectors.groupingBy(Student::getCourse)) .forEach(src, res) -> System.out.println(scr));
```

What is the result?

A. A compilation error occurs.

B. Java EEJava ME

C. [Java EE: Helen:Houston][Java ME: Jessy:Chicago, Java ME: Mark:Chicago] D. [Java ME: Jessy:Chicago, Java ME: Mark:Chicago][Java EE: Helen:Houston]

Answer: B

Explanation:

Question: 165

Given:

```
1.  class MyClass implements Runnable {
2.      public int value
3.      public void run() {
4.          while {value < 100{
5.              value!-;
6.              system.out.printin("value: " + value);

8.      }
5.  }
10. public class TestThread {
11. public static void main(String[] args) {
12. MyClass me = new Thread(me);
13. Thread a = new Thread(me);
14.         a.start ();
15. Thread b = new Thread (me);
16.         b.start();
27.     }
13. }
```

What change should you make to guarantee a single order of execution (printed values 1 -100 in order)?

A. Line 3: public synchronized void run() {
B. Line 1: class MyClass extends Thread {
C. Line 2: public volatile int value;
D. Line 2: public synchronized int value;

Answer: B

Explanation:

Question: 166

Given:

```
class MyThread implements Runnable { private String src [ ] = /Wb "B",
    "C"} private int count = 0;              // line nl
```

```
public void run() {                    // line n2
    while (count < src.length) {
        System.cut.print(src[count]); }

}
```

and the code fragment:

MyThread nt = new MyThread() Thread tl = new Thread(mt); Thread t2 - new Thread(mt); 11.start () ; t2.start () ;

The threads t1 and t2 execute asynchronously and possibly prints ABCA or AACB.
You have been asked to modify the code to make the threads execute synchronously and prints ABC.

Which modification meets the requirement?

A. start the threads t1 and t2 within a synchronized block.
B. Replace line n1 with:private synchronized int count = 0;
C. Replace line n2 with:public synchronized void run () {
D. Replace line n2 with:volatile int count = 0;

Answer: A

Explanation:

Question: 167

Given that these files exist and are accessible:

/sports/info.txt
/sports/cricket/players.txt

/sports/cricket/data/ODI.txt

and given the code fragment:

```
int maxDepth =2;
Stream<Path> paths = Files.find(Paths.get("/sports"),
maxDepth,
(p, a) -> p.getFileName().toString().endsWith ("txt"),
FileVisitOption.FOLLOW_LINKS);
Long fCount = paths.count();
System.out.println(fCount);
```

Assuming that there are NO soft-link/symbolic links to any of the files in the directory structure, what is the result?

A. 1
B. 2
C. 3
D. An Exception is thrown at runtime.

Answer: D

Explanation:

Question: 168

Which statement is true about the single abstract method of the java.util.function.Predicate interface?

A. It accepts one argument and returns void.
B. It accepts one argument and returns boolean.
C. It accepts one argument and always produces a result of the same type as the argument.
D. It accepts an argument and produces a result of any data type.

Answer: B

References:

Question: 169

Given:

```
class FuelNotAvailException extends Exception { }
class Vehicle {
void ride() throws FuelNotAvailException {//line n1

System.out.println("Happy Journey!");
}
}
class SolarVehicle extends Vehicle {
public void ride () throws FuelNotAvailException {//line n2
super ride ();
}
}
```

and the code fragment:

```
public static void main (String[] args) throws Exception {
Vehicle v = new SolarVehicle ();
v. ride();
```

```
}
```

Which modification enables the code fragment to print Happy Journey!?

A. Replace line n1 with public void ride() throws FuelNotAvailException {
B. Replace line n1 with protected void ride() throws Exception {
C. Replace line n2 with void ride() throws Exception {
D. Replace line n2 with private void ride() throws FuelNotAvailException {

Answer: C

Explanation:

Question: 170

Given:

```
public class Counter {
public static void main (String[ ] args) {
int a = 10;
int b = -1;
assert (b >=1) : "Invalid Denominator";
int c = a / b;
System.out.println (c);
}
}
```

What is the result of running the code with the –da option?

A. -10
B. 0
C. An AssertionError is thrown.
D. A compilation error occurs.

Answer: A

Explanation:

Question: 171

Given records from the Player table:

PID	PName
1	Dave
2	Jack
3	Sam

and given the code fragment:

```
try {
Connection conn = DriverManager.getConnection(URL, username, password);
Statement st= conn.createStatement(
ResultSet.TYPE_SCROLL_SENSITIVE,
ResultSet.CONCUR_UPDATABLE);
st.execute ("SELECT * FROM Player");
st.setMaxRows(2);
ResultSet rs = st.getResultSet();
rs.absolute(3);
while (rs.next ()) {
System.out.println(rs.getInt(1) + " " + rs.getString(2));
}
} catch (SQLException ex) {
System.out.print("SQLException is thrown.");
}
```

Assume that:
The required database driver is configured in the classpath.
The appropriate database is accessible with URL, username, and password.
The SQL query is valid.

What is the result?

A. 2 Jack3 Sam
B. The program prints nothing.
C. 3 Sam
D. SQLException is thrown.

Answer: D

Explanation:

Question: 172

Given:

Item table

- ID, INTEGER: PK
- DESCRIP, VARCHAR(100)
- PRICE, REAL
- QUANTITY< INTEGER

And given the code fragment:

```
9.  try {
10. Connection conn = DriveManager.getConnection(dbURL, username, password);
11. String query = "Select * FROM Item WHERE ID = 110";
12. Statement stmt = conn.createStatement();
13. ResultSet rs = stmt.executeQuery(query);
14.  while(rs.next()) {
```

```
1.  .System.out.println("ID:" + rs.getString(1));
2.  .System.out.println("Description:" + rs.getString(2));
3.  .System.out.println("Price:" + rs.getString(3));
18.  System.out.println(Quantity:" + rs.getString(4));
19.}
20.  } catch (SQLException se) {
21.  System.out.println("Error");
22.  }
```

Assume that:
The required database driver is configured in the classpath.
The appropriate database is accessible with the dbURL, userName, and passWord exists.
The SQL query is valid.

What is the result?

A. An exception is thrown at runtime.
B. Compilation fails.
C. The code prints Error.
D. The code prints information about Item 110.

Answer: B

Explanation:

Question: 173

Given the code fragments:

```
interface CourseFilter extends Predicate<String> {
public default boolean test (String str) {
return str.contains ("Java");
}
}
```

and

```
List<String> strs = Arrays.asList("Java", "Java EE", "Embedded Java");
Predicate<String> cf1 = s - > s.length() > 3;
Predicate cf2 = new CourseFilter() { //line n1
public boolean test (String s) {
return s.startsWith ("Java");
}
};
long c = strs.stream()
.filter(cf1)
.filter(cf2//line n2
.count();
System.out.println(c);
```

What is the result?

A. 2
B. 3
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: D

Explanation:

Question: 174

Given:

```
public class Foo<K, V> {
     private K key;
     private V value;

     public Foo(K key, V value) ( this.key = key; this.value = value; )

     public static <T> Foo<T, T> twice(T value) { return new Foo<T, T>(value, value); )

     public K getKeyO { return key; } public V getValue() { return value; }
```

Which option fails?

A. Foo<String, Integer> mark = new Foo<Object, Object> (“Steve”, 100);
B. Foo<String, String> pair = Foo.<String>twice (“Hello World!”);
C. Foo<Object, Object> percentage = new Foo<Object, Object>(“Steve”, 100);
D. Foo<String, String> grade = new Foo <> (“John”, “A”);

Answer: C

Explanation:

Question: 175

Given the code fragment:

```
Map<Integer, String> books = new TreeMap<>();
books.put (1007, “A”);
books.put (1002, “C”);
books.put (1003, “B”);
books.put (1003, “B”);
System.out.println (books);
```

What is the result?

A. {1007=A, 1003=B, 1002=C}

B. {1007=A, 1003=B, 1003=B, 1002=C}
C. {1007=A, 1002=C, 1003=B, 1003=B}
D. {1002=C, 1003=B, 1007=A}

Answer: D

Explanation:

Question: 176

Given:

```
public class Canvas implements Drawable { public void draw () { }
}
public abstract class Board extends Canvas { }
public class Paper extends Canvas { protected void draw (int color) { }
}
public class Frame extends Canvas implements Drawable { public void resize () { }
abstract void open ();
}
public interface Drawable { public abstract void draw ();
}
```

Which statement is true?

A. Board does not compile.
B. Paper does not compile.
C. Frame does not compile.
D. Drawable does not compile.
E. All classes compile successfully.

Answer: C

Explanation:

Question: 177

Given the code fragment:

```
UnaryOperator<Double> uo1 = s -> s*2;//line n1 List<Double> loanValues = Arrays.asList(1000.0, 2000.0);
loanValues.stream()
.filter(lv -> lv >= 1500)
.map(lv -> uo1.apply(lv))//line n2
.forEach(s -> System.out.print(s + " "));
```

What is the result?

A. 4000.0
B. 4000
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: D

Explanation:

Question: 178

Given the code fragment:

```
Path path1 = Paths.get("/app/./sys/");
Path res1 = path1.resolve("log");
Path path2 = Paths.get("/server/exe/");
Path res1 = path2.resolve("/readme/");
System.out.println(res1);
System.out.println(res2);
```

What is the result?

A. /app/sys/log/readme/server/exe
B. /app/log/sys/server/exe/readme
C. /app/./sys/log/readme
D. /app/./sys/log/server/exe/readme

Answer: D

Explanation:

Question: 179

Given the code fragment:

```
List<String> nL = Arrays.asList("Jim", "John", "Jeff");
Function<String, String> funVal = s -> "Hello : ".concat(s);
nL.Stream()
.map(funVal)
.forEach(s-> System.out.print (s));
```

What is the result?

A. Hello : Jim Hello : John Hello : Jeff

B. Jim John Jeff
C. The program prints nothing.
D. A compilation error occurs.

Answer: C

Explanation:

The program prints nothing because the method is concat.

Question: 180

Given the code fragment:

```
List<String> colors = Arrays.asList("red", "green", "yellow");
Predicate<String> test = n - > {
System.out.println("Searching...");
return n.contains("red");
};
colors.stream()
.filter(c -> c.length() >= 3)
.allMatch(test);
```

What is the result?

A. Searching...
B. Searching...Searching...
C. Searching...Searching...Searching...
D. A compilation error occurs.

Answer: C

Explanation:

Question: 181

Given the definition of the Emp class:

```
public class Emp
private String eName;
private Integer eAge;
Emp(String eN, Integer eA) {
this.eName = eN;
this.eAge = eA;
}
public Integer getEAge () {return eAge;} public String getEName () {return eName;} }
```

and code fragment:

```
List<Emp>li = Arrays.asList(new Emp("Sam", 20), New Emp("John", 60), New Emp("Jim", 51));
Predicate<Emp> agVal = s -> s.getEAge() <= 60;//line n1
li = li.stream().filter(agVal).collect(Collectors.toList());
Stream<String> names = li.stream()map.(Emp::getEName);//line n2 names.forEach(n -> System.out.print(n + " "));
```

What is the result?

A. Sam John Jim
B. John Jim
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: C

Explanation:

Question: 182

Given:

```
class Book {
int id;
String name;
public Book (int id, String name) {
this.id = id;
this.name = name;
}
public boolean equals (Object obj) { //line n1 boolean output = false;
Book b = (Book) obj;
if (this.id = = b.id) {
output = true;
}
return output;
}
}
```

and the code fragment:

```
Book b1 = new Book (101, "Java Programing");
Book b2 = new Book (102, "Java Programing");
System.out.println (b1.equals(b2)); //line n2
```

Which statement is true?

A. The program prints true.
B. The program prints false.

C. A compilation error occurs. To ensure successful compilation, replace line n1 with:boolean equals (Book obj) {
D. A compilation error occurs. To ensure successful compilation, replace line n2 with:System.out.println (b1.equals((Object) b2));

Answer: B

Explanation:

Question: 183

Given the code fragment:

```
LocalDate valentinesDay =LocalDate.of(2015, Month.FEBRUARY, 14);
LocalDate next15days = valentinesDay.plusDays (15);
LocalDate nextYear = next15days.plusYears(1); // line n1
System.out.println(nextYear);
```

What is the result?

A. 2016-03-01
B. A DateTimeException is thrown.
C. 2016-02-29
E. A compilation error occurs at line n1.

Answer: D

Explanation:

Question: 184

Given:

```
class UserException extends Exception { }
class AgeOutOfLimitException extends UserException { }
```

and the code fragment:

```
class App {
public void doRegister(String name, int age)
throws UserException, AgeOutOfLimitException {

if (name.length () <= 60) {
throw new UserException ();
} else if (age > 60) {
throw new AgeOutOfLimitException ();
} else {
System.out.println("User is registered.");
```

```
}
}
public static void main(String[ ] args) throws UserException {

App t = new App ();
t.doRegister("Mathew", 60);
}
}
```

What is the result?

A. User is registered.
B. An AgeOutOfLimitException is thrown.
C. A UserException is thrown.
D. A compilation error occurs in the main method.

Answer: C

Explanation:

Question: 185

Given the code fragment:

```
public class Foo {
public static void main (String [ ] args) {
Map<Integer, String> unsortMap = new HashMap< > ( );
unsortMap.put (10, "z");
unsortMap.put (5, "b");
unsortMap.put (1, "d");
unsortMap.put (7, "e");
unsortMap.put (50, "j");

Map<Integer, String> treeMap = new TreeMap <Integer, String> (new
Comparator<Integer> ( ) {
@Override public int compare (Integer o1, Integer o2) {return o2.compareTo (o2); } } );

treeMap.putAll (unsortMap);

for (Map.Entry<Integer, String> entry : treeMap.entrySet () ) {
System.out.print (entry.getValue () + " "); } } }
```

What is the result?

A. A compilation error occurs.
B. d b e z j
C. j z e b d
D. z b d e j

Answer: D

Explanation:

Question: 186

Given the code fragments:

```
class Caller implements Callable<String> {
String str;
public Caller (String s) {this.str=s;}
public String call()throws Exception { return str.concat ("Caller");} }
class Runner implements Runnable {
String str;
public Runner (String s) {this.str=s;}
public void run () { System.out.println (str.concat ("Runner"));} }
```

and

```
public static void main (String[] args) throws InterruptedException, ExecutionException { ExecutorService es =
Executors.newFixedThreadPool(2);
Future f1 = es.submit (new Caller ("Call"));
Future f2 = es.submit (new Runner ("Run"));
String str1 = (String) f1.get();
String str2 = (String) f2.get();//line n1
System.out.println(str1+ ":" + str2);
}
```

What is the result?

A. The program prints:Run RunnerCall Caller : nullAnd the program does not terminate.
B. The program terminates after printing:Run RunnerCall Caller : Run
C. A compilation error occurs at line n1.
D. An Execution is thrown at run time.

Answer: D

Explanation:

Question: 187

Given:

```
class Vehicle implements Comparable<Vehicle>{ int vno;
String name;
```

```
public Vehicle (int vno, String name) { this.vno = vno,;
this.name = name;
}
public String toString () {
return vno + ":" + name;
}
public int compareTo(Vehicle o) { return this.name.compareTo(o.name);
}
```

and this code fragment:

```
Set<Vehicle> vehicles = new TreeSet <> (); vehicles.add(new Vehicle (10123, "Ford")); vehicles.add(new
Vehicle (10124, "BMW"));
System.out.println(vehicles);
```

What is the result?

A. [10123:Ford, 10124:BMW]
B. [10124:BMW, 10123:Ford]
C. A compilation error occurs.
D. A ClassCastException is thrown at run time.

Answer: A

Explanation:

Question: 188

Given that course.txt is accessible and contains:

```
Course : : Java
```

and given the code fragment:

```
public static void main (String[ ] args) {
int i;
char c;
try (FileInputStream fis = new FileInputStream ("course.txt"); InputStreamReader isr = new
InputStreamReader(fis);) { while (!isr.close()) { //line n1
isr.skip(2);
i = isr.read ();
c = (char) i;
System.out.print(c);
}
} catch (Exception e) {
e.printStackTrace();
}
}
```

What is the result?

A. ur :: va
B. ueJa
C. The program prints nothing.
D. A compilation error occurs at line n1.

Answer: C

Explanation:

Question: 189

Given the code fragment:

```
ZonedDateTime depart = ZonedDateTime.of(2015, 1, 15, 1, 0, 0, 0, ZoneID.of("UTC-7"));
ZonedDateTime arrive = ZonedDateTime.of(2015, 1, 15, 9, 0, 0, 0, ZoneID.of("UTC-5"));
long hrs = ChronoUnit.HOURS.between(depart, arrive); //line n1 System.out.println("Travel time is" + hrs + "hours");
```

What is the result?

A. Travel time is 4 hours
B. Travel time is 6 hours
C. Travel time is 8 hours
D. An exception is thrown at line n1.

Answer: C

Explanation:

Question: 190

Given the code fragment:

```
Path file = Paths.get ("courses.txt");
// line n1
```

Assume the courses.txt is accessible.

Which code fragment can be inserted at line n1 to enable the code to print the content of the courses.txt file?

A. List<String> fc = Files.list(file);fc.stream().forEach (s -> System.out.println(s));
B. Stream<String> fc = Files.readAllLines (file);fc.forEach (s - > System.out.println(s));
C. List<String> fc = Files.readAllLines(file);fc.stream().forEach (s -> System.out.println(s));

D. Stream<String> fc = Files.list (file);fc.forEach (s -> System.out.println(s));

Answer: C

Explanation:

Question: 191

Given the code fragment:

```
Stream<Path> files = Files.list(Paths.get(System.getProperty("user.home")));
files.forEach (fName -> {//line n1
try {
Path aPath = fName.toAbsolutePath();//line n2
System.out.println(fName + ":"
+ Files.readAttributes(aPath, Basic.File.Attributes.class).creationTime ());
} catch (IOException ex) { ex.printStackTrace();
});
```

What is the result?

A. All files and directories under the home directory are listed along with their attributes.

B. A compilation error occurs at line n1.
C. The files in the home directory are listed along with their attributes.
D. A compilation error occurs at line n2.

Answer: C

Explanation:

Question: 192

Given the code fragment:

```
BiFunction<Integer, Double, Integer> val = (t1, t2) -> t1 + t2; //line n1
//line n2
System.out.println(val.apply(10, 10.5));
```

What is the result?

A. 20
B. 20.5
C. A compilation error occurs at line n1.
D. A compilation error occurs at line n2.

Answer: D

Explanation:

Question: 193

Given:

```
class Student {
String course, name, city;
public Student (String name, String course, String city) { this.course = course; this.name = name; this.city = city; }
public String toString() {
return course + ":" + name + ":" + city;
}
public String getCourse() {return course;}
public String getName() {return name;}
public String getCity() {return city;}
```

and the code fragment:

```
List<Student> stds = Arrays.asList(
new Student ("Jessy", "Java ME", "Chicago"),
new Student ("Helen", "Java EE", "Houston"),
new Student ("Mark", "Java ME", "Chicago"));
stds.stream()
.collect(Collectors.groupingBy(Student::getCourse)) .forEach(src, res) -> System.out.println(res));
```

What is the result?

A. A compilation error occurs.
B. Java EEJava ME
C. [Java EE: Helen:Houston][Java ME: Jessy:Chicago, Java ME: Mark:Chicago] D. [Java ME: Jessy:Chicago, Java ME: Mark:Chicago][Java EE: Helen:Houston]

Answer: B

Explanation:

Question: 194

Given the code fragments:

```
class Employee {
Optional<Address> address;
Employee (Optional<Address> address) { this.address = address;
```

```
}
public Optional<Address> getAddress() { return address; }
}

class Address {
String city = "New York";
public String getCity { return city: }
public String toString() {
return city;
}
}
```

and

```
Address address = new Address;
Optional<Address> addrs1 = Optional.ofNullable (address);
Employee e1 = new Employee (addrs1);
String eAddress = (addrs1.isPresent()) ? addrs1.get().getCity() : "City Not available";
System.out.println(eAddress);
```

What is the result?

A. New York
B. City Not available
C. null
D. A NoSuchElementException is thrown at run time.

Answer: C

Explanation:

Question: 195

Given the code fragment:

```
public void recDelete (String dirName) throws IOException {
File [ ] listOfFiles = new File (dirName) .listFiles();
if (listOfFiles ! = null && listOfFiles.length >0) {
for (File aFile : listOfFiles) {
if (!aFile.isDirectory ()) {
if (aFile.getName ().endsWith (".class"))
aFile.delete ();
}
}
}
}
```

Assume that Projects contains subdirectories that contain .class files and is passed as an argument to the recDelete ()

method when it is invoked.

What is the result?

A. The method deletes all the .class files in the Projects directory and its subdirectories.
B. The method deletes the .class files of the Projects directory only.
C. The method executes and does not make any changes to the Projects directory.
D. The method throws an IOException.

Answer: B

Explanation:

Question: 196

Given the code fragment:

```
List<String> empDetails = Arrays.asList("100, Robin, HR", "200, Mary, AdminServices","101, Peter, HR");
empDetails.stream()
.filter(s-> s.contains("r"))
.sorted()
.forEach(System.out::println); //line n1
```

What is the result?

A. 100, Robin, HR101, Peter, HR
B. E. A compilation error occurs at line n1.
C. 101, Peter, HR200, Mary, AdminServices
D. 100, Robin, HR200, Mary, AdminServices101, Peter, HR

Answer: D

Question: 197

Given:

```
interlace Calculator {
    public ln.t lncrease(lnt x);
J

public class App (
    public static void main(String[j args) ( Calculator c = new Calculator() {
                                    public int increase(int x) {
                                        return x + 100;

                                };
        int x - c.increase(1000);
        System.out.printin(x);
```

}

Which is refactored code with functional interfaces?

A.

```
Function<Intcger> f - n -> n + 100; int y = f .accept (1003);
System.out.println(x);
```

B.

```
Function<Integer, lntcgcr> f - n -> r. + 100; int y - f.apply(1000);
System.out.printin(x);
```

C.

```
BiFunction<Integer, Integer> f - n -> n + 100; int y - I.accept(1000);
System.out.printIn(x);
```

D.

```
BlFunctions Integer, Integer> 1 - n -> n + 100; int y = f.apply(1000);
System.out.println(x);
```

A. Option A B. Option B C. Option C D. Option D E. Option E

Answer: B

Question: 198

Given:

Message.properties:

msg = Welcome!

Message_fr_FR.properties:

msg = Bienvenue!

Given the code fragment:

```
// line n1
Locale.setDefault(locale);
ResourceBundle bundle = ResourceBundle.getBundle("Message");
System.out.print(bundle.getString("msg"));
```

Which two code fragments, when inserted at line n1 independently, enable to print Bienvenue!?

A. Locale locale = new Locale("fr-FR");

B. Locale locale = Locale.FRANCE;

C. Locale locale = new Locale ("fr", "FR");

D. Locale locale = new Locale ("FRANCE", "FRENCH");

E. Locale locale = Locale.forLanguageTag("fr");

Answer: B, C

Question: 199

Given:

```
class MyExcepLion extends Exception I String msg;
    public MyExcepLion0 ( msg - "MyException is thrown. ”

public class App (
    public static void main(String[] args) { int a = 100;
        try (
            if (a <- 100) ( threw new MyException();
            ) else (
            throw new Exception("Exception is thrown.")

        ) catch (MyException | Exception me) { System.out.printin(me);
```

What is the result?

A. The program prints nothing.
B. A compile-time error occurs.
C. Exception is thrown.
D. MyException is thrown.

Answer: D

Question: 200

Given the code fragment:

```
Instant instant = In3tant.parse("2015-03-12T00:00:00.000Z').plus(l, ChronoUnit.HOURS)
System.out.printin(Instant);

Duration travelTlme - Duration.ofHours(II;
Instant arrive - instant.plus(travelTime);
System.out.printin(arrive);

LocalDateTime localDateTime • LocalDateTime.cfInstant(instant, Zoneld.of("UTC+4"));
System.out.printin(localDateTime);
```

What is the result?

A. T01:00:00Z
T03:00:00Z
2015-03-12X05:00

B.2015-03-12T01:00:00Z 2015-03-12T03:00: OOZ 2015-03-12T06:00

C.2015-03-12T01:00: OOZ 2015-03-12T02:00: OOZ 2015-03-12T05:00

D. An exception is thrown at run time.

Answer: C

Question: 201

Given:

```
public class Candidate ( int id;
    Siring name; int age; string city; Candidate(int id, String name, int age, String city) ( this.id - id;
    this.name - name; this.ace - age; this.city - city;
}
```

and the code fragment:

```
L_st<Candldate> candiLst = new ArrayListo ();
```

Assuming candlist contains Candidate objects, which code fragment calculates the average age of candidates from NewYork?

A.

```
Double si - candiLst.stream!).filter(s -> s.city.equals("NewYork")) .collect(Collectors.averagingInt(s -> s.ageH;
```

B.

```
Double si - candiLst .stream!) .map(c -> c.city) .filterts -> s.equals("NewYork")) •collect(Collectors.averagingInt<s -> s.age));
```

C.

```
Double si = candiLst.stream!).map(s -> s.cily) .filter(s -> s.equals("NewYork"))
                                .collect(Collectors.average()).toDouble()
```

D.

```
Double si = candiLst .stream() . filter (s -> s.equals ("iiewYork")) .maple -> c.age) •average();
```

A. Option A B. Option B C. Option C D. Option D E. Option E

Answer: A

Question: 202

Given this code;

```
public class hoc ■
    public in- 1 ■ 3, ] •• 9;
    public void selJ(int ii) (i = ii; ; = li/3;}
    public void setldnt jj) (] - jj; i - j- * 3;)
```

Which two are correct after this class is instantiated and tested?

A. If the value of j is set to 15, the value of i could be any integer value.
B. If the value of j is set to 5, the value of i will be 15.
C. If the value of i is set to 8, the value of j could be any integer value.
D. If the value of i is set to 5, the value of j will be 1.
E. If the value of i is set to 6, the value of j will be 18.
F. If the value of i remains 3, the value of j will remain 9.

Answer: B, D

Question: 203

Given the information: The employee table has 10 records.

Given the code fragment:

```
Cry (Connection con = // connection establishment code goes here );
        Statement stat - con.createStatement(ResultSet.TYPE_SCROLL_SENSITIVE, ResultSet.CONCURJJPDATABLE);
        ResultSet rs • stmt.executeQuery("SELECT emp_id FROM employee"))(rs.relative(1); rs.deleteRow();      // Line nl
System.out.printin(rs.getlnt(1)); // Line n2 I
```

What is the result?

A. deletes the second row and prints the emp_id of the first row
B. throws a runtime exception at Line n1
C. deletes the first row and throws an exception at Line n2
D. deletes the first row and prints the emp_id of the second row

Answer: C

Question: 204

Given the EMPLOYEE table;

EMP.ID	EMP-NAME
100	Tom
101	Mary
102	Peter
103	Robin

Given the code fragment:

```
try (Connection con - DriverMa-aaer.qetCornection(dbURL,user.passwd);) (
    Statement stmt - con.createStatement(ResultSet.TYPE_SCROLL_SENSITlVE, Result-Set.CONCUR_UPDATABL£) ResultSet rs
    - stmt.executeQuery("select ernp id,emp_name from employee");)) rs.absolute!-2);          // Line 1
    rs.roveTcInsertRow(); rs.updatelnt(1, 104); rs.updatestring(2, "Michael");
    rs. insertRou();
    rs.moyeToCurrentRowO ;
    System.out.printin("Employee Id: " ♦ rs.getlnt(l) t "< Employee Kame: " + rs.getString(2));
```

Assuming the database supports scrolling and updating, what is the result?

A. The program throws a runtime exception at Line 1.
B. A compilation error occurs.
C. A new record is inserted and Employee Id: 102, Employee Name: Peter is displayed.
D. A new record is inserted and Employee Id: 104, Employee Name: Michael is displayed.

Answer: C

Question: 205

Given the structure of the EHF and DEPT tables:

Table: BMP

ID NAME]DEPTTD

Table. DEPT

ID NAME

Given the code fragment:

```
try (Connect ior. con - DriverManager .qEtConneetiori' "Connection. String goes here");
    Statement stmt = con.createStatementf);
aesulMet rs^stmuexecuteguerysEtHO® EKP.IC,SHE.NAME,PE?T-N«E FMfi SMF,DEPT WHERE W.PEeT_it>DEPT.tt>")( ( Stiit.setFetchSlzell).;
    whiLa(rs.next ()){
        System.out.prihtln|"Enip!oyee rB:"*r3.getI-ftt(”id") |;
        System.out.printIn("Employee Name;"+rs.getstring<"name"!);
        System .out. print in ("Department Name; "+rs .gets ring)"name") | ;
    }
```

What is the result?

A. The code prints all of the records in the EM? table but not with the respective department names.
B. The code prints all of the records in the EMP table along with the respective department names.
C. The code throws a syntax error at ResultSet because the semicolon (:) is missing.
D. The code prints only the first record of the EM? table.

Answer: A

Question: 206

Given the content of resources /Message.properties:

greet = Good Day!

Given the content of resources/Message_de_DE.properties:

greet = Guten Tag!

Given the code fragment from C:\src\App.java:

```
Locale locale - new Locale("de", "DE");
Locale.setDefault(locale);
ResourceBundle bundle - ResourceBundle.getBundle("/resources/Message"); //line n'.
String msg - bundle.getstring("greet");
System.out.printin(msg);
```

A. A compilation error occurs. To ensure successful compilation, replace line n1 with:
ResourceBundle bundle = ResourceBundle.getBundle("/resources/Message.properties", locale);
B. A java.util.MissingResourceException is thrown at run time.
C. Good Day!
D. Guten Tag!

Answer: A

Question: 207

Given the content:

MessagesBundle.properties
greetings • Hello

MessagesBundle_de_DE.properties
greetings - Hallo

MessagesBundle_en_US.properties
greetings - Hi

Given the code fragment:

```
Locale currentLocale-new Locale.BuiIder().setLanguage("de"). setRegion("DE").butId();
// Line 1
String greetings- messages.getstring("greetings");
System.out.printin (greetings);
```

Which two code fragments when inserted at Line 1, independently, enables the code fragment to print "Hallo'?

A.

```
ResourceBundle messages - ResourceBundle.getBundieCMessagesBundle",Locale.GERMANY);
```

B.

```
ResourceBundle messages - ResourceBundle.getBundle("MessagesBundlc",currentLocale);
```

C.

```
ResourceBundle messages = ResourceBundle.getBundle("KessaqesBundle.properties",currentLocale);
```

D.

```
ResourceBundle messages = ResourceBundle.gelBundle CKessagesBundle", Locale.gelDelaulK));
```

E.

```
ResourceBundle messages - ResourceBundle.getBundle("MessagesBundle.properties",Locale.GERMAN)>
```

A. Option A B. Option B C. Option C D. Option D E. Option E

Answer: A, B

Question: 208

Given the content of the files:

Messages.properties:
greet = Hello!

Messages cn.properties:
greet - Hl!

Messages en CA.properties:
greet - Have a nice day!

Given the code fragment from the Test. java file:

```
12.  Locale locale - new Locale.Builder().sctLanguagc("cn").sctRcgion ("CA").build();
13.  Locale.setDefault(locale);
14.  ResourceBundle resource - ResourceBundle.load("/codes/resources/Kessages.properties");15
System.out.print(resource.getString("greet"));
```

What is the result?

A. Compilation fails at line 14.
B. Have a nice day!
C. Hi!
D. A MissingResourceException is thrown at run time.

Answer: A