

Updates from ADMjava04 batch:

spring ioc

hibernate multiple questions

Concurrency/Threadpool

Exceptions

More questions on hql

Query interface, Criteria in Hibernate

SimpleDateFormat

- 1) Which of the following techniques can a Java SE programmer use to increase the thread safety of a program?
- a. Use public static variables
  - b. Write classes so they are immutable
  - c. Use ThreadLocal variables
  - d. Use Final classes
  - e. Annotate a class with @Multithread

Ans: b,C

- 2) Under which of the following conditions will an alert message be displayed for the Java script code given below

<form name="frm">

```

<label for=age"> Please enter your birthday</label>
<input type ="text" name=age" id=age" onblur="validate(this.value)"
<input type="submit" id=Enter"/></form>

<script language ="javascript">
function validate(val)
{
    if (isNaN(val)
    {
        alert("XXX XXX XXX");
        document.frm.age.focus();
    }
}
</script>

```

- a. If the text box age contains a numerical value and the submit button Submit is clicked
- b. If textbox age loses focus and contains a non-numerical value
- c. If textbox age contains a non-numerical value and gains focus
- d. If textbox age contains a non-numerical value and the submit button Enter is clicked
- e. If textbox age loses focus and contains a numerical value

**Ans: B**

**3)** A Java EE servlet uses the line of code below:

```
String targetEmailForRequest = getServletConfig().getInitParameter("corporateEmail");
```

From which of the following locations will the application read the corporateEmail value?

- a. An attribute corporateEmailsteriin the request
- b. A <servlet-mapping> element in web.xml
- c. A corporateEmail entity in properties.xml
- d. An <init-param> element in web.xml
- e. A corporateEmail item in the session

Ans: d

- 4) Which of the following statements correctly describe lightweight and heavyweight Java Swing components?
- a. Lightweight components are faster in response and performance
  - b. *JWindow, JFrame , JDialog* and *JApplet* are lightweight components
  - c. Heavyweight components provide a consistent look and feel on all platforms
  - d. Heavyweight components depend on native code counterparts to handle their functionality
  - e. AWT components are heavyweight, whereas Swing components are lightweight

Ans: a,d,e

- 5) Which of the following can be returned in the variable result from invoking the below Java SE code

```
java.util.Random r = new java.util.Random();  
int result = r.nextInt(7);
```

- a. 3
- b. -1
- c. 1234567
- d. 7
- e. 0

Ans: a,e

- 6) Which of the following statements regarding the usage of the Java SE this() and super() keywords are valid?

- a. If used, this() or super() calls must always be the first statements in a constructor
- b. this() and super() can be used in the same (non-constructor) method
- c. If neither this() nor super() is coded then the compiler will generate a call to the zero argument superclass constructor
- d. this() and super() calls can be used in methods other than a constructor
- e. this() and super() can be used in the same constructor

-----  
Ans: a,c

7) Which of the following statements are true about variable access between a Java SE inner class and its containing class?

- a. The inner class cannot access public variables in the containing class
- b. The inner class cannot access its own private variables
- c. The inner class can access private variables in the containing class
- d. The containing class cannot access public variables in the inner class
- e. The containing class can access private variables in the inner class

Ans: C,d

8) In Java EE environment, which of the following statements are valid concerning the choice of a JDBC driver to access a database?

- a. Type 2 drivers have been deprecated since J2SE 5.0 and so should not be chosen
- b. Type 4 drivers exist for MySQL, Oracle, SQL Server and DB2
- c. A type1 driver will perform slightly faster than type2 driver
- d. A type3 driver does not support calls to stored procedures
- e. Type 4 drivers have the fastest performance but require the installation of software on the client
- f. Which is vendor independent – type I

Ans: b

9) What will be the output of the following code snippet?

```
import java.util.*;
public class LinkEx{
    public static void main(String args[])
    {
        Set <String> set = new LinkedHashSet<String>();
        set.add("3");
        set.add("1");
    }
}
```

```

        set.add("3");
        set.add("2");
        set.add("3");
        set.add("1");

        for(Iterator<String> it=set.iterator(); it.hasNext(); ){
            String str=(String) it.next();
            System.out.print(str+"-");
        }
    }
}

```

- a. 3-1-2-
- b. An exception will be thrown at runtime
- c. 1-2-3-
- d. 3-1-3-2-3-1-
- e. The program will run to completion, but the output will vary depending on the JVM

**Ans: a**

**10)** Based on the annotated hibernate code below, which of the following statements are correct?

```

@Entity
public class Peanut {
    @Id
    @Column (name= "peanut_id")
    private String id;
    @Column private BigDecimal price;
    @OneToMany(cascade={CascadeType.All})
    @JoinColumn(name="peanut_id")
    @IndexColumn(name="idx")
    private List<Walnut> walnuts;
}

@Entity
public class Walnut{
    @Id
    @Column (name= "walnut_id")
    private String id;
    @ManyToOne

```

```
        @JoinColumn(name="peanut_id", insertable=false, updatable=false,
        nullable=false)
        private Peanut peanut;
    }
```

- a. A Walnut cannot have any Peanuts
- b. A Walnut cannot update a Penut
- c. A Walnut can have multiple Peanuts
- d. A Peanut can have multiple Walnuts
- e. A Peanut can delete a Walnut

Ans: b,d,e

**11)** A Java SE class, MyFileProcessor, opens and uses a FileReader object in response to calls by its clients. Which of the following techniques could be used so that a client can guarantee that the FileReader object is closed at a certain point?

- a. The client sets its MyFileProcessor object reference to null
- b. The client makes a call to System.gc()
- c. MyFileProcessor contains code to close files in its destructor
- d. MyFileProcessor contains code to close the FileReader in its finalizer
- e. MyFileProcessor includes a public closeFiles method that contains code to close the files. The client calls this method

ns: e

**12)** The role of Spring in a full fledged Spring Web application is which of the following?

- a. It provides only an application-tier and data-tier logic web application framework, while the presentation-tier logic is left to itself
- b. It provides only a presentation-tier Web application framework, while the application-tier and data-tier logic is left to itself
- c. It provides the domain logic which implements the business rules to be provided by the web application

- d. It provides the management and configuration of business objects, enabling data access, integration, and presentation with simple POJOs
- e. It does not provide support for a full-fledged Spring Web application, but provides the infrastructure to support third-party Web frameworks

Ans: b,d

**13)** Which of the following will be the result of an attempt to compile and execute the Java SE code snippet below?

- ```
1. class ExceptionDemo {  
2.     public static void main(String[] args) {  
3.         for (int x=3, int y=0; x>y; x--, y++) {  
4.             System.out.print(x+ " "+y+ " ");  
5.         }  
6.     }  
7. }
```
- a. The output is "3 1 0 2"
  - b. A compilation error will occur at line number 4
  - c. The output is " 3 0 2 1 "
  - d. A compilation error will occur at line number 3
  - e. A runtime exception will occur

Ans: d

**14)** Which of the following can be the output of an attempt to compile and execute the Java SE code snippet

```
public class ExceptionDemo {  
    public static void main(String args[]) {  
        int x=5, y=0;  
        try{  
            try {  
                System.out.println(x);  
                System.out.println(x/y);  
                System.out.println(y);  
            }  
            catch(ArithmeticException ex)
```



```

        {System.out.println("Inner Catch1");
        throw ex;
        }
    } catch(RuntimeException ex)
    {System.out.println("Inner Catch2");
    throw ex;
    }

    Finally {
        System.out.println("Inner Finally");
    }

    catch(Exception ex)
    {
        System.out.println("Outer Catch");
    }
}

```

- a. 5  
Inner Catch1  
Inner Finally  
Outer Catch
- b. 5  
Inner Catch1  
Outer Catch
- c. 5  
Inner Catch2  
Outer Catch  
Inner Finally
- d. 5  
Inner Catch1  
Inner Finally
- e. 5  
Inner Catch2  
Inner Finally  
Outer Catch

Ans: a

**15)** Which of the following statements correctly describe hibernate annotations?

- a.** They are the indicators for the database on how to map database table to Java objects
- b.** They are embedded metadata in Plain Old Java Objects(POJO)
- c. They cannot be combined with the XML-based configuration
- d.** They can be combined with Java Persistent API (JPA) implementations
- e. They are retrieved by the Java Virtual Machine (VM) at runtime

**Ans:** a , b,d

**16)** In Java EE, which of the following JSP and EL statements will get the URI string of the client request?

- a. `${pageContext.getRequest.getRequestURL}`
- b. `<%=request.getClientURI() %>`
- c.** `${pageContext.request.requestURI}`
- d. `${requestScope.requestURI}`
- e. `<${pageContext.request.requestURI}>`

**Ans:** C

**17)** Which of the following statements correctly describe Hibernate id generation strategies?

- a.** The Native strategy uses Identity, Sequence, or Hilo depending on the database hibernate is connecting to
- b. The sequence strategy generates the next available sequence for Sybase database
- c.** The assigned strategy allows the Java application to create the database identifier
- d. The Hilo strategy uses a sequence number calculated from a Hilo algorithm
- e.** Ids generated with the Increment strategy are unique

Ans: a,c, e.

**18)** In Java SE, which of the following from the java.io package are concrete classes that can be instantiated?

- a. PrintWriter
- b. OutputStream(A)
- c. DataInput(l)
- d. FilterInputStream
- e. FilterReader(A)

Ans: a,d

**19)** Which of the following statements are correct about the java.util.Queue<E> interface in Java SE?

- a. The Queue class has 2 constructors, a zero argument constructor and a constructor that takes an int param(capacity)
- b. A Queue object orders its elements in a FIFO (First In First Out) manner
- c. In a PriorityQueue<Integer>, a call to element is guaranteed to return the element with the highest integer value
- d. In a Queue object containing one or more elements, the element and remove methods both return the same element – head element
- e. In a BlockingQueue<E>, a call to put is guaranteed to block unless the queue is full

Ans: b,d

**20)** Which of the following correctly describe what the command javah -jni\_FooBar will produce?

- a. A library called jni\_FooBar.h based on annotated elements in the FooBar class
- b. A Java class called FooBarH which Java used when invoking native code
- c. A Java style header file called jni\_FooBar.h based on the annotations in the FooBar native library
- d. A C-style application from data elements in the jni\_FooBar.java file
- e. A C-style header file called jni\_FooBar .h based on the native methods defined in the FooBar class

Ans: e

=====day3=====

**21)** Which of the following techniques can resolve an OutOfMemoryError in a Java SE application?

- a. Configure the garbage collector to run more frequently
- b. Increase the page file size of the computer's virtual memory
- c.** Increase the available JVM heap size.
- d.** Ensure that references to objects are released when they are no longer needed.
- e. Increase the amount of physical RAM on the computer

Ans: C,d

**22)** Two Java SE classes are declared as shown below:

```
public class Invoice {
    public static String formatId(String oldId) {
        return oldId + "_Invoice"
    }
}
public class SalesInvoice extends Invoice {
    public static String formatId (String oldId) {
        return oldId + "_SalesInvoice";
    }
}
```

Which of the following statements are true about attempts to use these classes?

- a. Invoice invoice = new SalesInvoice();  
System.out.println(invoice.formatId("1234"));  
  
Will output 1234\_SalesInvoice
- b. Invoice invoice = new Invoice();  
System.out.println((SalesInvoice)Invoice.formatId("1234"));  
  
Will output 1234\_SalesInvoice

- c. `Invoice invoice = new Invoice();` .  
`System.out.println(invoice.formatId("1234"));`

Will output 1234\_Invoice

- d. `SalesInvoice invoice = new SalesInvoice();`  
`System.out.println(Invoice.formatId("1234"));`

Will output 1234\_SalesInvoice

- e. `SalesInvoice invoice = new SalesInvoice();`  
`System.out.println(invoice.formatId("1234"));`

Will output 1234\_Invoice

Ans: C

**23)** Java SE class `ThirdPartyObject`, that is not thread-safe, is to be used in some new Java code. Which of the following design decisions can be made to ensure that no race conditions will occur?

- a. Provide a static getter for a `ThirdPartyObject` instance
- b. Store instances of `ThirdPartyObject` in a `ThreadLocal` .
- c. Make any instance of `ThirdPartyObject` a local (method) variable and ensure that no references to it are published.
- d. Use `@Immutable` as an annotation with `ThirdPartyObject` instances.
- e. Ensure that an instance of `ThirdPartyObject` is private and can only be accessed using a public getter method

Ans: b,C

**24)** Java EE servlet-based application uses a context attribute that is vital to the operation of the application. Which of the following approaches can be used to ensure thread-safe access to the attribute?

- a. Access the attribute within a code block that is synchronized on the request object
- b. Agree a strategy where all servlets must access the attribute within a code block that is synchronized on the session object

- c. Specify synchronized in the method declarations of doGet and doPost in the servlet
- d.** Agree a strategy where all servlets must access the attribute within the code block that is synchronized on the context object.
- e. Access the attribute within a code block that is synchronized on the session object

**Ans: d**

**25)** Given code below contains overloaded and overridden constructor. Which of the following can be the result of an attempt to compile and execute this code?

```
class Superclass {
    Superclass() {
        this(0);
        System.out.println("1");
    }
    Superclass(int x) {
        System.out.println("2"+x);
    }
}

public class Subclass extends Superclass {
    Subclass(int x) {
        System.out.println("3" + x);
    }
    Subclass(int x, int y) {
        this(x);
        System.out.println("4" + x + y);
    }
    public static void main(String[] args) {
        new Subclass(2,3);
    }
}
```

- a. The output is  
32  
423
- b.** The output is.  
20  
1  
32  
423

- c. The output is  
22  
32  
423
- d. The output is  
5  
9
- e. A Recursive constructor invocation compilation error occurs

**Ans: b**

**26)** In Java the two classes below are declared in the same file:

```
class Parent {
    protected static int count=0;
    public Parent () { count++; }
    static int getCount() { return count; }
}

public class Child extends Parent {
    public Child() { count++; }
    public static void main(String [] args) {
        System.out.println("Count = "+getCount());
        Child obj = new Child();
        System.out.println("Count = "+ getCount());
    }
}
```

Which of the following can be the result of trying to compile and execute this file?

- a. The file will compile and run and the output will be :  
Count = 0  
Count = 1
- b. The file will not compile
- c. The file will compile and run and the output will be :  
Count = 1  
Count = 2
- d.** The file will compile and run and the output will be : .  
Count = 0  
Count = 2
- e. The file will compile but will generate a runtime error

Ans: d

**27)** In the Java SE statement shown below, which of the following accurately describe the parameter “MyBundle”?

```
ResourceBundle bundle = ResourceBundle.getBundle("MyBundle", currentLocale);
```

- a. An Internet URL
- b. The name of a Java class
- c. The name of a command line switch
- d.** The name-prefix of a series of property files.
- e. The name of a .Net dll

Ans: d

**28)** Which of the following are implementations of the Front Controller pattern for full-fledged Spring Web application described by the deployment descriptor below?

```
<?xml version="1.0" encoding = "UTF-8"?>
<web-app xmlns = "http://java.sun.com/xml/ns/javaee"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
  version = "2.5">
  <display-name>Archetype Created Web Application</display-name>

  <servlet>
    <servlet-name> Spring MVC Web Application</servlet-name>
    <servlet-class>
      [Spring Front Controller implementation]
    </servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>Spring MVC Web Application</servlet-name>
    <url-pattern>/*</url-pattern>
```



```
        </servlet-mapping>
    </web-app>
```

- a. RequestContextListener
- b. RequestContextFilter
- c. WebApplicationContext
- d. DispatcherServlet .**
- e. ContextLoaderListener

**Ans d**

**29)** To troubleshoot a problem in a live system, a class is modified slightly resulting in the code shown below:

```
import java.util.ArrayList;
import java.util.List;
public List<String> queueSequence;
public void setup()
{try {  establishQueueSequence();
    }
    finally {
        cleanupQueueSequence();
        System.out.println("Queue sequence successfully cleaned up");
    }
}
private void cleanupQueueSequence() {
    if (queueSequence.size() > 0) {
        System.out.println("Queue size > 0");
    }
}
private void establishQueueSequence() {
    if (true) {
        throw new IllegalArgumentException();
    }
    queueSequence = new ArrayList<String>();
}
}
```

Which of the following can be the result of an attempt to execute the code shown below?

```
IKMProcessor processor = new IKMProcessor();
processor.setUp();
System.out.println("Processing complete");
```

- a. The program runs to completion without exception, but nothing is output
- b. The program outputs: Queue sequence successfully cleaned up
- c. Processing ends abnormally with an `IllegalArgumentException`
- d. Processing ends abnormally with a `NullPointerException` .**
- e. The program outputs: Processing complete

**Ans: d**

**30)** Which of the following are valid results of executing the JavaScript code snippet below?

```
<body onLoad="hi()" onUnload = "bye()">
<script language=javascript>
    var nm= "";
    function hi() {
        nm= prompt("Hello! Your name?", "");
    }
    {
        Function bye() { alert("Goodbye " + nm);
    }
</script>
</body>
```

- a. There is no visible output when the document loads
- b. After the document loads, a welcome message is displayed and the user is prompted for a name.**
- c. A syntax error is displayed when function `hi()` is executed
- d. When the user request another URL, a good-bye message is displayed.**

- e. The document displays and error message, since all functions must be in the <HEAD>section of the document

Ans: b,d

**31)** Which of the following Java Native Interface (JNI) types and keywords map to their machine-dependent Java equivalents?

- a. const : constant
- b. void : void .
- c. jintArray : int []
- d. jlong : long.
- e. jarray : array

Ans: b,d,,

JNI,javah,swing and awt, jvm

**32)** Which of the following statements are valid about the JDBC code snippet below, written for a Java EE environment?

```
imports here
.....
public class MyJDBCInsertServlet extends HttpServlet {
    @Resource (name="jdbc/TimetableDBPool")
    private DataSource dataSource;
    @Override
    protected void doGet (HttpServletRequest request, HttpServletResponse
        response) throws ServletException, IOException {
        String insertSql= "INSERT INTO purchase_order (id, description)
            VALUES (?,?)";
        try {
            Connection connection = dataSource.getConnection();
            PreparedStatement insertStatement =
                connection.prepareStatement(insertSql);
            insertStatement.setInt(1, 12345);
            insertStatement.setString(2, "QAC Demo");
            insertStatement.executeUpdate(); ....
        }
```

```

        insertStatement.close();
        connection.close();
    }
    catch (SQLException e) {
        e.printStackTrace();
    }
}
}

```

- a. The code will not compile
- b. The code will throw an `IndexOutOfBoundsException`
- c. After execution, a record will be added to the `purchase_orders` table with `id=12345` and `description="QAC Demo"`
- d. A `SQLException` will be caught, then the code will continue execution
- e. The code will throw a `NullPointerException`

Ans: a

**33)** Which of the following statements correctly describe Hibernate caching?

- a. Caching causes extra database activity
- b. Caching dynamic data will improve application performance
- c. Hibernate bypasses the session cache by default
- d. Cached data resides between the application and the database
- e. Hibernate does not support second level caching

Ans: b,d

**34)** Before forwarding the request to a JSP, a Java servlet executes the code below:

```

java.util.ArrayList peopleNames = new java.util.ArrayList();
peopleNames.add("John");
peopleNames.add("Michelle");
peopleNames.add("Michael");
peopleNames.add("Susan");

```

```

request.setAttribute("favoriteNames", peopleNames);

```

In the JSP, which of the following EL statements will cause one or more of these names to be shown on the web page?

- a. Second name is `${peopleNames[1]}`

- b. Last name is `${favoriteNames["Susan"]}`
- c.** Names are `${favoriteNames}`
- d. Initial name is `${favoriteNames["O"]}`
- e. Favorite names are `${peopleNames}`

**Ans: c**

**35)** A company is building a new application which stores all employee information

1. `@Entity`
2. `public class Company {`
3. `@Id`
4. `@Column(name="company_id")`
5. `private String id;`
- 6.
7. `private String employeeNumber;`
8. `@Column(name="employee_number")`
9. `public void setEmployeeNumber (String value) {`
10. `price = value;`
11. `}`
12. `}`

When the above code is executed, a mapping exception is thrown, which of the following changes will allow the code to successfully execute?

- a.** Add at Line 12:  
`public void setId(String value) {`  
`id = value;`  
`}`
- b. Remove Line 3
- c. Remove Line 4
- d.** Move Line 8 to Line 6
- e. Update Line 8 to `@Column(name="employee_number_id")`

**Ans: a,d**

**36)** Which of the following statements correctly describe the use of Java Native Interface (JNI)?

- a. JNI imports and converts non-Java code into a Java application
- b. JNI provides an out-of-the-box solution to interface with services outside the Java application
- c. JNI allows native operating systems to access Java based applications by bypassing the Java Virtual Machine (JVM)
- d. JNI gives applications direct access to computer hardware
- e. JNI allows applications to use native code in situations where Java cannot be used

Ans: e

**37)** Which of the following blocks of code can replace the asterisks in the Java Swing code below to

```
import java.util.Locale;
import java.util.ResourceBundle;
import javax.swing.JFrame;

public class SwingInternationalizationDemo {
    public static void main (String[] args) {
        String language;
        String country;
        Locale locale;
        ResourceBundle rb;
        *****
    }
}
```

- a. `Locale = new Locale();`  
`rb= ResourceBundle.getBundle("MessageBundle" , locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`
- b. `language = Locale.getDefault().getLanguage();`  
`country=Locale.getDefault().getCountry();`  
`locale=new Locale(language, country);`  
`rb= new ResourceBundle("MessageBundle" , locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`

```
frame.setVisible(true);
```

- c. 

```
language = System.getLanguage();
country = System.getCountry();
locale=new Locale(language, country);
rb= ResourceBundle.getBundle("MessageBundle", locale);
JFrame frame=new JFrame();
frame.setSize(300,300);
frame.setTitle(rb.getString("frameTitle"));
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setVisible(true);
```
- d. 

```
language = Locale.getDefault().getLanguage();
country=Locale.getDefault().getCountry();
locale=new Locale(language, country);
rb= ResourceBundle.getBundle("MessageBundle", locale);
JFrame frame=new JFrame();
frame.setSize(300,300);
frame.setTitle(rb.getString("frameTitle"));
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setVisible(true);
```
- e. 

```
locale = new Locale();
language = System.getDefaultLanguage();
country = System.getDefaultCountry();
locale.setLanguage(language);
locale.setCountry(country);
rb= ResourceBundle.getBundle("MessageBundle", locale);
JFrame frame=new JFrame();
frame.setSize(300,300);
frame.setTitle(rb.getString("frameTitle"));
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.setVisible(true);
```

**Ans C**

**38)** Two Java SE classes are declared as shown below:

```
package com.ikmnet;
public class MySuper {
    protected String buildString(String current) {
        return current + "1";
    }
}
```

```

    }
}
package com.ikmnet;
public class MySub extends MySuper {
    @Override
    public String buildString (String current) {
        return super.buildString(current);
    }
}

```

A test harness is accessed using the line of code below:

```
new MyTestHarness().writeString();
```

Which of the following class declarations for MyTestHarness will result in a console output of

- a. 

```
package anotherpackage;
import com.ikmnet.MySub;
public class MyTestHarness {
    public void writeString() {
        MySub object = new MySub();
        System.out.println(object.buildString("O, "));
    }
}
```
- b. 

```
package anotherpackage;
import com.ikmnet.MySub;
import com.ikmnet.MySuper;
public class MyTestHarness {
    public void writeString() {
        MySuper object = new MySub();
        System.out.println(object.buildString("O, "));
    }
}
```
- c. 

```
package com.ikmnet;
public class MyTestHarness {
    public void writeString() {
        MySuper object = new MySuper();
        System.out.println(object.buildString("O, "));
    }
}
```



- d. 

```
package anotherpackage;
import com.ikmnet.MySuper;
public class MyTestHarness extend MySuper {
    public void writeString() {
        MySuper object = new MySuper();
        System.out.println(object.buildString("O, "));
    }
}
```
- e. 

```
package anotherpackage;
import com.ikmnet.MySuper;
public class MyTestHarness {
    public void writeString() {
        MySuper object = new MySuper();
        System.out.println(object.buildString("O, "));
    }
}
```

Ans: a,c

**39)** In a Java SE environment, garbage collection is causing performance problems and it is suspected .... Problems are caused by some of the applications making explicit calls to System.gc(). Which of the following JVM Arguments can be used to test this theory?

- a. -XX:+DisableExplicitGC
- b. -XX:+UseConcMarkSweepGC
- c. -XX:+UseParNewGC
- d. -XX:+UseParallelGC
- e. -Xverify:none

<http://www.oracle.com/technetwork/articles/java/vmoptions-jsp-140102.html>

Ans: a

=====

**40)** A Java EE servlet contains the code below:

```
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    ...
    PrintWriter out = response.getWriter();
    out.println("<html><body>Please wait...</body></html>");
    out.flush();
    out.close();
    response.sendRedirect("BookingPortal.jsp");
    ...
}
```

}

Which of the following will occur when this code is executed?

- a. A page containing the text "BookingPortal.jsp" will display
- b. StackOverflowException will be thrown and be visible in the server log
- c. A page containing the text "Please wait..." will briefly display then disappear.
- d. IllegalStateException will be thrown and be visible in the server log.
- e. The HTML for page Bookingportal.jsp will display

Ans : c, d

**41)** In Java SE, which of the following are true about the string s?

String s = "abcd";

- a. The statement  
s.equals("abcd") will evaluate to true.
- b. The statement  
S == "abcd" will evaluate to true
- c. s.replace('a','f') will modify the string s
- d. Given  
String s2=new String("abcd");  
The statement  
s == s2 will evaluate to true
- e. The statement  
s = "abcd" will eval

Ans: a

**42)** Which of the following statement correctly describe the Java Hibernate framework?

- a. It is an Object Relation Mapping implementation.
- b. It is not supported with Enterprise Java Beans (EJBs)
- c. It increases the complexity of the application
- d. It converts Java objects to database specific SQL statements.
- e. It supports distributed databases

Ans : a,d,e

43) Which of the following do NOT correctly declare a generic java SE class?

- a. 

```
public class Account<T> {  
    private T accountType;  
    public void add(T newType) {accountType= newType;}  
    public T get() {return accountType;}  
}
```
- b. 

```
public class Account {  
    private<T extends Object> accountType;  
    public void add (<T extends Object> newType) {accountType=newType;}  
    public<T extends Object> get() {return accountType;}  
}.
```
- c. 

```
public class Account<T>{  
    private T accountType;  
    public void add(T newType) {accountType =newType;}  
    public T get() { return accountType;}  
}
```
- d. 

```
public class Account {  
    private<T> accountType;  
    public void add(<T> newType){ accountType =newType;}  
    public Type get() { return accountType; }  
}.
```
- e. 

```
public class Account(Type){  
    private Type accountType;  
    public void add(Type newType){accountType=newType;}  
    public Type get() { return accountType;}  
}.
```

Ans: b,d,e

**44)** Which of the following statements are valid about JPA Entities in Java EE?

- a. Mapping between java objects and the related databases must be defined using annotations.
- b. An entity class must implement a persist() method
- c. In an entity class, the annotation @ColumnInTable must be used if a field is to be associated with a column in a table
- d. An entity instance corresponds to a table row.
- e. An entity is a POJO annotated with the @Entity annotation.

Ans: a,d,e

**45)** Which of the following are created by the J2SE 5.0 code below?

```
package pkg;

class Foo {

    native int bar(String S);

    Static {

        System.loadLibrary("foo_bar");

    }}
```

- a. A native library called foo\_bar .
- b. A mapping in the registry between the java class Foo and a native application called foo\_bar
- c. A java class with a native method called bar.
- d. A native method called bar, which is used in the native application called foo\_bar
- e. A static native class called foo\_bar

Ans: a,c

**46)** The JavaScript snippet show is to be used by a gaming software company to return the "x" & "y" coordinates of a user's mouse click. The script must correctly address any current browser challenges as well as Internet Explore support for versions prior to IE6. Which of the following values can be substituted for \*\*\*A\*\*\*, \*\*\*B\*\*\* and \*\*\*C\*\*\* in the JavaScript code to execute correctly?

```
<script language="javascript" type="text/javascript">
function processClick(evt) {
    ***A***
    var x = 0; var y = 0;
    var result = new Array(2);
    var offsetX = 0; offsetY= 0;
    if (evt.pageX) {
```

```

        x=evt.pageX;
        y = evt.pageY;
    } else if (evt.clientX) {
        If (document.documentElement.scrollLeft) {
            offsetX = document.documentElement.scrollLeft;
            offsetY = document.documentElement.scrollTop;
        } else if (document.body) {
            offsetX = document.body.scrollLeft;
            offsetY = document.body.scrollTop;
        }
    }
    result[0] = evt.clientX + offsetX;
    result[1] = evt.clientY + offsetY;
    return result;
}

If (document.attachEvent)
    ***B***
else
    ***C***
</script>

```

- a. Replace \*\*\*A\*\*\* with `evt=evt || windows.event;`  
 Replace \*\*\*B\*\*\* with `document.attachEvent("onclick",processClick);`  
 Replace \*\*\*C\*\*\* with `document.addEventListener("click",processClick, false);` .
- b. Replace \*\*\*A\*\*\* with `evt=evt || windows.event;`  
 Replace \*\*\*B\*\*\* with `document.attachEvent("onclick",processClick, false);`  
 Replace \*\*\*C\*\*\* with `document.addEventListener("click",processClick);`
- c. Replace \*\*\*A\*\*\* with `evt=evt || windows.event;`  
 Replace \*\*\*B\*\*\* with `document.addEventListener("onclick",processClick);`  
 Replace \*\*\*C\*\*\* with `document.attachEvent("click",processClick, false);`
- d. Replace \*\*\*A\*\*\* with `evt=evt || windows.event;`  
 Replace \*\*\*B\*\*\* with `document.attachEvent("onmouseclick",processClick, false);`  
 Replace \*\*\*C\*\*\* with `document.addEventListener("mouseclick",processClick);`

Ans: a

**47)** A User application deals with late binding in its implementation as is shown in the Java SE code snippet

```

class LB_1 {
    public void retValue() {
        System.out.println("LB_1");
    }
}
public class LB_2 extends LB_1 {
    public void retValue() {
        System.out.println("LB_2");
    }
    public static void main(String args[]) {
        LB_1 lb = new LB_2();
        lb.retValue();
    }
}

```

- a. A runtime error will occur
- b. A compilation error will occur
- c. LB\_2**
- d. LB\_1 LB\_2
- e. LB\_1

**Ans: c**

**48)** Java EE application is to be built so that some of the functionality can be customized by each customer. The intention is that each customer will be able to write a class to implement the customer behavior then deploy the class with the application. Which of the following are valid approaches that will enable the deployer at the customer site to achieve this?

- a. The deployer uses Winzip to add and remove .class files in the EAR file
- b. The deployer uses the IDE to code the correct class and runs Junit tests to verify
- c. The deployer specifies the classname in a config file. The application code reads the file and uses reflection api to load the class**
- d. The deployer uses Winzip to add and remove .class files in the RAR file
- e. In the container, the deployer adds the Java source code of the class to the classpath

**Ans: c**

**49)** In Java SE, which of the following statements are correct about thread management in the main method?

- a. The main method runs on daemon thread with a higher priority than the garbage collector's thread

- b. The main method can start a daemon thread that will not affect whether the JVM instance exits
- c. When the main method returns, any daemon thread created by it are always automatically terminated
- d. Any thread launched by the main method will be a non-daemon thread with the same priority as the original thread
- e. When the main method of a program returns, the JVM instance must exit

Explain: When main method is called by default one main thread is created. And main thread is a non-daemon thread. When threads created by the main method it inherits it's parent's property. That means they are all non-daemon threads. As you know JVM waits until all non-daemon threads to complete. So it will execute even after the main thread completes.

B,D

=====

50) Which of the following combinations of Spring modules cover end-to-end functionalities of presentation, middle-tier, and data access in the full-fledged Spring Web application below?

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<beans xmlns="http://www.springframework.org/schema/beans"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns:tx="http://www.springframework.org/schema/tx"
      xmlns:mvc="http://www.springframework.org/schema/mvc"
      xsi:schemaLocation="http://www.springframework.org/schema/beans
        http://www.springframework.org/schema/beans/spring-beans-3.0.xsd
        http://www.springframework.org/schema/tx
        http://www.springframework.org/schema/tx/spring-tx-3.0.xsd
        http://www.springframework.org/schema/mvc
        http://www.springframework.org/schema/mvc/spring-mvc-3.0.xsd">
  <mvc:annotation-driven/>
  <bean class="MyController"/>
  <tx:annotation-driven />
  <bean id="transactionManager"
```

```
class="org.springframework.jdbc.datasource.DataSourceTransactionManager">
  <!-- ... -->
```

```

</bean>

<bean id = "localSessionFactoryBean"
      class = "org.springframework.orm.hibernate3.LocalSessionFactoryBean"
      init-method="createDatabaseSchema">
    <!-- ... -->
  </bean>
<bean id = "myDataSource"
      class = "org.springframework.jdbc.datasource.DriverManagerDataSource"
>
    <!-- ... -->
  </bean>
</beans>

```

- a. Web, Context, JDBC
- b. Portlet, AOP, Context
- c. Core, AOP, OXM
- d. ORM, Transactions, JDBC.**
- e. Beans, Context, JDBC

**Ans: d**

**51)** Consider the deployment descriptor for a Java EE servlet shown below

```

<web-app>
  <context-param>
    <param-name>GeneralSitename</param-name>
    <param-value>S1234</param-value>
  </context-param>
</Web-app>

<servlet>
  <servlet-name> orders</servlet-name>

  <init-param>
    <param-name>AccountingSitename</param-name>

```



```
<param-value>A5678</param-value>
</init-param>
</servlet>
```

Which of the following are valid?

- a. `getServletConfig().getServletContext("AccountingSitename").getInitParameter()` returns A5678
- b. `getServletContext().getAttributeNames()` returns the value AccountingSitename.
- c.** `getServletContext().getInitParameter("GeneralSitename")` returns the value S1234.
- d. `getServletConfig().getInitParameter()` returns the value GeneralSitename
- e. `getServletConfig().getServletName()` return the value AccountingSitename

**Ans: C**

**52)** In the context of Java Hibernate, which of the following correctly describe the purpose of the cascade property?

- a. It ensures attributes in a non –mapped class are saved, updated, merged or deleted
- b. It replaces boiler-plate code when loading databases values
- c. It removes the need to have code for saving, updating, merging and deleting objects
- d.** It replaces boiler-plate code for saving , updating ,merging and deleting collections.
- e.** It ensures collections in a valid mapped class are saved, updated, merged or deleted.

**d,e**

**53)** If the java SE method below exists in a superclass:

```
protected int getLocalCode(String value, boolean isValidated)
```

Which of the following are valid subclass override declarations?

- a. `@Override`  
`public int getLocalCode(String value, boolean isValidated) .`
- b. `@Override`  
`protected long getLocalCode(String value, boolean isValidated)`
- c. `@Override`  
`protected short getLocalCode(String value, boolean isValidated)`
- d. `@Override`  
`protected int getLocalCode(String value, boolean isValidated) throws invalideCodeException`
- e. `@Override`  
`protected int getLocalCode(String value, boolean isValidated) .`

ans: a,e

54) Which of the following statements are valid regarding the Java SE code snippet provided below?

```

import java.io.*;
public class FileClass{
    public static void main (String[] args) {
        File file = new File("test.txt");
        File backup = new File ("test.txt.bak");
        backup.delete();
        file.renameTo(backup); // Location 1
    }
}

```

- a. If before execution: file test.txt containing the line  
Original  
Result: test.txt no longer exists. File test.txt.bak is created containing line  
Original
- b. There will be a runtime error at Location 1 regardless of which files exist before execution.

- c. If before execution: test.txt.bak does not exist  
Result: an IOException is thrown during execution
- d. If before execution: test.txt does not exist  
Result: an empty file test.txt.bak is created
- e. If before execution: file test.txt exists containing the line

Original

Result: test.txt remains unchanged and file test.txt.bak is created containing line

Original

**a**

**55) Which of the following are features of Servlet in Java EE?**

- a.** The container calls the servlet's `init(ServletConfig)` to pass a `ServletConfig` reference to the servlet
- b. The container calls the servlet's `init(HttpServletRequest)` to make the request object available to the servlet.
- c. The servlet can extend `HttpRequest` or `HttpResponse`.
- d.** The servlet must extend `GenericServlet` directly
- e. A `destroy()` method is called after each response to a client.

**Ans: a, d**

**56) Which of the following are JTA `@TransactionAttribute` values for declarative transactions in Java EE?**

- a.** Mandatory
- b. ReadCommitted
- c. TransactionMandatory
- d.** RequiresNew
- e. Heuristic

**Ans: a, REQUIRES\_NEW**

**57) Which of the following correctly describe the output from the Java SE program below?**

`java.text.ParseException;`

```

import java.text.SimpleDateFormat;

import java.util.Calendar;

import java.util.Date;

public class CalendarTest {

    public static void main(String[] args) {

        Date aDate= null;

        try {

            aDate = new SimpleDateFormat("yyyy-mm-dd").parse("2012-01-15");

            Calendar aCalendar = Calendar.getInstance();

            aCalendar.setTime(aDate);
            System.out.print(aCalendar.get(aCalendar.DAY_OF_MONTH)+"," +aCalendar
            .get(aCalendar.MONTH);

        }

        Catch (ParseException ex) {System.out.println(ex);}

    }

}

```

- a. java.text.ParseException : unparseable date: "2012-01-15"
- b. 1,0
- c. 15,1
- d. 1,1
- e. 15,0

Ans: e

59. Which of the following correctly describe the output from the java SE program below?

```

import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Calendar;
import java.util.Date;

public class Test01 {

    public static void main(String[] args) {
        Date aDate =null;

```

```

        try{
            aDate =new SimpleDateFormat("yyyy-mm-dd").parse("2012-01-
15");

            Calendar aCalendar =Calendar.getInstance();
            aCalendar.setTime(aDate);
            System.out.println(aCalendar.get(aCalendar.DAY_OF_MONTH)+"
, "+aCalendar.get(aCalendar.MONTH));
        }catch(ParseException ex){
            System.out.println(ex);
        }
    }
}

```

- A. Java.text.Parseexception:Unparseable data:"2012-01-15"
- B. 1.0
- C. 15,1
- D. 1,1
- E. 15,0**

**Ans:E**

60. Which of the following can be result of an attempt to compile and execute the java SE code below?

```

import java.math.BigDecimal;

interface Account{
    BigDecimal balance = newBigDecimal(0.0);
}

class SavingAccount implements Account{
    public SavingAccount(BigDecimal intialValue){
        balance = intialValue;
    }
    public String toString(){
        returnbalance.toString();
    }
}

publicclass Test25 {

    publicstaticvoid main(String[] args) {

        SavingAccount instance= newSavingAccount(new BigDecimal(50.00));
        System.out.println(instance);
    }
}

```

- A. Class SavingAccount is the output
- B. 0.00 is output

- C. A compilation error occurs.
- D. A runtime exception is thrown
- E. 50.00 is the output.

Ans: C

61. Which of the following transition can occur during the life cycle of a thread in J2SE 6.0?

- A. New to Runnable.
- B. Terminated to Ready
- C. Blocked to Runnable.
- D. New to Timed\_Wating
- E. Runnable to Waiting

Ans: A, C,

62. In a Java EE environment, when setting up input parameters for a PreparedStatement, which of the following Java to SQL types mapping are valid?

- A. Java int to SQL SMALLINT
- B. Java Struct to SQL BLOB
- C. Java Resultset to SQL RESULTSET
- D. Java char[] to SQL STRING
- E. Java BigDecimal to SQL DECIMAL

Ans: E

=====

63. Which of the following statements are correct about the java.util.Queue<E> interface in Java SE?

- a. The Queue class has 2 constructors, a zero argument constructor and a constructor that takes an int param(capacity)
- b. A Queue object orders its elements in a FIFO (First In First Out) manner-
- c. In a PriorityQueue<Integer>, a call to element is guaranteed to return the element with the highest integer value

- d. In a Queue object containing one or more elements, the element and remove methods both return the same element-
- e. In a BlockingQueue<E>, a call to put is guaranteed to block unless the queue is full

Ans: b,d

64. Which of the following correctly describe what the command `javah -jni FooBar` will produce?

- a. A library called `jni_FooBar.h` based on annotated elements in the `FooBar` class
- b. A Java class called `FooBarH` which Java used when invoking native code
- c. A Java style header file called `jni_FooBar.h` based on the annotations in the `FooBar` native library
- d. A C-style application from data elements in the `jni_FooBar.java` file
- e. A C-style header file called `jni_FooBar .h` based on the native methods defined in the `FooBar` class-

Ans: e

65. Which of the following statements correctly describe hibernate annotations?

- a. They are the indicators for the database on how to map database table to Java objects.
- b. They are embedded metadata in Plain Old Java Objects(POJO).
- c. They cannot be combined with the XML-based configuration
- d. They can be combined with Java Persistent API (JPA) implementations.
- e. They are retrieved by the Java Virtual Machine (VM) at runtime

Ans: a,b,d

66. Which of the following are valid results of executing the JavaScript code snippet below?

```
<bodyonload="hi()"onunload="bye()">
<scripttype="text/javascript">
var nm = "";
function hi(){
    nm = prompt("Hello!your name?", "");
}
function bye(){
    alert("GoodBye "+nm);
}
</script>
<a href="a.html">Click Me !</a>
</body>
```

- A. When the user request another URL , a good-bye message is displayed.
- B. After the documents loads, a welcome message is displayed and the user is prompted for a name.
- C. The document displays an error message , since all functions must be in the <HEAD> section of the document



- D. There is no visible output when the documents loads
- E. A syntax error is displayed when function hi() is executed

Ans : A,B

67

Which of the following describe how to create a custom component that uses a UI delegate in Java Swing?

- A. Have a component extend from the AWT Component  
Create a subclass of ComponentUI for the custom component.  
Override at least the createUI() and paint() methods  
Override four methods of the Component subclass
- B. Have a component extend from the AWT Container  
Create a subclass of ContainerUI for the custom component.  
Override at least the createUI() and paint() methods  
Override four methods of the Container subclass
- C. Have a component extend from the AWT ComponentOrientation  
Create a subclass of ComponentUI for the custom component.  
Override at least the createUI() and paint() methods  
Override four methods of the ComponentOrientation subclass
- D. Have a component extend from JComponent  
Create a subclass of ComponentUI for the custom component.  
Override at least the createUI() and repaint() methods  
Override four methods of the ComponentOrientation subclass
- E. Have a component extend from JComponent.  
Create a subclass of ComponentUI for the custom component.

Override at least the createUI() and repaint() methods.

Override four methods of the JComponent subclass.

<http://stackoverflow.com/questions/17798631/how-to-determine-the-correct-ui-implementation-for-a-custom-component>

Ans: E

68. Which of the following statement correctly describe Hibernate Caching?

- A. Caching causes extra database activity
- B. Hibernate bypasses the session cache by default
- C. Cached data resides between the application and the database.
- D. Caching frequently queried data will improved application performances.
- E. Hibernate does not support second level caching

Ans: C,D

69. Which of the accurately describe a checked exception in Java SE?

- A. A subclasses of java.lang.Throwable annotated with @checked
- B. A class that implements java.lang.CheckedException
- C. A subclass of java.lang.Runtimeexception
- D. A subclass of java.lang.CheckedException
- E. A subclass of java.lang.Exception.**

Ans: E

70. A Third Party java application is running out of space on the heap after executing for few hours. Which of the following command line argument can be used at application startup to improve the situation.?

A. -Xmx

-Xms<size>	set initial Java heap size
-Xmx<size>	set maximum Java heap size
-Xss<size>	set java thread stack size

71. If param1 and param2 are local variables, which of the following can be the result of an attempt to execute the Java SE code below with different values of param1 and param2?

```
Map<String, Integer> names = Calendar.getInstance().getDisplayNames(Calendar.DAY_OF_WEEK,
Calendar.LONG, param1);
try{
    FileOutputStream fos= new FileOutputStream("test.txt");
    Writer out = new OutputStreamWriter(fos, param2);
    out.write(names.toString());
    out.close();
}
Catch (IOException ex){
    System.out.println(ex);
}
```

A. param1:Locale.RUSSIAN  
param2: "UTF-16"

then this message is output to the console

java.io.UnsupportedEncodingException : UTF-16

B. param1:Locale.ENGLISH  
param2: "UTF-32"

then test.txt contains:

{##\$% =7, %\$#@=6, @#!%=4, \$#@%=1, %\$#@=5}

**C.** param1: Locale.JAPANESE-  
param2: "UTF-64"

then this message is output to the console

java.io.UnsupportedEncodingException : UTF-64

- D. parm1: Locale.CHINESE  
param2: "UTF-32"

then test.txt contains:

{Saturday=7, Thursday=5, Monday=2, Wednesday=4, Friday=6,Sunday=1}

- E. parm1: Locale.ENGLISH -  
param2: "UTF-16"

then test.txt contains:

{Saturday=7, Thursday=5, Monday=2, Wednesday=4, Friday=6,Sunday=1}

Ans: C,E

72. Which of the following correctly describe the modules of the Spring architecture?

- A. The Context module provides a Web-based framework for integrating Spring's IoC and DI containers through the J2EE Servlet API
- B. The Web module provide transaction management for data access business logic, utilizing AOP to inject transaction logic into domain functionality
- C. The inversion of Control(IOC) and dependency Injection (DI) contains , as well as fundamental parts of the Spring framework, are provided by the core and Beans modules.
- D. The transaction modules provides and AOP framework to utilize proxies to transparently inject any desired business logic into domain functionality.
- E. The Aspect-Oriented Programming(AOP) modules builds on the Core and Business modules to provide the ApplicationContext infrastructure, allowing access to object in a framework style.

B,C,D

73. Which of the following blocks of code can replace the asterisks oin the Java Swing code below to

```
import java.util.Locale;

import java.util.ResourceBundle;

import javax.swing.JFrame;

public class SwingInternationalizationDemo {

    public static void main (String[] args) {

        String language;

        String country;

        Locale locale;

        ResourceBundle rb;

        *****

    }

}
```

- a. `Locale = new Locale();`  
`rb= ResourceBundle.getBundle("MessageBundle" , locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`
- b. `language = Locale.getDefault().getLanguage();`  
`country=Locale.getDefault().getCountry();`  
`locale=new Locale(language, country);`  
`rb= new ResourceBundle("MessageBundle", locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`

.

- c. `language = System.getLanguage();`  
`country = System.getCountry();`  
`locale=new Locale(language, country);`  
`rb= ResourceBundle.getBundle("MessageBundle", locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`
- d. `language = Locale.getDefault().getLanguage();`  
`country=Locale.getDefault().getCountry();`  
`locale=new Locale(language, country);`  
`rb= ResourceBundle.getBundle("MessageBundle", locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`
- e. `locale = new Locale();`  
`language = System.getDefaultLanguage();`  
`country = System.getDefaultCountry();`  
`locale.setLanguage(language);`  
`locale.setCountry(country);`  
`rb= ResourceBundle.getBundle("MessageBundle", locale);`  
`JFrame frame=new JFrame();`  
`frame.setSize(300,300);`  
`frame.setTitle(rb.getString("frameTitle"));`  
`frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);`  
`frame.setVisible(true);`

Ans: c

```
74. public class MyCollection<T> {
    private Set<T> set;
    public Set<T> getCollection() {
        return this.set;
    }
    public void TestCollection(MyCollection<?> collection) {
        // Set<?> set = collection.getCollection();
    }
}
```

Which of the following code blocks will create a variable from the `getCollection`'s returned value?

- A. 

```
public void TestCollection(MyCollection<?> collection){  
    Set<?> set = collection.getCollection();  
}
```
- B. 

```
public void TestCollection(MyCollection<?> collection){  
    <?> set = collection.getCollection();  
}
```
- C. 

```
public void TestCollection(MyCollection<?> collection){  
    <T> set = collection.getCollection();  
}
```
- D. 

```
public void TestCollection(MyCollection<?> collection){  
    Set<E> set = collection.getCollection();  
}
```
- E. 

```
public void TestCollection(MyCollection<?> collection){  
    Set<T> set = collection.getCollection();  
}
```

Ans: A, E

75. In Java SE which of the following statement are true about `RandomAccessFile` class define in `java.io` package?

- A. The valid `RandomAccessFile` modes are `r`, `w`, and `rw`
- B. When a `RandomAccessFile` is created in write only mode it always write bytes starting at the file pointer
- C. A `RandomAccessFile` object can be instantiated in read only mode.
- D. If an existing file is flagged as read only on the file system then the `RandomAccessFile` constructor can throw an "access is denied" exception
- E. The `RandomAccessFile` has a method that returns the offset at which the next read or write will take place.

Ans: C, E

76. A company is building a new application which stores all employee information

```
@Entity  
public class Company {  
    @Id  
    @Column(name="company_id")  
    private String id;
```

```

private String employeeNumber;
@Column(name="employee_number")
public void setEmployeeNumber (String value) {
    price = value;
}
}

```

When the above code is executed, a mapping exception is thrown, which of the following changes will allow the code to successfully execute?

- a. Add at Line 12:  

```

public void setId(String value) {
    id = value;
}

```
- b. Remove Line 3
- c. Remove Line 4
- d. Move Line 8 to Line 6
- e. Update Line 8 to `@Column(name="employee_number_id")`

Ans: a,d

77. package com.ikm

```
class A{
```

```
public void m1(){
```

```
System.out.println("A.m1, ");
```

```
}
```

```
protected void m2(){
```

```
System.out.println("A.m2, ");
```

```
}
```

```
private void m3(){
```

```
System.out.println("A.m3, ");
```

```
}
```

```
void m4(){
```



```

System.out.println("A.m4, ");
}
}

public class B{
    public static void main(String [] args){
        A a = new A();
        a.m1();
        a.m2();
        a.m3();
        a.m4();
    }
}

```

- A. The line a.m4(); causes compilation error.
- B. The program outputs:A.m1, Am2,Am3,Am4.
- C. The line a.m3(); causes compilation error.**
- D. The line a.m1(); causes compilation error.
- E. The line a.m2(); causes compilation error.

**Ans: C**

78. Which of the following statement can provide transaction services

In Java EE?

- A. An EJB container can provide transaction services to an applications.**
- B. Declarative transaction attributes can be specified to an application
- C. A servlet container cannot provide transaction service to an application.**
- D. JTA can be used to roll back a transaction after it has committed.**
- E. The Mandatory attribute is the implicit transaction attribute for all enterprise bean methods running with container-managed transaction demarcation.

**Ans: A,C,D**

79. A pharmaceutical company has a nightly job which generates metrics for all its active research projects. A C++ library call Armadillo is used to generate the metrics. The company wants to build a Java application to display the metrics in a web browser. Which of the following J2SE 5.0 framework will allow the Java code to access the Armadillo results?

- A. Java Native Interface(JNI).
- B. A Java API for XML Web Service (JAX\_WS).
- C. A Java Messaging Services(JMS)
- D. An Enterprise Java Bean(EJB)
- E. A Java Persistence API(JPA)
- F.

Ans: A

80. Soon after a Java EE Internet application goes live, intermittent crashes occur. The line of code causing the trouble is identified below, where request is the HttpServletRequest object:

```
HttpSession mySession = request.getSession();
```

For the cases where a crash is observed, mySession is set to a new Session when an existing Session should have been retrieve. Which of the following factors can contribute to this problem?

- A. For existing sessions request.setSessionId(String) must be called before getSession.
- B. The Java EE specification does not oblige Web Containers to implement HttpServletRequest.getSession().
- C. The Servlet is using URL rewriting
- D. A web browser has disabled cookies.
- E. web.xml contains the entry <StatelessSession>true</StatelessSession>

Ans: A,

81. When the code snippet below is executed, the user types "Hello" in the first text control and then click the [Click Me](#) button. Which of the following statement correctly describe the result of performing these steps?

```
<script type="text/javascript">
function Pass() {
    document.jane.elements[0].value = document.joe.elements[0].value;
}

</script>
</head>
<Body>
<form name="joe">
<input type="text" size=30>
</form>
<form name="abc">
<input type="button" value="Click Me" onclick="Pass()">
</form>
<form name="jane">
<input type="text" size=30>
</form>
</Body>
</html>
```

- A. The text is moved to the second text control.
- B. The text is recopied in the first text control
- C. Nothing, function Pass() contains an error
- D. The text is deleted from the first test control
- E. The text is copied to the second test control.**

**Ans: E**

82. Which of the following statement are true about a thread pool in Java SE?

- A.** The client of thread pool passes is new threads as they become eligible for executions.
- B. Class `java.util.concurrent.ThreadPoolExecutor` provides an implementation of a thread pool
- C. In a thread pool, any deadlocked threads will be terminated after the time indicated on startup switch – `DthreadPoolTimeout`
- D. A thread pool is generally ineffective in a multi-processor environment
- E.** A thread pool can provide good performance in handling large numbers of short-lived tasks.

**A,E**

83. Which of the following statements regarding the usage of the Java SE `this()` and `super()` keywords are valid?

- a. If used, `this()` or `super()` calls must always be the first statements in a constructor
- b. `this()` and `super()` can be used in the same (non-constructor) method
- c. If neither `this()` nor `super()` is coded then the compiler will generate a call to the zero argument superclass constructor
- d. `this()` and `super()` calls can be used in methods other than a constructor
- e. `this()` and `super()` can be used in the same constructor

Ans: a,c

84. Which of the following about Exception in Java SE are true?

- A. If a method can throw a subclass of `RuntimeException` then the method declaration must include a `throws` clause
- B. `Throwable` is a subclass of `Exception`
- C. `NullPointerException` is a subclass of `RuntimeException`
- D. If a checked exception is thrown by a method then calling method must either catch the exception or declare `throws`.
- E. If an exception is caught then it can re-thrown.

Ans: D,E

85. Assuming the `Student` class has a valid Java mapping file, which of the following lines need to be updated for Hibernate to successfully map the class below (lines numbers are for reference purpose only)?

- 1. `public class Student{`
- 2. `int id;`
- 3. `List<Course> courses;`
- 4. `String name;`
- 5.
- 6. `private Student(){}`
- 7.
- 8. `public Student(int id, List<Course>courses, String name){`
- 9. `this.id = id;`
- 10. `this.courses = courses;`
- 11. `this.name = name;`
- 12. `};`

13. //Setter and Getters

14. }

- A. Remove line 2
- B. Change line 8 to: private Student(int id, List<Courses> courses, String name){
- C. Remove line 3
- D. Change line 6 to: public Student() {}.**
- E. Remove lines 9-12

**Ans: D**

86. Which of the following statements about Java SE Interfaces are valid?

- A. If two interfaces have in common an identical method signature then a class that implements both the interfaces must define the method twice with different annotations.
- B. An interface can be implemented as an anonymous inner class.
- C. Methods inside the interface must be declared as public
- D. An abstract class that implements an interface can implement none, some or all methods of the interface.**
- E. An interface can extends at most one other interface.

**Ans: D**

87. Which of the following correctly describe how JDBC objects are objects are obtained in Java EE system?

- A. A ResultSet object can be obtained by calling executeQuery() on a Connection object
- B. A ResultSet object can be obtained by calling getResultSet() on a Connection object
- C. A PerparedStatement object can be obtained by calling getPreparedStatement() on a ResultSet object
- D. A Connection object can be obtained by calling getConnection() on a DataSource object.**
- E. A DataSource object can be obtained by calling getDataSource() on a Connection object

**Ans: D**

88. Which of the following describe a part of java SE memory invokes in garbage collection?

- A. Method areas
- B. Constant pools
- C. Null pointers
- D. The stack
- E. The heap

Ans: E

1 Consider the following code:

```
public abstract class Shape {  
    private int x;  
    private int y;  
  
    public abstract void draw();  
  
    public void setAnchor(int x, int y) {  
        this.x = x;  
        this.y = y;  
    }  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

- Answer: ☐ a. public class Circle extends Shape {  
 private int radius;  
 public void draw();  
}
- ☐ b. public abstract class Circle extends Shape {  
 private int radius;  
}
- ☒ c. public class Circle extends Shape {  
 private int radius;  
 public void setRadius(int radius) { this.radius = radius; }  
 public int getRadius() { return radius; }  
 public void draw() { /\* code here \*/ }  
}
- ☐ d. public class Circle implements Shape {  
 private int radius;  
}
- ☒ e. public class Circle extends Shape {  
 public int radius;

```
private void draw() { /* code here */  
}
```

2

Consider the following code:

```
class UT1 {  
    static byte m1() {  
        final char c = 'u0001';  
        return c;  
    }  
  
    static byte m3(final char c) {return c;}  
  
    public static void main(String[] args) {  
        char c = 'u0003';  
        System.out.print(""+m1()+m3(c));  
    }  
}
```

Which of the following gives the valid output of the above code?

Answer: ☐ a. None of the listed options

☐ b. Prints: 4

☐ c. Prints: 13

☐ d. Run-time error

☒ e. Compile-time error

3

Consider the following partial code:

```
class Bean {  
    interface I {  
        void beanInterface();  
    }  
}
```



```
class BeanI extends Bean implements I { }  
}
```

```
public class BeanImpl {  
    public static void main(String args[]) {  
        Bean bean = new Bean();  
        Bean.BeanI beanI = bean. new BeanI();  
        beanI.beanInterface();  
    }  
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☐ a. The inner interface I should be removed and kept outside the Bean class
- ☐ b. The inner class should be removed and kept outside the Bean class
- ☒ c. Add the following method to Bean class  
public void beanInterface() { }
- ☐ d. The outer class Bean should be declared as abstract
- ☐ e. The inner class BeanI should be declared as abstract

4

Which of the following options is true about multiple inheritance?

- Answer: ☐ a. Inheriting from two super classes
- ☒ b. Inheriting from a class which is already in an inheritance hierarchy
- ☐ c. Inheriting from more than one super class
- ☐ d. Inheriting from a single class

5

Consider the following program:

```
import java.io.*;

public class CrypticCatch {
    public static void main(String[] args) throws Exception {
        try {
            try {
                throw new FileNotFoundException();
            } catch (Exception e3) {
                throw e3;
            }
        } catch (IOException e2) {
            throw e2;
        }
    } catch (FileNotFoundException e1) {
        System.out.println("File not found exception caught");
    }
    System.out.println("Exception handled successfully");
}
```

What will be the output of the above program?

- Answer: ☐ a. Exception handled successfully
- ☐ b. Compile time error. Since exceptions should be caught in reversed hierarchy order
- ☒ c. File not found exception caught  
Exception handled successfully
- ☐ d. Runtime error
- ☐ e. File not found exception caught

6

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

Answer: ☐ a. ObjectSerializable interface

☐ b. Readable interface

☐ c. Writable interface

☒ d. Serializable interface

☐ e. Cloneable interface

7

Consider the following code snippet:

```
import java.io.*;
```

```
public class IOCode2 {  
    public static void main(String args[]) throws FileNotFoundException {  
        // Insert Code here  
        System.out.println("Welcome to File Programming");  
    }  
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

Answer: ☐ a. System.setOut(new PrintStream("C:/Data"));

☒ b. System.out.redirectOutput(new PrintStream("C:/Data"));

☐ c. System.redirectOutput(new PrintStream("C:/Data"));

- ☐ d. `System.setOut(new FileWriter("C:/Data"));`
- ☐ e. `System.out.setOut(new PrintStream("C:/Data"));`

8 Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() {}
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }
}

public class TestCol7 {
    public static void main(String args[]){
        TreeSet students = new TreeSet();
        students.add(new Student("Raju"));
        students.add(new Student("Krishna"));
        students.add(new Student("Vijay"));

        System.out.println(students);
    }
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☒ a. The Student class should implement Comparable interface.
- ☐ b. The Student class should implement Serializable

interface

- ☐ c. The Student class should implement Cloneable interface
- ☐ d. The Student class should implement Externalizable interface
- ☐ e. The Student class should implement Comparator interface.

9

Consider the following code:

```
1. public class DagRag {  
2. public static void main(String [] args) {  
3.  
4. int [][] x = new int[2][4];  
5.  
6. for(int y = 0; y < 2; y++) {  
7. for(int z = 0; z < 4; z++) {  
8. x[y][z] = z;  
9. }  
10. }  
11.  
12. dg: for(int g = 0; g < 2; g++) {  
13. rg: for(int h = 0; h < 4; h++) {  
14. System.out.println(x[g][h]);  
15.  
16. }  
17. System.out.println("The end.");  
18.  
19. }  
20.  
21. }  
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

0

1

2

3

The end.

Answer: ☐ a. if(g==3) break rg;  
if(h==0) break dg;

☒ b. if(h==3) break rg;  
if(g==0) break dg;

☐ c. if(h > 3) break dg;  
if(g > 0) break rg;

☐ d. if(h > 3) break dg;  
if(g > 0) break dg;

10

Which of the following is the immediate super interface of CallableStatement?

Answer: ☐ a. ResultSet

☐ b. Statement

☒ c. PreparedStatement

☐ d. CallableStatement

☐ e. Connection

11

Which of the following types of driver provides maximum decoupling between database and Java application?

- Answer: ☐ a. Type I driver
- ☐ b. Type III driver
- ☐ c. Type II driver
- ☒ d. Type IV driver

12 Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + ", ");  
        System.out.println(args.length);  
    }  
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

- Answer: ☒ a. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ b. variable arguments cannot be used with enhanced for-loop
- ☐ c. Runtime Error: NoSuchMethodError
- ☐ d. Compilation Error: var-args cannot be used as arguments for main() method

13 Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

- Answer: ☒ a. @Retention

- ☐ b. @Deprecated
- ☐ c. @Override
- ☐ d. @SuppressWarnings
- ☒ e. @Target

14 Consider the following code snippet:

```
1. class Garbage { }  
2. class GC1 {  
3. public static void main(String a[]) {  
4. Garbage s = new Garbage();  
5. {  
6. s = new Garbage();  
7. }  
8. s = new Garbage();  
9. }  
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

- Answer: ☐ a. None of the object is eligible for Garbage Collection
- ☐ b. lines: 8
- ☒ c. lines: 4, 6
- ☐ d. lines: 6, 8
- ☐ e. lines: 4, 6, 8

15 Consider the following scenario:



Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

- Answer: ☒ a. Class: Fruit Chocolates  
Objects: Rum Chocolates
- ☐ b. Class: Real Chocos Private Limited  
Objects: Chocolate
- ☒ c. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates
- ☐ d. Class: Choclote  
Objects: Milk Chocolates

16

What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

- Answer: ☐ a. Methods to encrypt the file with password
- ☒ b. Methods to set or query file permissions
- ☐ c. Methods to attach the file to an email
- ☒ d. Methods to retrieve disk usage information
- ☐ e. No new methods are introduced in JDK 1.6

17

Consider the following code snippet:

```

class Animal {
    String name;
    public boolean equals(Object o) {
        Animal a = (Animal) o;
        // Code Here
    }
}

class TestAnimal {
    public static void main(String args[]) {
        Animal a = new Animal();
        a.name = "Dog";
        Animal b = new Animal();
        b.name = "dog";

        System.out.println(a.equals(b));
    }
}

```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

- Answer: ☐ a. return this.name.equals(a.name);
- ☐ b. return super.equals(a);
- ☐ c. return this.name == a.name;
- ☒ d. return this.name.equalsIgnoreCase(a.name);
- ☐ e. return this.name.hashCode() == a.name.hashCode();

18

Which of the following options are true? (Choose 2)

- Answer: ☐ a. In a try-catch-finally structure, finally block and catch block can be placed in any order

- ☐ b. On using nested try-catch blocks, only the outer most try-catch block can have the finally block
- ☒ c. The finally block can have another try-catch-finally block nested inside
- ☒ d. The catch block can have another try-catch-finally block

19

Consider the following program:

```
public class ThreadJoin extends Thread{
    public static void main(String[] args) {
        Thread t1 = new Thread("T1");
        Thread t2 = new Thread("T2");
        try {
            t1.join();
            t2.join();
        } catch (InterruptedException e) {
            System.out.println("Main Thread interrupted.");
        }
    }

    public void run(){
        System.out.println("Run executed");
    }
}
```

What will be the output of the above program?

- Answer: ☐ a. Compile-time error
- ☐ b. Run-time error
- ☒ c. Prints "Main Thread interrupted."
- ☐ d. Program ends without printing anything
- ☐ e. Prints "Run executed" twice

20

Which of the following are true about ResultSet? (Choose 2)

- Answer: ☒ a. Not all ResultSets are updatable
- ☒ b. It is possible to delete records through ResultSet
- ☐ c. The ResultSet object contains null, if there are no records in the table
- ☐ d. Atleast one record should be there in the ResultSet on opening a query (or) table
- ☐ e. All ResultSet, are Scrollable

21

Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
} //End of bicycle class
} //End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

Answer: ☒ a. System.out.println(iam);

☒ b. System.out.println(iArgs);

☐ c. System.out.println(iOther);

☐ d. System.out.println(s);

22

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

Answer: ☒ a. Compile-time error

☐ b. NO

☐ c. false

☐ d. true

☐ e. Runtime Error

23

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. 0 1 2 3 4
- ☐ b. Indefinite Loop
- ☐ c. 0 1 2 3 4 0 1 2 3 4
- ☐ d. 1 2 3 4 5
- ☐ e. 0 1 2 3 4 5

24

Consider the following code:

```
public class UnwiseThreads implements Runnable {  
    public void run() {  
        while(true) { }  
    }  
  
    public static void main(String args[]) {  
        UnwiseThreads ut1 = new UnwiseThreads();  
        UnwiseThreads ut2 = new UnwiseThreads();  
        UnwiseThreads ut3 = new UnwiseThreads();  
        ut1.run();  
    }  
}
```

```
        ut2.run();
    ut3.run();
    }
}
```

Which of the following is correct for the above given program?

- Answer: ☐ a. The code compiles but runs only 1 non ending, non daemon thread
- ☒ b. Compilation error "ut2.run() is never reached"
- ☐ c. Runtime Error "IllegalThreadStateException"
- ☐ d. The code compiles and runs 3 non ending non daemon threads

25 An Annotation Type \_\_\_\_\_.

- Answer: ☐ a. defines the structure of an Object
- ☐ b. defines the structure of an Annotation
- ☐ c. defines the structure of an Application
- ☐ d. defines the structure of an interface
- ☒ e. is a meta-tag used to pass message between the code and JVM.

26 Consider the following code:

```
class A { }
class B extends A { }
public class Code2 {
    public void method(A a) {
        System.out.println("A");
    }
}
```

```
}  
public void method(B b) {  
    System.out.println("B");  
}  
public static void main(String args[]) {  
    new Code2().method(new Object());  
}  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: B
- ☐ b. Throws ClassCastException at runtime
- ☐ c. Compilation Error 'Cannot find the symbol'
- ☒ d. Prints: A

27

Consider the following program:

```
1. class CheckedException extends RuntimeException { }  
2. class UncheckedException extends Exception { }  
3. public class Check {  
4.     public static void main(String args[]) {  
5.         generateException1();  
6.         generateException2();  
7.     }  
8.  
9.     private static void generateException1() {  
10.         throw new CheckedException();  
11.     }  
12.  
13.     private static void generateException2() {  
14.         throw new UncheckedException();  
15.     }  
16. }
```

Which of the following is true regarding the above given program?



- Answer: ☒ a. No compilation error but throws RuntimeException on running the code
- ☐ b. Compilation error at line 5
- ☐ c. Compilation error at line 10
- ☐ d. Compilation error at line 14
- ☐ e. Compilation error at line 6

28

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☒ a. The class is fully encapsulated
- ☐ b. The cardID and limit variables break polymorphism
- ☐ c. The ownerName variable breaks encapsulation
- ☐ d. The code demonstrates polymorphism
- ☐ e. The setCardInformation method breaks encapsulation

29

Which of the following are correct regarding hashCode?(Choose 2)

Answer: ☒ a. hashCode() value cannot be a zero-value

☐ b. the numeric key is unique

☒ c. it is a 32 bit numeric digest key

☐ d. It improves performance

☐ e. hashCode() is defined in String class

30

Consider the following program:

```
class UserDefinedException extends Error { }

public class Tastelt {
    public static void main(String args[]) {
        try {
            try {
                throw new Error();
            }
            catch(UserDefinedException u1) {
                throw u1;
            }
            catch(Exception e1) {
                System.out.println("This is the required output");
            }
            finally {
                throw new UserDefinedException();
            }
        }
        catch(UserDefinedException u2) {
            System.out.println("This is not the output");
        }
        catch(Error e2) {
            System.out.println("This is the output");
        }
    }
}
```

```
}  
}
```

What will be the output for the above program?

- Answer: ☐ a. Runtime Error
- ☐ b. This is the required output
- ☐ c. Compile-time error
- ☒ d. This is not the output
- ☐ e. This is the output

31

Consider the following Statements:

Statement A: The threads are scheduled using fixed priority scheduling.

Statement B: Thread priority can be set after it is created using the public `int setPriority()` method declared in the `Thread` class.

Which of the following statements is correct?

- Answer: ☒ a. Statement A is true and Statement B is false
- ☐ b. Both Statement A and B are true
- ☐ c. Statement A is false and Statement B is true
- ☐ d. Both Statement A and B are false

32

Which of the following options are true for `StringBuffer` class?(choose 3)

- Answer: ☒ a. `StringBuffer` implements `CharSequence` interface

- ☒ b. StringBuffer is threadsafe
- ☒ c. Buffer space in StringBuffer can be shared
- ☐ d. StringBuffer is extended from String class
- ☐ e. 'capacity' property indicates the maximum number of characters that a StringBuffer can have

33

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☒ a. protected

- ☒ b. final
- ☒ c. private
- ☐ d. synchronized
- ☐ e. public

34

Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
```

```
}  
  
public static void main(String args[]) {  
    new Code10().codeMethod();  
}  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Runtime error: NullPointerException
- ☐ b. Compilation error: v is not initialised inside the constructor
- ☒ c. Compilation error: cannot find the symbol
- ☐ d. Prints: false
- ☐ e. Prints: true

35

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

- Answer: ☒ a. SortedSet
- ☒ b. TreeSet
- ☐ c. ArrayList
- ☐ d. List
- ☐ e. Set

36

The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☒ a. to keep objects alive only while they are in use (reachable) by clients
- ☐ b. to delete objects from a container if the clients are no longer referencing them and memory is tight
- ☐ c. to keep objects alive provided there is enough memory
- ☐ d. to allow clean up after finalization but before the space is reclaimed

37

Consider the following code snippet:

```
import java.util.*;

public class TestCol4 {
    public static void main(String[] args) {
        Set h = new HashSet();
        h.add("One");
        h.add("Two");
        h.add("Three");
        h.add("Four");
        h.add("One");
        h.add("Four");

        List l = new ArrayList();

        l.add("One");
        l.add("Two");
        l.add("Three");

        h.retainAll(l);

        System.out.println("Size:" + l.size() + h.size());
    }
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. Size: 33
- ☐ b. Compilation error
- ☐ c. Size: 63
- ☐ d. Size: 36
- ☐ e. Size: 66

38 Which are all platform independent among the following? (Choose 3)

- Answer: ☒ a. JAR Files
- ☐ b. Java Development Kit (JDK)
- ☒ c. Java Source Files
- ☐ d. Java Virtual Machine (JVM)
- ☒ e. Java Class Files

39 Consider the following program:

```
public class TThread implements Runnable {
    public void run() {
        try {
            Thread.sleep(100000);
        } catch (Exception objE) {
            System.out.println ("Exception Handler");
        }
        System.out.println ("Run method ends here");
    }

    public static void main (String[] argv) {
        Thread thread = new Thread(new TThread ());
    }
}
```

```
thread.start();
```

```
thread.interrupt();
```

```
System.out.println ("Main method ends here");
```

```
}
```

```
}
```

What will be the output of the above program?

- Answer: ☐ a. Main method ends here  
Run method ends here  
Exception Handler
- ☐ b. Exception Handler  
Run method ends here  
Main method ends here
- ☒ c. Main method ends here  
Exception Handler  
Run method ends here
- ☐ d. Run method ends here  
Exception Handler  
Main method ends here
- ☐ e. None of the listed options

40

Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```



Which of the following gives the correct value printed at line 6?

Answer: ☐ a. Prints: 10.3

☐ b. Prints: -2.0

☒ c. Prints: 12.3

☐ d. Prints: 0.0

**41** Consider the following code snippet:

```
public class TestString9 {  
    public static void main(String st[]){  
        String s1 = "java";  
        String s2 = "java";  
        String s3 = "JAVA";  
        s2.toUpperCase();  
        s3.toUpperCase();  
        boolean b1 = s1==s2;  
        boolean b2 = s1==s3;  
        System.out.print(b1);  
        System.out.print(" "+b2);  
    }  
}
```

What will be the output of the above code snippet?

Answer: ☐ a. Runtime error

☐ b. true false

☐ c. true true

☒ d. false false

☐ e. false true

**42** Consider the following code:

```
class Planet { }  
  
class Earth extends Planet { }
```

```

public class WelcomePlanet {
    public static void welcomePlanet(Planet planet) {
        if (planet instanceof Earth) {
            System.out.println("Welcome!");
        } else if (planet instanceof Planet) {
            System.out.println("Planet!");
        } else {
            System.exit(0);
        }
    }

    public static void main(String args[]) {
        WelcomePlanet wp = new WelcomePlanet();
        Planet planet = new Earth();
        welcomePlanet(planet);
    }
}

```

Which of the following will be the output of the above program?

- Answer: ☐ a. Compilation fails  
☐ b. The code runs with no output  
☒ c. Welcome!  
☐ d. An exception is thrown at runtime  
☐ e. Planet!

**43**

Which of the following is the best-performing implementation of Set interface?

- Answer: ☐ a. HashSet  
☐ b. LinkedHashSet  
☒ c. TreeSet  
☐ d. Hashtable  
☐ e. SortedSet

**44**

Consider the following partial code:

```

interface A { public int getValue(); }

class B implements A {

```

```
public int getValue() { return 1; }  
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

- Answer: ☒ a. public void add(B b) { b.getValue(); }  
☒ b. public void add(C c) { c.getValue(); }  
☐ c. public void add(A a) { a.getValue(); }  
☒ d. public void add(C c1, C c2) { c1.getValue(); }  
☐ e. public void add(A a, B b) { a.getValue(); }

000

## ELT BCC: Core Java SDK Ver 1.5 & 1.6

- 1 Which of the following are true about ResultSet? (Choose 2)  
Answer: ☐ a. Atleast one record should be there in the ResultSet on opening a query (or) table  
☐ b. Not all ResultSets are updatable  
☐ c. The ResultSet object contains null, if there are no records in the table  
☐ d. It is possible to delete records through ResultSet  
☐ e. All ResultSet, are Scrollable

2 Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
}

public static void main(String args[]) {
new Code10().codeMethod();
}
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: false  
☐ b. Runtime error: NullPointerException  
☒ c. Compilation error: cannot find the symbol  
☐ d. Compilation error: v is not initialised inside the constructor  
☐ e. Prints: true

3

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☐ a. Writable interface  
☐ b. Readable interface  
☐ c. ObjectSerializable interface  
☐ d. Cloneable interface  
☒ e. Serializable interface

4

Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
} //End of bicycle class
} //End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1? (Choose 2)

- Answer: ☐ a. System.out.println(iOther);  
☐ b. System.out.println(iam);  
☒ c. System.out.println(iArgs);  
☒ d. System.out.println(s);

5

Which of the following modifiers cannot be used with the

abstract modifier in a method declaration?(Choose 3)

- Answer: ☒ a. synchronized  
☒ b. final  
☐ c. public  
☐ d. protected  
☒ e. private

6

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. 0 1 2 3 4 5  
☐ b. Indefinite Loop  
☐ c. 1 2 3 4 5  
☒ d. 0 1 2 3 4  
☐ e. 0 1 2 3 4 0 1 2 3 4

7

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
}
```

```
public static void main(String args[]) {  
    System.out.println(new Key1().testAns("no", 5));  
}  
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. NO  
☐ b. true  
☒ c. Compile-time error  
☐ d. Runtime Error  
☐ e. false

8

Which of the following is the immediate super interface of CallableStatement?

- Answer: ☐ a. CallableStatement  
☒ b. PreparedStatement  
☐ c. ResultSet  
☐ d. Statement  
☒ e. Connection

9

Consider the following code:

```
public class UnwiseThreads implements Runnable {  
    public void run() {  
        while(true) { }  
    }  
  
    public static void main(String args[]) {  
        UnwiseThreads ut1 = new UnwiseThreads();  
        UnwiseThreads ut2 = new UnwiseThreads();  
        UnwiseThreads ut3 = new UnwiseThreads();  
        ut1.run();  
        ut2.run();  
        ut3.run();  
    }  
}
```

Which of the following is correct for the above given program?

- Answer: ☒ a. Compilation error "ut2.run() is never reached"
- ☐ b. The code compiles and runs 3 non ending non daemon threads
- ☐ c. The code compiles but runs only 1 non ending, non daemon thread
- ☐ d. Runtime Error "IllegalThreadStateException"

10

The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☐ a. to delete objects from a container if the clients are no longer referencing them and memory is tight
- ☒ b. to keep objects alive provided there is enough memory
- ☐ c. to keep objects alive only while they are in use (reachable) by clients
- ☐ d. to allow clean up after finalization but before the space is reclaimed

1

Which of the following are true about ResultSet? (Choose 2)

- Answer: ☐ a. Atleast one record should be there in the ResultSet on opening a query (or) table
- ☒ b. Not all ResultSets are updatable
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- ☒ d. It is possible to delete records through ResultSet
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2

Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
}

public static void main(String args[]) {
new Code10().codeMethod();
}
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: false
- ☐ b. Runtime error: NullPointerException
- ☒ c. Compilation error: cannot find the symbol
- ☐ d. Compilation error: v is not initialised inside the constructor
- ☐ e. Prints: true

3

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Which of the following options can be used to accomplish the above requirement?

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- ☐ b. Readable interface
- ☐ c. ObjectSerializable interface
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Consider the following class definition:

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class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
} //End of bicycle class
} //End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

- Answer: ☐ a. System.out.println(iOther);

☐ b. System.out.println(iam);

☒ c. System.out.println(iArgs);

☒ d. System.out.println(s);

5

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☒ a. synchronized

☒ b. final

☐ c. public

☐ d. protected

☒ e. private

6

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

Answer: ☐ a. 0 1 2 3 4 5

☐ b. Indefinite Loop

☐ c. 1 2 3 4 5

☒ d. 0 1 2 3 4

☐ e. 0 1 2 3 4 0 1 2 3 4

7

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

Answer: ☐ a. NO

☐ b. true

☒ c. Compile-time error

☐ d. Runtime Error

☐ e. false

8 Which of the following is the immediate super interface of CallableStatement?

Answer: ☐ a. CallableStatement

☐ b. PreparedStatement

☐ c. ResultSet

☐ d. Statement

☒ e. Connection

9 Consider the following code:

```
public class UnwiseThreads implements Runnable {  
    public void run() {  
        while(true) { }  
    }  
}
```

```
public static void main(String args[]) {  
    UnwiseThreads ut1 = new UnwiseThreads();  
    UnwiseThreads ut2 = new UnwiseThreads();  
    UnwiseThreads ut3 = new UnwiseThreads();  
    ut1.run();  
    ut2.run();  
    ut3.run();  
}
```

Which of the following is correct for the above given program?

Answer: ☒ a. Compilation error "ut2.run() is never reached"

- ☐ b. The code compiles and runs 3 non ending non daemon threads
- ☒ c. The code compiles but runs only 1 non ending, non daemon thread
- ☐ d. Runtime Error "IllegalThreadStateException"

10 The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☐ a. to delete objects from a container if the clients are no longer referencing them and memory is tight
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- ☒ c. to keep objects alive only while they are in use (reachable) by clients
- ☐ d. to allow clean up after finalization but before the space is reclaimed

11 ( 20151) Which of the following is the best-performing implementation of Set interface?

Marks: 1

Answer: ☐ a. LinkedHashSet

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☐ b. TreeSet

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☐ c. Hashtable

☐ d. SortedSet

☒ e. HashSet

12

Consider the following scenario:

Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

- Answer: ☐ a. Class: Real Chocos Private Limited  
Objects: Chocolate
- ☒ b. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates
- ☐ c. Class: Choclote  
Objects: Milk Chocolates
- ☐ d. Class: Fruit Chocolates  
Objects: Rum Chocolates

13

Consider the following code snippet:

```
class Animal {  
    String name;  
    public boolean equals(Object o) {  
        Animal a = (Animal) o;  
        // Code Here  
    }  
}  
  
class TestAnimal {  
    public static void main(String args[]) {  
        Animal a = new Animal();  
        a.name = "Dog";  
        Animal b = new Animal();  
        b.name = "dog";  
    }  
}
```

```
System.out.println(a.equals(b));  
}  
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

- Answer: ☒ a. `return this.name.equalsIgnoreCase(a.name);`
- ☐ b. `return this.name.equals(a.name);`
- ☐ c. `return super.equals(a);`
- ☐ d. `return this.name == a.name;`
- ☐ e. `return this.name.hashCode() == a.name.hashCode();`

14

Consider the following code:

```
class A { }  
class B extends A { }  
public class Code2 {  
    public void method(A a) {  
        System.out.println("A");  
    }  
    public void method(B b) {  
        System.out.println("B");  
    }  
    public static void main(String args[]) {  
        new Code2().method(new Object());  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Throws `ClassCastException` at runtime
- ☐ b. Prints: B



- ☒ c. Compilation Error 'Cannot find the symbol'
- ☐ d. Prints: A

15

Consider the following code:

```
class Planet { }

class Earth extends Planet { }

public class WelcomePlanet {
    public static void welcomePlanet(Planet planet) {
        if (planet instanceof Earth) {
            System.out.println("Welcome!");
        } else if (planet instanceof Planet) {
            System.out.println("Planet!");
        } else {
            System.exit(0);
        }
    }
}

public static void main(String args[]) {
    WelcomePlanet wp = new WelcomePlanet();
    Planet planet = new Earth();
    welcomePlanet(planet);
}
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. An exception is thrown at runtime
- ☐ b. Planet!
- ☐ c. The code runs with no output
- ☒ d. Welcome!
- ☐ e. Compilation fails

16

Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + ", ");  
        System.out.println(args.length);  
    }  
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

- Answer: ☒ a. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ b. Runtime Error: NoSuchMethodError
- ☐ c. variable arguments cannot be used with enhanced for-loop
- ☐ d. Compilation Error: var-args cannot be used as arguments for main() method

17

Consider the following code:

```
class UT1 {  
    static byte m1() {  
        final char c = 'u0001';  
        return c;  
    }  
  
    static byte m3(final char c) {return c;}  
  
    public static void main(String[] args) {  
        char c = 'u0003';  
        System.out.print(""+m1()+m3(c));  
    }  
}
```

Which of the following gives the valid output of the above code?

- Answer: ☒ a. Compile-time error
- ☐ b. Prints: 13
- ☐ c. Run-time error
- ☐ d. Prints: 4
- ☐ e. None of the listed options

18

An Annotation Type \_\_\_\_\_.

- Answer: ☐ a. is a meta-tag used to pass message between the code and JVM.
- ☐ b. defines the structure of an interface
- ☐ c. defines the structure of an Application
- ☐ d. defines the structure of an Object
- ☒ e. defines the structure of an Annotation

19

Which of the following are correct regarding hashCode?(Choose 2)

- Answer: ☒ a. It improves performance
- ☐ b. the numeric key is unique
- ☒ c. it is a 32 bit numeric digest key
- ☐ d. hashCode() is defined in String class

☐ e. hashCode() value cannot be a zero-value

20

Given the following object hierarchy and code for the upgrade method:

```
java.lang.Object
+----mypkg.BaseWidget
|
+----TypeAWidget
```

// the following is a method in the BaseWidget class

```
1. public TypeAWidget upgrade() {
2. TypeAWidget A = (TypeAWidget) this;
3. return A;
4. }
```

Which of the following will be the result of the below statements?

```
5. BaseWidget B = new BaseWidget();
6. TypeAWidget A = B.upgrade();
```

- Answer: ☐ a. The compiler would object to line 2.
- ☒ b. A runtime ClassCastException would be generated in line 2.
- ☐ c. As this refers to the BaseWidget, a parent can accept its child
- ☐ d. After line 6 executes, the object referred to as A will in fact be a TypeAWidget.

21

Consider the following program:

```
public class ThreadJoin extends Thread{
public static void main(String[] args) {
Thread t1 = new Thread("T1");
Thread t2 = new Thread("T2");
```

```
try {  
    t1.join();  
    t2.join();  
} catch (InterruptedException e) {  
    System.out.println("Main Thread interrupted.");  
}  
}  
  
public void run(){  
    System.out.println("Run executed");  
}  
}
```

What will be the output of the above program?

- Answer: ☐ a. Run-time error
- ☐ b. Compile-time error
- ☐ c. Prints "Main Thread interrupted."
- ☒ d. Program ends without printing anything
- ☐ e. Prints "Run executed" twice

22

Which are all platform independent among the following? (Choose 3)

- Answer: ☒ a. JAR Files
- ☐ b. Java Virtual Machine (JVM)
- ☐ c. Java Development Kit (JDK)
- ☒ d. Java Class Files
- ☒ e. Java Source Files

23

Which of the following options is true about multiple inheritance?

- Answer: ☐ a. Inheriting from a class which is already in an inheritance hierarchy
- ☒ b. Inheriting from more than one super class
- ☐ c. Inheriting from two super classes
- ☐ d. Inheriting from a single class

24

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

Answer: ☐ a. List

☒ b. SortedSet

☐ c. Set

☐ d. ArrayList

☒ e. TreeSet

25

Which of the following options are true for StringBuffer class?(choose 3)

- Answer: ☒ a. 'capacity' property indicates the maximum number of characters that a StringBuffer can have
- ☐ b. StringBuffer is extended from String class
- ☒ c. StringBuffer implements CharSequence interface
- ☒ d. StringBuffer is threadsafe
- ☐ e. Buffer space in StringBuffer can be shared

26

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The class is fully encapsulated
- ☐ b. The setCardInformation method breaks encapsulation
- ☐ c. The code demonstrates polymorphism
- ☐ d. The cardID and limit variables break polymorphism
- ☒ e. The ownerName variable breaks encapsulation

27

Consider the following partial code:

```
interface A { public int getValue(); }  
  
class B implements A {  
    public int getValue() { return 1; }  
}  
  
class C extends B {  
    // insert code here
```

```
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

Answer: ☐ a. public void add(C c1, C c2) { c1.getValue(); }

☒ b. public void add(A a, B b) { a.getValue(); }

☒ c. public void add(B b) { b.getValue(); }

☒ d. public void add(A a) { a.getValue(); }

☐ e. public void add(C c) { c.getValue(); }

28

Consider the following program:

```
import java.io.*;

public class CrypticCatch {
    public static void main(String[] args) throws Exception {
        try {
            try {
                try {
                    throw new FileNotFoundException();
                } catch (Exception e3) {
                    throw e3;
                }
            } catch (IOException e2) {
                throw e2;
            }
        } catch (FileNotFoundException e1) {
            System.out.println("File not found exception caught");
        }
        System.out.println("Exception handled successfully");
    }
}
```



What will be the output of the above program?

Answer: ☐ a. Runtime error

☐ b. File not found exception caught

☐ c. Compile time error. Since exceptions should be caught in reversed hierarchy order

☐ d. Exception handled successfully

☒ e. File not found exception caught  
Exception handled successfully

29

Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

Answer: ☒ a. @Retention

☐ b. @Deprecated

☐ c. @Override

☐ d. @SuppressWarnings

☒ e. @Target

30

What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

Answer: ☒ a. Methods to retrieve disk usage information

☐ b. Methods to set or query file permissions

☐ c. Methods to attach the file to an email

☒ d. Methods to encrypt the file with password

☐ e. No new methods are introduced in JDK 1.6

31

Consider the following code:

```
1. public class DagRag {
2. public static void main(String [] args) {
3.
4. int [][] x = new int[2][4];
5.
6. for(int y = 0; y < 2; y++) {
7. for(int z = 0; z < 4; z++) {
8. x[y][z] = z;
9. }
10. }
11.
12. dg: for(int g = 0; g < 2; g++) {
13. rg: for(int h = 0; h < 4; h++) {
14. System.out.println(x[g][h]);
15.
16. }
17. System.out.println("The end.");
18.
19. }
20.
21. }
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

0

1

2

3

The end.

Answer: ☐ a. if(g==3) break rg;  
if(h==0) break dg;

- ☐ b. if(h > 3) break dg;  
if(g > 0) break rg;
- ☒ c. if(h==3) break rg;  
if(g==0) break dg;
- ☐ d. if(h > 3) break dg;  
if(g > 0) break dg;

32

Consider the following code:

```
public abstract class Shape {
    private int x;
    private int y;

    public abstract void draw();

    public void setAnchor(int x, int y) {
        this.x = x;
        this.y = y;
    }
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

Answer: ☒

- ☒ a. public class Circle extends Shape {  
private int radius;  
public void setRadius(int radius) { this.radius = radius; }  
public int getRadius() { return radius; }  
public void draw() { /\* code here \*/ }  
}
- ☐ b. public class Circle implements Shape {  
private int radius;  
}
- ☐ c. public class Circle extends Shape {  
public int radius;  
private void draw() { /\* code here \*/ }

}

- ☒ d. public abstract class Circle extends Shape {  
private int radius;  
}
- ☐ e. public class Circle extends Shape {  
private int radius;  
public void draw();  
}

33

Consider the following code snippet:

```
public class TestString9 {  
    public static void main(String st[]){  
        String s1 = "java";  
        String s2 = "java";  
        String s3 = "JAVA";  
        s2.toUpperCase();  
        s3.toUpperCase();  
        boolean b1 = s1==s2;  
        boolean b2 = s1==s3;  
        System.out.print(b1);  
        System.out.print(" "+b2);  
    }  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. false true
- ☐ b. true true
- ☒ c. true false
- ☐ d. Runtime error
- ☐ e. false false

34

Consider the following code snippet:

```
import java.io.*;

public class IOCode2 {
    public static void main(String args[]) throws FileNotFoundException {
        // Insert Code here
        System.out.println("Welcome to File Programming");
    }
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

- Answer: ☐ a. System.out.setOut(new PrintStream("C:/Data"));
- ☐ b. System.out.redirectOutput(new PrintStream("C:/Data"));
- ☐ c. System.redirectOutput(new PrintStream("C:/Data"));
- ☒ d. System.setOut(new PrintStream("C:/Data"));
- ☐ e. System.setOut(new FileWriter("C:/Data"));

35

Which of the following types of driver provides maximum decoupling between database and Java application?

- Answer: ☐ a. Type II driver
- ☐ b. Type III driver
- ☐ c. Type I driver
- ☒ d. Type IV driver

Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() { }
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }
}

public class TestCol7 {
    public static void main(String args[]){
        TreeSet students = new TreeSet();
        students.add(new Student("Raju"));
        students.add(new Student("Krishna"));
        students.add(new Student("Vijay"));

        System.out.println(students);
    }
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☒ a. The Student class should implement Comparable interface.
- ☐ b. The Student class should implement Cloneable interface
- ☐ c. The Student class should implement Serializable interface
- ☐ d. The Student class should implement Comparator interface.
- ☐ e. The Student class should implement Externalizable interface

37

Consider the following code snippet:

```
1. class Garbage { }
2. class GC1 {
3. public static void main(String a[]) {
4. Garbage s = new Garbage();
5. {
6. s = new Garbage();
7. }
8. s = new Garbage();
9. }
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

- Answer: ☒ a. lines: 4, 6
- ☐ b. lines: 4, 6, 8
- ☐ c. None of the object is eligible for Garbage Collection
- ☐ d. lines: 6, 8
- ☐ e. lines: 8

38

Which of the following options are true? (Choose 2)

- Answer: ☒ a. The catch block can have another try-catch-finally block
- ☐ b. In a try-catch-finally structure, finally block and catch block can be placed in any order
- ☐ c. On using nested try-catch blocks, only the outer most try-catch block can have the finally block
- ☒ d. The finally block can have another try-catch-finally block nested inside

39

Consider the following program:

```
public class TThread implements Runnable {  
    public void run() {  
        try {  
            Thread.sleep(100000);  
        } catch (Exception objE) {  
            System.out.println ("Exception Handler");  
        }  
        System.out.println ("Run method ends here");  
    }  
  
    public static void main (String[] argv) {  
        Thread thread = new Thread(new TThread ());  
        thread.start();  
  
        thread.interrupt();  
        System.out.println ("Main method ends here");  
    }  
}
```

What will be the output of the above program?

Answer: ☐ a. None of the listed options

☐ b. Exception Handler  
Run method ends here  
Main method ends here

☐ c. Run method ends here  
Exception Handler  
Main method ends here

☒ d. Main method ends here  
Exception Handler  
Run method ends here



- ☐ e. Main method ends here  
Run method ends here  
Exception Handler

40

Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```

Which of the following gives the correct value printed at line 6?

- Answer: ☒ a. Prints: 12.3
- ☐ b. Prints: -2.0
- ☐ c. Prints: 10.3
- ☐ d. Prints: 0.0

41

Consider the following Statements:

Statement A:The threads are scheduled using fixed priority scheduling.

Statement B:Thread priority can be set after it is created using the public int setPriority() method declared in the Thread class.

Which of the following statements is correct?

- Answer: ☐ a. Both Statement A and B are true

- ☒ b. Statement A is false and Statement B is true
- ☐ c. Statement A is true and Statement B is false
- ☐ d. Both Statement A and B are false

42

Consider the following code snippet:

```
import java.util.*;

public class TestCol4 {
    public static void main(String[] args) {
        Set h = new HashSet();
        h.add("One");
        h.add("Two");
        h.add("Three");
        h.add("Four");
        h.add("One");
        h.add("Four");

        List l = new ArrayList();

        l.add("One");
        l.add("Two");
        l.add("Three");

        h.retainAll(l);

        System.out.println("Size:" + l.size() + h.size());
    }
}
```

What will be the output of the above code snippet?

Answer: ☐ a. Size: 63

☒ b. Size: 33

- ☐ c. Size: 66
- ☐ d. Compilation error
- ☐ e. Size: 36

43

Consider the following program:

```
1. class CheckedException extends RuntimeException { }
2. class UncheckedException extends Exception { }
3. public class Check {
4.     public static void main(String args[]) {
5.         generateException1();
6.         generateException2();
7.     }
8.
9.     private static void generateException1() {
10.        throw new CheckedException();
11.    }
12.
13.    private static void generateException2() {
14.        throw new UncheckedException();
15.    }
16. }
```

Which of the following is true regarding the above given program?

Answer: ☐ a. Compilation error at line 6

☐ b. Compilation error at line 5

☒ c. Compilation error at line 14

☐ d. No compilation error but throws RuntimeException on running the code

☐ e. Compilation error at line 10

44

Consider the following partial code:

```
class Bean {
    interface I {
        void beanInterface();
    }
    class BeanI extends Bean implements I { }
}

public class BeanImpl {
    public static void main(String args[]) {
        Bean bean = new Bean();
        Bean.BeanI beanI = bean. new BeanI();
        beanI.beanInterface();
    }
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☐ a. The inner interface I should be removed and kept outside the Bean class
- ☐ b. The inner class BeanI should be declared as abstract
- ☐ c. The outer class Bean should be declared as abstract
- ☒ d. Add the following method to Bean class  
 public void beanInterface() { }
- ☐ e. The inner class should be removed and kept outside the Bean class

45

Consider the following program:

```
class UserDefinedException extends Error { }

public class TestIt {
```

```
public static void main(String args[]) {  
    try {  
        try {  
            throw new Error();  
        }  
        catch(UserDefinedException u1) {  
            throw u1;  
        }  
        catch(Exception e1) {  
            System.out.println("This is the required output");  
        }  
        finally {  
            throw new UserDefinedException();  
        }  
    }  
    catch(UserDefinedException u2) {  
        System.out.println("This is not the output");  
    }  
    catch(Error e2) {  
        System.out.println("This is the output");  
    }  
}
```

What will be the output for the above program?

Answer: ☐ a. Runtime Error

- ☒ b. This is not the output
- ☐ c. This is the output
- ☐ d. Compile-time error
- ☐ e. This is the required output

1 Consider the following scenario:

Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

- Answer: ☐ a. Class: Real Chocos Private Limited  
Objects: Chocolate
- ☐ b. Class: Fruit Chocolates  
Objects: Rum Chocolates
- ☒ c. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates
- ☐ d. Class: Choclote  
Objects: Milk Chocolates

2 Consider the following code:

```
class Planet { }  
  
class Earth extends Planet { }  
  
public class WelcomePlanet {  
    public static void welcomePlanet(Planet planet) {  
        if (planet instanceof Earth) {  
            System.out.println("Welcome!");  
        } else if (planet instanceof Planet) {
```

```
        System.out.println("Planet!");
    } else {
        System.exit(0);
    }
}

public static void main(String args[]) {
    WelcomePlanet wp = new WelcomePlanet();
    Planet planet = new Earth();
    welcomePlanet(planet);
}
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. Compilation fails
- ☐ b. The code runs with no output
- ☒ c. Welcome!
- ☐ d. An exception is thrown at runtime
- ☐ e. Planet!

3

Consider the following program:

```
public class TThread implements Runnable {
    public void run() {
        try {
            Thread.sleep(100000);
        } catch (Exception objE) {
            System.out.println ("Exception Handler");
        }
        System.out.println ("Run method ends here");
    }

    public static void main (String[] argv) {
        Thread thread = new Thread(new TThread ());
    }
}
```

```
thread.start();
```

```
thread.interrupt();
```

```
System.out.println ("Main method ends here");
```

```
}
```

```
}
```

What will be the output of the above program?

- Answer: ☐ a. Exception Handler  
Run method ends here  
Main method ends here
- ☐ b. None of the listed options
- ☐ c. Main method ends here  
Run method ends here  
Exception Handler
- ☒ d. Main method ends here  
Exception Handler  
Run method ends here
- ☐ e. Run method ends here  
Exception Handler  
Main method ends here

4

Consider the following program:

```
1. class CheckedException extends RuntimeException { }
```

```
2. class UncheckedException extends Exception { }
```

```
3. public class Check {
```

```
4. public static void main(String args[]) {
```

```
5. generateException1();
```

```
6. generateException2();
```

```
7. }
```

```
8.
```

```
9. private static void generateException1() {
```

```
10. throw new CheckedException();
```

```
11. }
```



12.  
13. private static void generateException2() {  
14. throw new UncheckedException();  
15. }  
16. }

Which of the following is true regarding the above given program?

- Answer: ☐ a. Compilation error at line 6
- ☐ b. Compilation error at line 10
- ☒ c. Compilation error at line 14
- ☐ d. Compilation error at line 5
- ☐ e. No compilation error but throws RuntimeException on running the code

5 The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☐ a. to keep objects alive only while they are in use (reachable) by clients
- ☐ b. to allow clean up after finalization but before the space is reclaimed
- ☒ c. to keep objects alive provided there is enough memory
- ☐ d. to delete objects from a container if the clients are no longer referencing them and memory is tight

6 An Annotation Type \_\_\_\_\_.

- Answer: ☐ a. defines the structure of an Application

- ☒ b. defines the structure of an Annotation
- ☐ c. defines the structure of an interface
- ☐ d. is a meta-tag used to pass message between the code and JVM.
- ☐ e. defines the structure of an Object

7 Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

- Answer: ☒ a. @Retention
- ☒ b. @Target
- ☐ c. @Override
- ☐ d. @SuppressWarnings
- ☐ e. @Deprecated

8 Consider the following program:

```
class UserDefinedException extends Error { }

public class Tastelt {
    public static void main(String args[]) {
        try {
            try {
                throw new Error();
            }
            catch(UserDefinedException u1) {
                throw u1;
            }
            catch(Exception e1) {
```

```
System.out.println("This is the required output");
}
finally {
throw new UserDefinedException();
}
}
catch(UserDefinedException u2) {
System.out.println("This is not the output");
}
catch(Error e2) {
System.out.println("This is the output");
}
}
}
```

What will be the output for the above program?

- Answer: ☐ a. This is the output
- ☐ b. Compile-time error
- ☐ c. Runtime Error
- ☐ d. This is the required output
- ☒ e. This is not the output

9

Which of the following types of driver provides maximum decoupling between database and Java application?

- Answer: ☐ a. Type II driver
- ☐ b. Type I driver
- ☒ c. Type IV driver
- ☐ d. Type III driver

10

Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() { }
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }
}

public class TestCol7 {
    public static void main(String args[]){
        TreeSet students = new TreeSet();
        students.add(new Student("Raju"));
        students.add(new Student("Krishna"));
        students.add(new Student("Vijay"));

        System.out.println(students);
    }
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☐ a. The Student class should implement Comparator interface.
- ☐ b. The Student class should implement Externalizable interface
- ☐ c. The Student class should implement Serializable interface

- ☐ d. The Student class should implement Cloneable interface
- ☒ e. The Student class should implement Comparable interface.

11

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. 0 1 2 3 4
- ☐ b. Indefinite Loop
- ☐ c. 1 2 3 4 5
- ☐ d. 0 1 2 3 4 0 1 2 3 4
- ☐ e. 0 1 2 3 4 5

12

Consider the following partial code:

```
class Bean {  
    interface I {
```

```
void beanInterface();  
}  
class BeanI extends Bean implements I { }  
}
```

```
public class BeanImpl {  
    public static void main(String args[]) {  
        Bean bean = new Bean();  
        Bean.BeanI beanI = bean. new BeanI();  
        beanI.beanInterface();  
    }  
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☒ a. Add the following method to Bean class  
`public void beanInterface() { }`
- ☐ b. The inner interface I should be removed and kept outside the Bean class
- ☐ c. The outer class Bean should be declared as abstract
- ☐ d. The inner class should be removed and kept outside the Bean class
- ☐ e. The inner class BeanI should be declared as abstract

13

Consider the following code:

```
1. public class DagRag {  
2. public static void main(String [] args) {  
3.  
4. int [][] x = new int[2][4];  
5.  
6. for(int y = 0; y < 2; y++) {  
7. for(int z = 0; z < 4; z++) {  
8. x[y][z] = z;
```

```
9. }
10. }
11.
12. dg: for(int g = 0; g < 2; g++) {
13. rg: for(int h = 0; h < 4; h++) {
14. System.out.println(x[g][h]);
15.
16. }
17. System.out.println("The end.");
18.
19. }
20.
21. }
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

```
0
1
2
3
The end.
```

- Answer: ☐ a. if(h > 3) break dg;  
if(g > 0) break rg;
- ☒ b. if(h==3) break rg;  
if(g==0) break dg;
- ☐ c. if(g==3) break rg;  
if(h==0) break dg;
- ☐ d. if(h > 3) break dg;  
if(g > 0) break dg;

14

Consider the following code:

```
1. class Test {
2. public static void main(String args[]) {
```

```
3. double d = 12.3;
4. Dec dec = new Dec();
5. dec.dec(d);
6. System.out.println(d);
7. }
8. }
9. class Dec{
10. public void dec(double d) { d = d - 2.0d; }
11. }
```

Which of the following gives the correct value printed at line 6?

Answer: ☐ a. Prints: 10.3

☐ b. Prints: 0.0

☐ c. Prints: -2.0

☒ d. Prints: 12.3

15

Which are all platform independent among the following? (Choose 3)

Answer: ☒ a. Java Class Files

☒ b. JAR Files

☒ c. Java Source Files

☐ d. Java Development Kit (JDK)

☐ e. Java Virtual Machine (JVM)

16

Consider the following code snippet:

```
1. class Garbage { }
2. class GC1 {
```



```
3. public static void main(String a[]) {  
4. Garbage s = new Garbage();  
5. {  
6. s = new Garbage();  
7. }  
8. s = new Garbage();  
9. }  
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

Answer: ☐ a. lines: 4, 6, 8

☐ b. lines: 8

☒ c. lines: 6, 8

☐ d. lines: 4, 6

☐ e. None of the object is eligible for Garbage Collection

17

Consider the following code snippet:

```
class Animal {  
    String name;  
    public boolean equals(Object o) {  
        Animal a = (Animal) o;  
        // Code Here  
    }  
}  
  
class TestAnimal {  
    public static void main(String args[]) {  
        Animal a = new Animal();  
        a.name = "Dog";  
        Animal b = new Animal();  
        b.name = "dog";  
    }  
}
```

```
System.out.println(a.equals(b));  
}  
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

- Answer: ☐ a. return this.name.hashCode() == a.name.hashCode();
- ☐ b. return super.equals(a);
- ☐ c. return this.name == a.name;
- ☒ d. return this.name.equalsIgnoreCase(a.name);
- ☐ e. return this.name.equals(a.name);

18

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☐ a. Writable interface
- ☒ b. Serializable interface
- ☐ c. Readable interface
- ☐ d. ObjectSerializable interface
- ☐ e. Cloneable interface

19

Consider the following code:

```
class UT1 {  
    static byte m1() {  
        final char c = 'u0001';  
        return c;  
    }  
  
    static byte m3(final char c) {return c;}  
  
    public static void main(String[] args) {  
        char c = 'u0003';  
        System.out.print(""+m1()+m3(c));  
    }  
}
```

Which of the following gives the valid output of the above code?

Answer: ☐ a. Prints: 4

☒ b. Compile-time error

☐ c. Run-time error

☐ d. Prints: 13

☐ e. None of the listed options

20

Which of the following are correct regarding hashCode?(Choose 2)

Answer: ☐ a. the numeric key is unique

☐ b. hashCode() value cannot be a zero-value

☒ c. it is a 32 bit numeric digest key

☐ d. hashCode() is defined in String class

☒ e. It improves performance

21

Consider the following code snippet:

```
public class TestString9 {
    public static void main(String st[]){
        String s1 = "java";
        String s2 = "java";
        String s3 = "JAVA";
        s2.toUpperCase();
        s3.toUpperCase();
        boolean b1 = s1==s2;
        boolean b2 = s1==s3;
        System.out.print(b1);
        System.out.print(" "+b2);
    }
}
```

What will be the output of the above code snippet?

Answer: ☐ a. true true

☒ b. true false

☐ c. Runtime error

☐ d. false false

☐ e. false true

22

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☐ a. protected

☐ b. public

☒ c. final

- ☒ d. synchronized
- ☒ e. private

23

Consider the following code:

```
public class UnwiseThreads implements Runnable {  
    public void run() {  
        while(true) { }  
    }  
  
    public static void main(String args[]) {  
        UnwiseThreads ut1 = new UnwiseThreads();  
        UnwiseThreads ut2 = new UnwiseThreads();  
        UnwiseThreads ut3 = new UnwiseThreads();  
        ut1.run();  
        ut2.run();  
        ut3.run();  
    }  
}
```

Which of the following is correct for the above given program?

- Answer: ☐ a. The code compiles and runs 3 non ending non daemon threads
- ☐ b. Runtime Error "IllegalThreadStateException"
- ☒ c. Compilation error "ut2.run() is never reached"
- ☐ d. The code compiles but runs only 1 non ending, non daemon thread

24

Consider the following program:

```
import java.io.*;
```

```
public class CrypticCatch {  
    public static void main(String[] args) throws Exception {  
        try {  
            try {  
                try {  
                    throw new FileNotFoundException();  
                } catch (Exception e3) {  
                    throw e3;  
                }  
            } catch (IOException e2) {  
                throw e2;  
            }  
        } catch (FileNotFoundException e1) {  
            System.out.println("File not found exception caught");  
        }  
        System.out.println("Exception handled successfully");  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. File not found exception caught
- ☐ b. Runtime error
- ☒ c. File not found exception caught  
Exception handled successfully
- ☐ d. Compile time error. Since exceptions should be caught in reversed hierarchy order
- ☐ e. Exception handled successfully

25

Which of the following options is true about multiple inheritance?

- Answer: ☒ a. Inheriting from more than one super class

- ☐ b. Inheriting from two super classes
- ☐ c. Inheriting from a class which is already in an inheritance hierarchy
- ☐ d. Inheriting from a single class

26

Consider the following Statements:

Statement A: The threads are scheduled using fixed priority scheduling.

Statement B: Thread priority can be set after it is created using the public `int setPriority()` method declared in the Thread class.

Which of the following statements is correct?

- Answer: ☐ a. Both Statement A and B are true
- ☐ b. Statement A is true and Statement B is false
- ☐ c. Both Statement A and B are false
- ☒ d. Statement A is false and Statement B is true

27

What are the new updations to `java.io.File` class in JDK 1.6?(Choose 2)

- Answer: ☐ a. No new methods are introduced in JDK 1.6
- ☒ b. Methods to retrieve disk usage information
- ☒ c. Methods to encrypt the file with password
- ☐ d. Methods to attach the file to an email
- ☐ e. Methods to set or query file permissions

28

Consider the following code:

```
class A {}  
class B extends A {}  
public class Code2 {  
    public void method(A a) {  
        System.out.println("A");  
    }  
    public void method(B b) {  
        System.out.println("B");  
    }  
    public static void main(String args[]) {  
        new Code2().method(new Object());  
    }  
}
```

Which of the following will be the output for the above code?

Answer: ☐ a. Prints: A

☒ b. Compilation Error 'Cannot find the symbol'

☐ c. Prints: B

☐ d. Throws ClassCastException at runtime

29

Which of the following options are true for StringBuffer class?(choose 3)

Answer: ☒ a. 'capacity' property indicates the maximum number of characters that a StringBuffer can have

☐ b. Buffer space in StringBuffer can be shared

☐ c. StringBuffer is extended from String class

☒ d. StringBuffer is threadsafe

☒ e. StringBuffer implements CharSequence interface



30

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The cardID and limit variables break polymorphism
- ☐ b. The setCardInformation method breaks encapsulation
- ☐ c. The class is fully encapsulated
- ☒ d. The ownerName variable breaks encapsulation
- ☐ e. The code demonstrates polymorphism

31

Consider the following code snippet:

```
import java.util.*;  
  
public class TestCol4 {  
    public static void main(String[] args) {  
        Set h = new HashSet();  
        h.add("One");  
        h.add("Two");  
        h.add("Three");  
        h.add("Four");  
        h.add("One");  
    }  
}
```

```
h.add("Four");

List l = new ArrayList();

l.add("One");
l.add("Two");
l.add("Three");

h.retainAll(l);

System.out.println("Size:" + l.size() + h.size());
}
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Size: 36
- ☐ b. Size: 63
- ☐ c. Size: 66
- ☐ d. Compilation error
- ☒ e. Size: 33

32

Given the following object hierarchy and code for the upgrade method:

```
java.lang.Object
+----mypkg.BaseWidget
|
+----TypeAWidget
```

// the following is a method in the BaseWidget class

```
1. public TypeAWidget upgrade( ){
2. TypeAWidget A = (TypeAWidget) this;
3. return A;
4. }
```

Which of the following will be the result of the below statements?

5. BaseWidget B = new BaseWidget();

6. TypeAWidget A = B.upgrade();

Answer: ☐ a. The compiler would object to line 2.

☒ b. A runtime ClassCastException would be generated in line 2.

☐ c. As this refers to the BaseWidget, a parent can accept its child

☐ d. After line 6 executes, the object referred to as A will in fact be a TypeAWidget.

33

Which of the following are true about ResultSet? (Choose 2)

Answer: ☒ a. Not all ResultSets are updatable

☐ b. Atleast one record should be there in the ResultSet on opening a query (or) table

☐ c. All ResultSet, are Scrollable

☐ d. The ResultSet object contains null, if there are no records in the table

☒ e. It is possible to delete records through ResultSet

34

Which of the following is the best-performing implementation of Set interface?

Answer: ☐ a. SortedSet

☐ b. Hashtable

- ☐ c. LinkedHashSet
- ☒ d. HashSet
- ☐ e. TreeSet

35 Which of the following options are true? (Choose 2)

- Answer: ☒ a. The catch block can have another try-catch-finally block
- ☒ b. The finally block can have another try-catch-finally block nested inside
- ☐ c. In a try-catch-finally structure, finally block and catch block can be placed in any order
- ☐ d. On using nested try-catch blocks, only the outer most try-catch block can have the finally block

36 Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
}

public static void main(String args[]) {
new Code10().codeMethod();
}
```

```
}  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. Compilation error: cannot find the symbol
- ☐ b. Prints: false
- ☐ c. Compilation error: v is not initialised inside the constructor
- ☐ d. Runtime error: NullPointerException
- ☐ e. Prints: true

37

Consider the following partial code:

```
interface A { public int getValue(); }
```

```
class B implements A {  
    public int getValue() { return 1; }  
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

- Answer: ☐ a. public void add(C c1, C c2) { c1.getValue(); }
- ☐ b. public void add(C c) { c.getValue(); }
- ☒ c. public void add(A a) { a.getValue(); }
- ☒ d. public void add(A a, B b) { a.getValue(); }



e. public void add(B b) { b.getValue(); }

38

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

Answer: ☐ a. NO

☐ b. Runtime Error

☒ c. Compile-time error

☐ d. false

☐ e. true

39

Consider the following program:

```
public class ThreadJoin extends Thread{  
    public static void main(String[] args) {  
        Thread t1 = new Thread("T1");
```

```
Thread t2 = new Thread("T2");
try {
    t1.join();
    t2.join();
} catch (InterruptedException e) {
    System.out.println("Main Thread interrupted.");
}
}
```

```
public void run(){
    System.out.println("Run executed");
}
}
```

What will be the output of the above program?

- Answer: ☒ a. Program ends without printing anything
- ☐ b. Compile-time error
- ☐ c. Prints "Main Thread interrupted."
- ☐ d. Prints "Run executed" twice
- ☐ e. Run-time error

40

Consider the following class definition:

```
class InOut{
    String s= new String("Between");
    public void amethod(final int iArgs){
        int iam;
        class Bicycle{
            public void sayHello(){
                ...Line 1
            }
        } //End of bicycle class
    } //End of amethod
}
```

```
public void another(){  
    int iOther;  
}  
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

- Answer: ☒ a. System.out.println(iArgs);  
☒ b. System.out.println(s);  
☐ c. System.out.println(iam);  
☐ d. System.out.println(iOther);

41

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

- Answer: ☐ a. Set  
☐ b. ArrayList  
☐ c. List  
☒ d. SortedSet  
☒ e. TreeSet

42

Consider the following code:

```
public abstract class Shape {  
    private int x;  
    private int y;
```



```
public abstract void draw();
```

```
public void setAnchor(int x, int y) {  
    this.x = x;  
    this.y = y;  
}  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

- Answer: ☐ a. public class Circle extends Shape {  
 public int radius;  
 private void draw() { /\* code here \*/ }  
}
- ☒ b. public class Circle extends Shape {  
 private int radius;  
 public void setRadius(int radius) { this.radius = radius; }  
 public int getRadius() { return radius; }  
 public void draw() { /\* code here \*/ }  
}
- ☐ c. public class Circle implements Shape {  
 private int radius;  
}
- ☐ d. public class Circle extends Shape {  
 private int radius;  
 public void draw();  
}
- ☒ e. public abstract class Circle extends Shape {  
 private int radius;  
}

43

Consider the following code snippet:

```
import java.io.*;
```

```
public class IOCode2 {  
    public static void main(String args[]) throws FileNotFoundException {  
        // Insert Code here  
        System.out.println("Welcome to File Programming");  
    }  
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

- Answer: ☐ a. System.out.redirectOutput(new PrintStream("C:/Data"));
- ☐ b. System.redirectOutput(new PrintStream("C:/Data"));
- ☐ c. System.out.setOut(new PrintStream("C:/Data"));
- ☒ d. System.setOut(new PrintStream("C:/Data"));
- ☐ e. System.setOut(new FileWriter("C:/Data"));

44

Which of the following is the immediate super interface of CallableStatement?

- Answer: ☐ a. Statement
- ☐ b. CallableStatement
- ☒ c. PreparedStatement
- ☐ d. ResultSet
- ☒ e. Connection

45

Consider the following code:

```
public class Code13 {
```

```
public static void main(String... args) {  
    for(String s:args)  
        System.out.print(s + ", ");  
    System.out.println(args.length);  
}  
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

Answer: ☐ a. Runtime Error: NoSuchMethodError

- ☒ b. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ c. Compilation Error: var-args cannot be used as arguments for main() method
- ☐ d. variable arguments cannot be used with enhanced for-loop
-

1 Which of the following options are true for StringBuffer class?(choose 3)

- Answer: ☒ a. StringBuffer implements Charsequence interface
- ☒ b. StringBuffer is extended from String class
- ☐ c. 'capacity' property indicates the maximum number of characters that a StringBuffer can have
- ☒ d. StringBuffer is threadsafe
- ☐ e. Buffer space in StringBuffer can be shared

2 Consider the following program:

```
class UserDefinedException extends Error { }

public class Tastelt {
    public static void main(String args[]) {
        try {
            try {
                throw new Error();
            }
            catch(UserDefinedException u1) {
                throw u1;
            }
            catch(Exception e1) {
                System.out.println("This is the required output");
            }
            finally {
                throw new UserDefinedException();
            }
        }
        catch(UserDefinedException u2) {
            System.out.println("This is not the output");
        }
    }
}
```

```
}  
catch(Error e2) {  
System.out.println("This is the output");  
}  
}  
}
```

What will be the output for the above program?

- Answer: ☒ a. Compile-time error
- ☐ b. This is the required output
- ☐ c. This is the output
- ☐ d. Runtime Error
- ☐ e. This is not the output

3

Consider the following code:

```
import java.util.*;  
  
public class Code10 {  
    {  
        final Vector v;  
        v=new Vector();  
    }  
  
    public Code10() { }  
  
    public void codeMethod() {  
        System.out.println(v.isEmpty());  
    }  
  
    public static void main(String args[]) {  
        new Code10().codeMethod();  
    }  
}
```

```
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: false
- ☐ b. Runtime error: NullPointerException
- ☐ c. Compilation error: v is not initialised inside the constructor
- ☐ d. Prints: true
- ☒ e. Compilation error: cannot find the symbol

4

Which of the following options is true about multiple inheritance?

- Answer: ☐ a. Inheriting from a class which is already in an inheritance hierarchy
- ☐ b. Inheriting from two super classes
- ☒ c. Inheriting from more than one super class
- ☐ d. Inheriting from a single class

5

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

- Answer: ☒ a. final
- ☐ b. protected
- ☐ c. public
- ☒ d. synchronized

☒ e. private

6 Consider the following partial code:

```
interface A { public int getValue(); }
```

```
class B implements A {  
    public int getValue() { return 1; }  
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

- Answer: ☒ a. public void add(B b) { b.getValue(); }
- ☒ b. public void add(A a) { a.getValue(); }
- ☐ c. public void add(C c1, C c2) { c1.getValue(); }
- ☐ d. public void add(C c) { c.getValue(); }
- ☒ e. public void add(A a, B b) { a.getValue(); }

7 Consider the following code snippet:

```
import java.util.*;  
  
public class TestCol4 {  
    public static void main(String[] args) {  
        Set h = new HashSet();  
        h.add("One");  
        h.add("Two");  
    }  
}
```

```
h.add("Three");
h.add("Four");
h.add("One");
h.add("Four");

List l = new ArrayList();

l.add("One");
l.add("Two");
l.add("Three");

h.retainAll(l);

System.out.println("Size:" + l.size() + h.size());
}
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Size: 66
- ☐ b. Compilation error
- ☐ c. Size: 36
- ☐ d. Size: 63
- ☒ e. Size: 33

8

Which of the following are correct regarding hashCode?(Choose 2)

- Answer: ☒ a. it is a 32 bit numeric digest key
- ☐ b. the numeric key is unique
- ☐ c. hashCode() value cannot be a zero-value



- ☒ d. It improves performance
- ☒ e. hashCode() is defined in String class

9 The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☒ a. to keep objects alive only while they are in use (reachable) by clients
- ☐ b. to keep objects alive provided there is enough memory
- ☐ c. to delete objects from a container if the clients are no longer referencing them and memory is tight
- ☐ d. to allow clean up after finalization but before the space is reclaimed

10 What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

- Answer: ☒ a. Methods to encrypt the file with password
- ☐ b. Methods to attach the file to an email
- ☒ c. Methods to retrieve disk usage information
- ☐ d. Methods to set or query file permissions
- ☐ e. No new methods are introduced in JDK 1.6

11 Consider the following code:

```
1. public class DagRag {  
2. public static void main(String [] args) {  
3.
```

```
4. int [][] x = new int[2][4];
5.
6. for(int y = 0; y < 2; y++) {
7. for(int z = 0; z < 4; z++) {
8. x[y][z] = z;
9. }
10. }
11.
12. dg: for(int g = 0; g < 2; g++) {
13. rg: for(int h = 0; h < 4; h++) {
14. System.out.println(x[g][h]);
15.
16. }
17. System.out.println("The end.");
18.
19. }
20.
21. }
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

```
0
1
2
3
The end.
```

- Answer: ☐ a. if(h > 3) break dg;  
if(g > 0) break rg;
- ☐ b. if(h > 3) break dg;  
if(g > 0) break dg;
- ☐ c. if(g==3) break rg;  
if(h==0) break dg;
- ☒ d. if(h==3) break rg;  
if(g==0) break dg;

Correct

Marks for this submission: 1/1.

Make comment or override grade

#	Action	Response	Time	Raw score	Penalty	Grade
2	Close	79518,79517,79516,79515:79515	13:14:29 on 5/10/09	1	0.1	1
1	Save	79518,79517,79516,79515:79515	12:15:39 on 5/10/09	1	0.1	0

12

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

Answer: ☒ a. SortedSet

☒ b. TreeSet

☐ c. Set

☐ d. ArrayList

☐ e. List

13

Consider the following program:

```
public class TThread implements Runnable {
    public void run() {
        try {
            Thread.sleep(100000);
        } catch (Exception objE) {
            System.out.println ("Exception Handler");
        }
        System.out.println ("Run method ends here");
    }
}
```

```

}

public static void main (String[] argv) {
    Thread thread = new Thread(new TThread ());
    thread.start();

    thread.interrupt();
    System.out.println ("Main method ends here");
}
}

```

What will be the output of the above program?

- Answer: ☐ a. Main method ends here  
Run method ends here  
Exception Handler
- ☒ b. Exception Handler  
Run method ends here  
Main method ends here
- ☐ c. Main method ends here  
Exception Handler  
Run method ends here
- ☐ d. None of the listed options
- ☐ e. Run method ends here  
Exception Handler  
Main method ends here

14

Consider the following code:

```

class Planet { }

class Earth extends Planet { }

public class WelcomePlanet {
    public static void welcomePlanet(Planet planet) {
        if (planet instanceof Earth) {
            System.out.println("Welcome!");
        }
    }
}

```

```

    } else if (planet instanceof Planet) {
        System.out.println("Planet!");
    } else {
        System.exit(0);
    }
}

public static void main(String args[]) {
    WelcomePlanet wp = new WelcomePlanet();
    Planet planet = new Earth();
    welcomePlanet(planet);
}
}

```

Which of the following will be the output of the above program?

- Answer: ☐ a. Compilation fails
- ☐ b. Planet!
- ☐ c. The code runs with no output
- ☒ d. Welcome!
- ☐ e. An exception is thrown at runtime

15

Consider the following code:

```

class A { }
class B extends A { }
public class Code2 {
    public void method(A a) {
        System.out.println("A");
    }
    public void method(B b) {
        System.out.println("B");
    }
    public static void main(String args[]) {
        new Code2().method(new Object());
    }
}

```

```
}  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. Compilation Error 'Cannot find the symbol'
- ☐ b. Prints: B
- ☐ c. Throws ClassCastException at runtime
- ☐ d. Prints: A

16

Which are all platform independent among the following? (Choose 3)

- Answer: ☐ a. Java Virtual Machine (JVM)
- ☒ b. Java Source Files
- ☐ c. Java Development Kit (JDK)
- ☒ d. Java Class Files
- ☒ e. JAR Files

17

Consider the following code snippet:

```
import java.io.*;  
  
public class IOCode2 {  
    public static void main(String args[]) throws FileNotFoundException {  
        // Insert Code here  
        System.out.println("Welcome to File Programming");  
    }  
}
```

Which of the following code snippets when substituted to the comment line (//

Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

- Answer: ☐ a. System.setOut(new FileWriter("C:/Data"));
- ☐ b. System.redirectOutput(new PrintStream("C:/Data"));
- ☐ c. System.out.setOut(new PrintStream("C:/Data"));
- ☐ d. System.out.redirectOutput(new PrintStream("C:/Data"));
- ☒ e. System.setOut(new PrintStream("C:/Data"));

18

Given the following object hierarchy and code for the upgrade method:

```
java.lang.Object
+----mypkg.BaseWidget
|
+----TypeAWidget
```

// the following is a method in the BaseWidget class

```
1. public TypeAWidget upgrade( ){
2. TypeAWidget A = (TypeAWidget) this;
3. return A;
4. }
```

Which of the following will be the result of the below statements?

```
5. BaseWidget B = new BaseWidget();
6. TypeAWidget A = B.upgrade();
```

- Answer: ☐ a. The compiler would object to line 2.
- ☐ b. As this refers to the BaseWidget, a parent can accept its child
- ☒ c. A runtime ClassCastException would be generated in line 2.

- ☐ d. After line 6 executes, the object referred to as A will in fact be a TypeAWidget.

19

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

- Answer: ☒ a. Compile-time error
- ☐ b. true
- ☐ c. NO
- ☐ d. false
- ☐ e. Runtime Error

20

Consider the following partial code:

```
class Bean {  
    interface I {
```



```
void beanInterface();  
}  
class BeanI extends Bean implements I { }  
}
```

```
public class BeanImpl {  
    public static void main(String args[]) {  
        Bean bean = new Bean();  
        Bean.BeanI beanI = bean. new BeanI();  
        beanI.beanInterface();  
    }  
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☐ a. The inner interface I should be removed and kept outside the Bean class
- ☐ b. The inner class should be removed and kept outside the Bean class
- ☒ c. Add the following method to Bean class  
public void beanInterface() { }
- ☐ d. The outer class Bean should be declared as abstract
- ☐ e. The inner class BeanI should be declared as abstract

21

Consider the following code snippet:

```
import java.util.*;  
class Student {  
    String studentName;  
    Student() { }  
    Student(String studentName) {  
        this.studentName = studentName;  
    }  
}
```

```
public String toString() {  
    return this.studentName;  
}  
}  
  
public class TestCol7 {  
    public static void main(String args[]){  
        TreeSet students = new TreeSet();  
        students.add(new Student("Raju"));  
        students.add(new Student("Krishna"));  
        students.add(new Student("Vijay"));  
  
        System.out.println(students);  
    }  
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☒ a. The Student class should implement Cloneable interface
- ☐ b. The Student class should implement Serializable interface
- ☒ c. The Student class should implement Comparable interface.
- ☐ d. The Student class should implement Comparator interface.
- ☐ e. The Student class should implement Externalizable interface

22

Consider the following code:

```
class UT1 {  
    static byte m1() {  
        final char c = 'u0001';
```

```

        return c;
    }

    static byte m3(final char c) {return c;}

    public static void main(String[] args) {
        char c = 'u0003';
        System.out.print(""+m1()+m3(c));
    }
}

```

Which of the following gives the valid output of the above code?

- Answer: ☐ a. Run-time error
- ☐ b. Prints: 4
- ☐ c. Prints: 13
- ☐ d. None of the listed options
- ☒ e. Compile-time error

23

Consider the following code snippet:

```

public class TestString9 {
    public static void main(String st[]){
        String s1 = "java";
        String s2 = "java";
        String s3 = "JAVA";
        s2.toUpperCase();
        s3.toUpperCase();
        boolean b1 = s1==s2;
        boolean b2 = s1==s3;
        System.out.print(b1);
        System.out.print(" "+b2);
    }
}

```

What will be the output of the above code snippet?

- Answer: ☐ a. false true
- ☐ b. Runtime error
- ☐ c. false false
- ☐ d. true true
- ☒ e. true false

24

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The class is fully encapsulated
- ☐ b. The cardID and limit variables break polymorphism
- ☐ c. The setCardInformation method breaks encapsulation
- ☒ d. The ownerName variable breaks encapsulation
- ☐ e. The code demonstrates polymorphism

25

Consider the following Statements:

Statement A:The threads are scheduled using fixed priority scheduling.

Statement B:Thread priority can be set after it is created using the public int setPriority() method declared in the Thread class.

Which of the following statements is correct?

Answer: ☐ a. Statement A is false and Statement B is true

☒ b. Statement A is true and Statement B is false

☐ c. Both Statement A and B are true

☐ d. Both Statement A and B are false

26

Consider the following code snippet:

```
1. class Garbage { }  
2. class GC1 {  
3. public static void main(String a[]) {  
4. Garbage s = new Garbage();  
5. {  
6. s = new Garbage();  
7. }  
8. s = new Garbage();  
9. }  
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

Answer: ☐ a. lines: 4, 6, 8

☐ b. lines: 8

☒ c. lines: 4, 6

- ☐ d. lines: 6, 8
- ☐ e. None of the object is eligible for Garbage Collection

27

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

Answer: ☐ a. ObjectSerializable interface

☐ b. Readable interface

☐ c. Writable interface

☐ d. Cloneable interface

☒ e. Serializable interface

28

Consider the following program:

```
1. class CheckedException extends RuntimeException { }
2. class UncheckedException extends Exception { }
3. public class Check {
4. public static void main(String args[]) {
5. generateException1();
6. generateException2();
7. }
8.
9. private static void generateException1() {
10. throw new CheckedException();
11. }
```

12.  
13. private static void generateException2() {  
14. throw new UncheckedException();  
15. }  
16. }

Which of the following is true regarding the above given program?

- Answer: ☒ a. Compilation error at line 14
- ☐ b. Compilation error at line 5
- ☐ c. No compilation error but throws RuntimeException on running the code
- ☐ d. Compilation error at line 10
- ☐ e. Compilation error at line 6

29

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. 1 2 3 4 5
- ☐ b. Indefinite Loop

- ☒ c. 0 1 2 3 4
- ☐ d. 0 1 2 3 4 0 1 2 3 4
- ☐ e. 0 1 2 3 4 5

30

Consider the following code:

```
public class UnwiseThreads implements Runnable {  
    public void run() {  
        while(true) { }  
    }  
  
    public static void main(String args[]) {  
        UnwiseThreads ut1 = new UnwiseThreads();  
        UnwiseThreads ut2 = new UnwiseThreads();  
        UnwiseThreads ut3 = new UnwiseThreads();  
        ut1.run();  
        ut2.run();  
        ut3.run();  
    }  
}
```

Which of the following is correct for the above given program?

Answer: ☐ a. Compilation error "ut2.run() is never reached"

- ☒ b. The code compiles but runs only 1 non ending, non daemon thread
- ☐ c. Runtime Error "IllegalThreadStateException"
- ☐ d. The code compiles and runs 3 non ending non daemon threads

31

Consider the following scenario:



Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

Answer: ☐ a. Class: Real Chocos Private Limited  
Objects: Chocolate

☒ b. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates

☐ c. Class: Fruit Chocolates  
Objects: Rum Chocolates

☐ d. Class: Choclate  
Objects: Milk Chocolates

32

Which of the following options are true? (Choose 2)

Answer: ☒ a. The catch block can have another try-catch-finally block

☐ b. In a try-catch-finally structure, finally block and catch block can be placed in any order

☒ c. The finally block can have another try-catch-finally block nested inside

☐ d. On using nested try-catch blocks, only the outer most try-catch block can have the finally block

Consider the following code:

```
public abstract class Shape {  
    private int x;  
    private int y;  
  
    public abstract void draw();  
  
    public void setAnchor(int x, int y) {  
        this.x = x;  
        this.y = y;  
    }  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

- Answer: ☐ a. public class Circle extends Shape {  
 private int radius;  
 public void draw();  
}
- ☐ b. public class Circle implements Shape {  
 private int radius;  
}
- ☒ c. public class Circle extends Shape {  
 private int radius;  
 public void setRadius(int radius) { this.radius = radius; }  
 public int getRadius() { return radius; }  
 public void draw() { /\* code here \*/ }  
}
- ☐ d. public class Circle extends Shape {  
 public int radius;  
 private void draw() { /\* code here \*/ }  
}
- ☒ e. public abstract class Circle extends Shape {  
 private int radius;  
}

34

Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```

Which of the following gives the correct value printed at line 6?

Answer: ☒ a. Prints: 12.3

☐ b. Prints: 10.3

☐ c. Prints: 0.0

☐ d. Prints: -2.0

35

Which of the following types of driver provides maximum decoupling between database and Java application?

Answer: ☐ a. Type II driver

☐ b. Type I driver

☒ c. Type III driver

☐ d. Type IV driver

36

Which of the following is the best-performing implementation of Set interface?

- Answer: ☐ a. SortedSet
- ☐ b. Hashtable
- ☐ c. LinkedHashSet
- ☐ d. TreeSet
- ☒ e. HashSet

37

Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + ", ");  
        System.out.println(args.length);  
    }  
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

- Answer: ☐ a. Runtime Error: NoSuchMethodError
- ☒ b. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ c. variable arguments cannot be used with enhanced for-loop
- ☐ d. Compilation Error: var-args cannot be used as arguments for main() method

38

An Annotation Type \_\_\_\_\_.

- Answer: ☐ a. defines the structure of an Object
- ☐ b. is a meta-tag used to pass message between the code and JVM.
- ☒ c. defines the structure of an Annotation
- ☐ d. defines the structure of an interface
- ☐ e. defines the structure of an Application

39

Consider the following program:

```
public class ThreadJoin extends Thread{
    public static void main(String[] args) {
        Thread t1 = new Thread("T1");
        Thread t2 = new Thread("T2");
        try {
            t1.join();
            t2.join();
        } catch (InterruptedException e) {
            System.out.println("Main Thread interrupted.");
        }
    }

    public void run(){
        System.out.println("Run executed");
    }
}
```

What will be the output of the above program?

- Answer: ☒ a. Program ends without printing anything
- ☐ b. Prints "Run executed" twice
- ☐ c. Compile-time error

- ☐ d. Prints "Main Thread interrupted."
- ☐ e. Run-time error

40

Consider the following program:

```
import java.io.*;

public class CrypticCatch {
    public static void main(String[] args) throws Exception {
        try {
            try {
                try {
                    throw new FileNotFoundException();
                } catch (Exception e3) {
                    throw e3;
                }
            } catch (IOException e2) {
                throw e2;
            }
        } catch (FileNotFoundException e1) {
            System.out.println("File not found exception caught");
        }
        System.out.println("Exception handled successfully");
    }
}
```

What will be the output of the above program?

- Answer: ☐ a. Compile time error. Since exceptions should be caught in reversed hierarchy order
- ☐ b. File not found exception caught
- ☐ c. Exception handled successfully
- ☒ d. File not found exception caught  
Exception handled successfully

☐ e. Runtime error

41

Consider the following code snippet:

```
class Animal {
    String name;
    public boolean equals(Object o) {
        Animal a = (Animal) o;
        // Code Here
    }
}

class TestAnimal {
    public static void main(String args[]) {
        Animal a = new Animal();
        a.name = "Dog";
        Animal b = new Animal();
        b.name = "dog";

        System.out.println(a.equals(b));
    }
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

- Answer: ☐ a. return this.name.equals(a.name);
- ☐ b. return this.name == a.name;
- ☐ c. return this.name.hashCode() == a.name.hashCode();
- ☐ d. return super.equals(a);
- ☒ e. return this.name.equalsIgnoreCase(a.name);

42

Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
}
}
}

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

Answer: ☐ a. System.out.println(iOther);☒ b. System.out.println(iArgs);☐ c. System.out.println(iam);☒ d. System.out.println(s);

43

Which of the following is the immediate super interface of CallableStatement?

Answer: ☐ a. CallableStatement☒ b. PreparedStatement☐ c. Connection



☒ d. Statement

☐ e. ResultSet

44

Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

Answer: ☐ a. @SuppressWarnings

☐ b. @Override

☐ c. @Deprecated

☒ d. @Target

☒ e. @Retention

45

Which of the following are true about ResultSet? (Choose 2)

Answer: ☐ a. All ResultSet, are Scrollable

☐ b. It is possible to delete records through ResultSet

☒ c. The ResultSet object contains null, if there are no records in the table

☒ d. Not all ResultSets are updatable

☐ e. Atleast one record should be there in the ResultSet on opening a query (or) table

## ELT BCC: Core Java SDK Ver 1.5 & 1.6

1 Consider the following code:

```
public class UnwiseThreads implements Runnable {
    public void run() {
        while(true) { }
    }

    public static void main(String args[]) {
        UnwiseThreads ut1 = new UnwiseThreads();
        UnwiseThreads ut2 = new UnwiseThreads();
        UnwiseThreads ut3 = new UnwiseThreads();
        ut1.run();
        ut2.run();
        ut3.run();
    }
}
```

Which of the following is correct for the above given program?

- Answer: ☐ a. Runtime Error "IllegalThreadStateException"
- ☐ b. The code compiles and runs 3 non ending non daemon threads
- ☒ c. The code compiles but runs only 1 non ending, non daemon thread
- ☐ d. Compilation error "ut2.run() is never reached"

2 Consider the following code:

```
1. public class DagRag {
2. public static void main(String [] args) {
3.
4. int [][] x = new int[2][4];
5.
6. for(int y = 0; y < 2; y++) {
7. for(int z = 0; z < 4; z++) {
8. x[y][z] = z;
9. }
10. }
11.
12. dg: for(int g = 0; g < 2; g++) {
13. rg: for(int h = 0; h < 4; h++) {
14. System.out.println(x[g][h]);
```

```
15.  
16. }  
17. System.out.println("The end.");  
18.  
19. }  
20.  
21. }  
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make the above program to generate the below output?

```
0  
1  
2  
3  
The end.
```

- Answer: ☒ a. `if(h==3) break rg;  
if(g==0) break dg;`
- ☐ b. `if(h > 3) break dg;  
if(g > 0) break rg;`
- ☐ c. `if(g==3) break rg;  
if(h==0) break dg;`
- ☐ d. `if(h > 3) break dg;  
if(g > 0) break dg;`

3

Consider the following code:

```
class Planet { }  
  
class Earth extends Planet { }  
  
public class WelcomePlanet {  
    public static void welcomePlanet(Planet planet) {  
        if (planet instanceof Earth) {  
            System.out.println("Welcome!");  
        } else if (planet instanceof Planet) {  
            System.out.println("Planet!");  
        } else {  
            System.exit(0);  
        }  
    }  
}
```

```
public static void main(String args[]) {  
    WelcomePlanet wp = new WelcomePlanet();  
    Planet planet = new Earth();  
    welcomePlanet(planet);  
}  
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. The code runs with no output  
☐ b. Compilation fails  
☐ c. Planet!  
☐ d. An exception is thrown at runtime  
☒ e. Welcome!

4

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☒ a. Serializable interface  
☐ b. Readable interface  
☐ c. Writable interface  
☐ d. Cloneable interface  
☐ e. ObjectSerializable interface

5

Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + ", ");  
        System.out.println(args.length);  
    }  
}
```

Which of the following will be the output if the above code is

attempted to compile and execute?

- Answer: ☒ a. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ b. variable arguments cannot be used with enhanced for-loop
- ☐ c. Runtime Error: NoSuchMethodError
- ☐ d. Compilation Error: var-args cannot be used as arguments for main() method

6

Which of the following options is true about multiple inheritance?

- Answer: ☒ a. Inheriting from more than one super class
- ☐ b. Inheriting from a single class
- ☐ c. Inheriting from a class which is already in an inheritance hierarchy
- ☐ d. Inheriting from two super classes

7

Consider the following code:

```
public abstract class Shape {  
    private int x;  
    private int y;  
  
    public abstract void draw();  
  
    public void setAnchor(int x, int y) {  
        this.x = x;  
        this.y = y;  
    }  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

- Answer: ☐ a. public class Circle extends Shape {  
 public int radius;  
 private void draw() { /\* code here \*/ }  
}
- ☐ b. public class Circle implements Shape {  
 private int radius;  
}
- ☐ c. public class Circle extends Shape {

```
private int radius;  
public void draw();  
}
```

- ☒ d. 

```
public class Circle extends Shape {  
    private int radius;  
    public void setRadius(int radius) { this.radius = radius; }  
    public int getRadius() { return radius; }  
    public void draw() { /* code here */ }  
}
```
- ☒ e. 

```
public abstract class Circle extends Shape {  
    private int radius;  
}
```

8

Consider the following code:

```
import java.util.*;
```

```
public class Code10 {  
    {  
        final Vector v;  
        v=new Vector();  
    }  
}
```

```
public Code10() { }
```

```
public void codeMethod() {  
    System.out.println(v.isEmpty());  
}
```

```
public static void main(String args[]) {  
    new Code10().codeMethod();  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. Compilation error: v is not initialised inside the constructor
- ☐ b. Prints: false
- ☒ c. Compilation error: cannot find the symbol
- ☐ d. Prints: true
- ☐ e. Runtime error: NullPointerException

9

Consider the following code:

```
class A { }
class B extends A { }
public class Code2 {
    public void method(A a) {
        System.out.println("A");
    }
    public void method(B b) {
        System.out.println("B");
    }
    public static void main(String args[]) {
        new Code2().method(new Object());
    }
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Throws ClassCastException at runtime  
☐ b. Prints: B  
☐ c. Prints: A  
☒ d. Compilation Error 'Cannot find the symbol'

10

Consider the following code:

```
class UT1 {
    static byte m1() {
        final char c = 'u0001';
        return c;
    }

    static byte m3(final char c) {return c;}

    public static void main(String[] args) {
        char c = 'u0003';
        System.out.print(""+m1()+m3(c));
    }
}
```

Which of the following gives the valid output of the above code?

- Answer: ☐ a. Prints: 4  
☒ b. Compile-time error

- ☐ c. None of the listed options
- ☐ d. Run-time error
- ☐ e. Prints: 13

11

Consider the following program:

```
public class ThreadJoin extends Thread{  
    public static void main(String[] args) {  
        Thread t1 = new Thread("T1");  
        Thread t2 = new Thread("T2");  
        try {  
            t1.join();  
            t2.join();  
        } catch (InterruptedException e) {  
            System.out.println("Main Thread interrupted.");  
        }  
    }  
  
    public void run(){  
        System.out.println("Run executed");  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Compile-time error
- ☒ b. Prints "Main Thread interrupted."
- ☐ c. Run-time error
- ☐ d. Program ends without printing anything
- ☐ e. Prints "Run executed" twice



12

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

- Answer: ☒ a. TreeSet
- ☐ b. ArrayList
- ☐ c. List
- ☐ d. Set
- ☒ e. SortedSet

13

Consider the following program:

```
class UserDefinedException extends Error { }

public class Tastelt {
    public static void main(String args[]) {
        try {
            try {
                throw new Error();
            }
            catch(UserDefinedException u1) {
                throw u1;
            }
            catch(Exception e1) {
                System.out.println("This is the required output");
            }
            finally {
                throw new UserDefinedException();
            }
        }
        catch(UserDefinedException u2) {
            System.out.println("This is not the output");
        }
        catch(Error e2) {
```

```
System.out.println("This is the output");  
}  
}  
}
```

What will be the output for the above program?

- Answer: ☐ a. Runtime Error
- ☐ b. This is not the output
- ☐ c. Compile-time error
- ☒ d. This is the output
- ☐ e. This is the required output

14

Which are all platform independent among the following? (Choose 3)

- Answer: ☒ a. Java Virtual Machine (JVM)
- ☐ b. JAR Files
- ☒ c. Java Development Kit (JDK)
- ☒ d. Java Class Files
- ☐ e. Java Source Files

15

Consider the following program:

```
public class TThread implements Runnable {  
    public void run() {  
        try {  
            Thread.sleep(100000);  
        } catch (Exception objE) {
```

```
System.out.println ("Exception Handler");
}
System.out.println ("Run method ends here");
}

public static void main (String[] argv) {
Thread thread = new Thread(new TThread ());
thread.start();

thread.interrupt();
System.out.println ("Main method ends here");
}
}
```

What will be the output of the above program?

- Answer: ☐ a. Run method ends here  
Exception Handler  
Main method ends here
- ☒ b. Main method ends here  
Run method ends here  
Exception Handler
- ☐ c. Main method ends here  
Exception Handler  
Run method ends here
- ☐ d. Exception Handler  
Run method ends here  
Main method ends here
- ☐ e. None of the listed options

16

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☐ a. private

- ☐ b. protected
- ☒ c. public
- ☒ d. final
- ☒ e. synchronized

17

Consider the following partial code:

```
class Bean {  
    interface I {  
        void beanInterface();  
    }  
    class BeanI extends Bean implements I { }  
}
```

```
public class BeanImpl {  
    public static void main(String args[]) {  
        Bean bean = new Bean();  
        Bean.BeanI beanI = bean. new BeanI();  
        beanI.beanInterface();  
    }  
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☒ a. Add the following method to Bean class  
`public void beanInterface() { }`
- ☐ b. The inner interface I should be removed and kept outside the Bean class
  - ☐ c. The outer class Bean should be declared as abstract
  - ☐ d. The inner class should be removed and kept outside the Bean class

- ☐ e. The inner class BeanI should be declared as abstract

18 Which of the following options are true? (Choose 2)

- Answer: ☐ a. In a try-catch-finally structure, finally block and catch block can be placed in any order
- ☒ b. The catch block can have another try-catch-finally block
- ☐ c. On using nested try-catch blocks, only the outer most try-catch block can have the finally block
- ☒ d. The finally block can have another try-catch-finally block nested inside

19 Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```

Which of the following gives the correct value printed at line 6?

- Answer: ☒ a. Prints: 12.3
- ☐ b. Prints: 10.3
- ☐ c. Prints: -2.0

20

Consider the following code snippet:

```
import java.util.*;

public class TestCol4 {
    public static void main(String[] args) {
        Set h = new HashSet();
        h.add("One");
        h.add("Two");
        h.add("Three");
        h.add("Four");
        h.add("One");
        h.add("Four");

        List l = new ArrayList();

        l.add("One");
        l.add("Two");
        l.add("Three");

        h.retainAll(l);

        System.out.println("Size:" + l.size() + h.size());
    }
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. Size: 33
- ☐ b. Size: 36
- ☐ c. Compilation error
- ☐ d. Size: 66

21

Consider the following program:

```
import java.io.*;

public class CrypticCatch {
    public static void main(String[] args) throws Exception {
        try {
            try {
                try {
                    throw new FileNotFoundException();
                } catch (Exception e3) {
                    throw e3;
                }
            } catch (IOException e2) {
                throw e2;
            }
        } catch (FileNotFoundException e1) {
            System.out.println("File not found exception caught");
        }
        System.out.println("Exception handled successfully");
    }
}
```

What will be the output of the above program?

Answer: ☐ a. Exception handled successfully

☐ b. File not found exception caught  
Exception handled successfully

☒ c. Compile time error. Since exceptions should be caught in reversed hierarchy order

☐ d. File not found exception caught

☐ e. Runtime error

22

Consider the following code snippet:

```
public class TestString9 {  
    public static void main(String st[]){  
        String s1 = "java";  
        String s2 = "java";  
        String s3 = "JAVA";  
        s2.toUpperCase();  
        s3.toUpperCase();  
        boolean b1 = s1==s2;  
        boolean b2 = s1==s3;  
        System.out.print(b1);  
        System.out.print(" "+b2);  
    }  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. false false
- ☐ b. false true
- ☐ c. Runtime error
- ☐ d. true true
- ☒ e. true false

23

The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☐ a. to keep objects alive provided there is enough memory
- ☐ b. to delete objects from a container if the clients are no longer referencing them and memory is tight
- ☐ c. to allow clean up after finalization but before the space is



reclaimed



d. to keep objects alive only while they are in use (reachable) by clients

24

Consider the following partial code:

```
interface A { public int getValue(); }
```

```
class B implements A {  
    public int getValue() { return 1; }  
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

Answer: ☒

a. `public void add(B b) { b.getValue(); }`

☐

b. `public void add(C c) { c.getValue(); }`

☒

c. `public void add(A a, B b) { a.getValue(); }`

☐

d. `public void add(C c1, C c2) { c1.getValue(); }`

☒

e. `public void add(A a) { a.getValue(); }`

25

Which of the following are correct regarding hashCode?(Choose 2)

Answer: ☐

a. It improves performance

☐

b. it is a 32 bit numeric digest key

- ☒ c. hashCode() is defined in String class
- ☒ d. hashCode() value cannot be a zero-value
- ☐ e. the numeric key is unique

26

Consider the following scenario:

Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

Answer: ☐ a. Class: Real Chocos Private Limited  
Objects: Chocolate

☒ b. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates

☐ c. Class: Choclate  
Objects: Milk Chocolates

☐ d. Class: Fruit Chocolates  
Objects: Rum Chocolates

27

Consider the following class definition:

```
class InOut{  
String s= new String("Between");  
public void amethod(final int iArgs){
```

```
int iam;  
class Bicycle{  
public void sayHello(){  
...Line 1  
}  
} //End of bicycle class  
} //End of amethod  
  
public void another(){  
int iOther;  
}  
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

- Answer: ☐ a. System.out.println(iOther);
- ☐ b. System.out.println(s);
- ☒ c. System.out.println(iArgs);
- ☒ d. System.out.println(iam);

28

Consider the following Statements:

Statement A: The threads are scheduled using fixed priority scheduling.

Statement B: Thread priority can be set after it is created using the public int setPriority() method declared in the Thread class.

Which of the following statements is correct?

- Answer: ☐ a. Both Statement A and B are false
- ☐ b. Statement A is true and Statement B is false
- ☐ c. Both Statement A and B are true
- ☒ d. Statement A is false and Statement B is true

29

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. 0 1 2 3 4
- ☐ b. 1 2 3 4 5
- ☐ c. 0 1 2 3 4 5
- ☐ d. Indefinite Loop
- ☐ e. 0 1 2 3 4 0 1 2 3 4

30

Which of the following is the immediate super interface of CallableStatement?

- Answer: ☒ a. PreparedStatement
- ☐ b. ResultSet
- ☐ c. Statement
- ☐ d. Connection

☐ e. CallableStatement

31 Which of the following are true about ResultSet? (Choose 2)

- Answer: ☒ a. Atleast one record should be there in the ResultSet on opening a query (or) table
- ☐ b. The ResultSet object contains null, if there are no records in the table
- ☒ c. Not all ResultSets are updatable
- ☐ d. All ResultSet, are Scrollable
- ☐ e. It is possible to delete records through ResultSet

32 Consider the following code snippet:

```
1. class Garbage { }
2. class GC1 {
3. public static void main(String a[]) {
4. Garbage s = new Garbage();
5. {
6. s = new Garbage();
7. }
8. s = new Garbage();
9. }
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

Answer: ☒ a. lines: 8

☐ b. lines: 6, 8

- ☐ c. lines: 4, 6, 8
- ☐ d. None of the object is eligible for Garbage Collection
- ☐ e. lines: 4, 6

33 Consider the following code snippet:

```
import java.io.*;

public class IOCode2 {
    public static void main(String args[]) throws FileNotFoundException {
        // Insert Code here
        System.out.println("Welcome to File Programming");
    }
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

- Answer: ☐ a. System.setOut(new FileWriter("C:/Data"));
- ☐ b. System.redirectOutput(new PrintStream("C:/Data"));
- ☐ c. System.out.setOut(new PrintStream("C:/Data"));
- ☐ d. System.out.redirectOutput(new PrintStream("C:/Data"));
- ☒ e. System.setOut(new PrintStream("C:/Data"));

34 Which of the following is the best-performing implementation of Set interface?

- Answer: ☒ a. HashSet

- ☐ b. TreeSet
- ☐ c. Hashtable
- ☐ d. LinkedHashSet
- ☐ e. SortedSet

35

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

Answer: ☐ a. true

☐ b. false

☐ c. Runtime Error

☒ d. Compile-time error

☐ e. NO

36

Consider the following program:

```
1. class CheckedException extends RuntimeException { }
2. class UncheckedException extends Exception { }
3. public class Check {
4.     public static void main(String args[]) {
5.         generateException1();
6.         generateException2();
7.     }
8.
9.     private static void generateException1() {
10.        throw new CheckedException();
11.    }
12.
13.    private static void generateException2() {
14.        throw new UncheckedException();
15.    }
16. }
```

Which of the following is true regarding the above given program?

- Answer: ☒ a. Compilation error at line 14
- ☐ b. Compilation error at line 5
- ☐ c. Compilation error at line 6
- ☐ d. No compilation error but throws RuntimeException on running the code
- ☐ e. Compilation error at line 10

37

Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() { }
    Student(String studentName) {
```



```

this.studentName = studentName;
}

public String toString() {
return this.studentName;
}
}

public class TestCol7 {
public static void main(String args[]){
TreeSet students = new TreeSet();
students.add(new Student("Raju"));
students.add(new Student("Krishna"));
students.add(new Student("Vijay"));

System.out.println(students);
}
}

```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☐ a. The Student class should implement Comparator interface.
- ☒ b. The Student class should implement Comparable interface.
- ☐ c. The Student class should implement Externalizable interface
- ☐ d. The Student class should implement Cloneable interface
- ☐ e. The Student class should implement Serializable interface

Answer: ☒ a. Type IV driver

☐ b. Type I driver

☐ c. Type III driver

☐ d. Type II driver

39

Consider the following code snippet:

```
class Animal {  
    String name;  
    public boolean equals(Object o) {  
        Animal a = (Animal) o;  
        // Code Here  
    }  
}  
  
class TestAnimal {  
    public static void main(String args[]) {  
        Animal a = new Animal();  
        a.name = "Dog";  
        Animal b = new Animal();  
        b.name = "dog";  
  
        System.out.println(a.equals(b));  
    }  
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

Answer: ☐ a. return super.equals(a);

☐ b. return this.name.hashCode() == a.name.hashCode();

☒ c. return this.name.equalsIgnoreCase(a.name);

- ☐ d. return this.name == a.name;
- ☐ e. return this.name.equals(a.name);

40

Given the following object hierarchy and code for the upgrade method:

```
java.lang.Object
+----mypkg.BaseWidget
|
+----TypeAWidget
```

// the following is a method in the BaseWidget class

```
1. public TypeAWidget upgrade( ){
2. TypeAWidget A = (TypeAWidget) this;
3. return A;
4. }
```

Which of the following will be the result of the below statements?

```
5. BaseWidget B = new BaseWidget();
6. TypeAWidget A = B.upgrade();
```

- Answer: ☒ a. A runtime ClassCastException would be generated in line 2.
- ☐ b. The compiler would object to line 2.
- ☐ c. After line 6 executes, the object referred to as A will in fact be a TypeAWidget.
- ☐ d. As this refers to the BaseWidget, a parent can accept its child

41

What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

- Answer: ☒ a. Methods to retrieve disk usage information

- ☒ b. Methods to set or query file permissions
- ☐ c. Methods to encrypt the file with password
- ☐ d. No new methods are introduced in JDK 1.6
- ☐ e. Methods to attach the file to an email

42 Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

Answer: ☐ a. @Override

- ☒ b. @Retention
- ☐ c. @Deprecated
- ☐ d. @SuppressWarnings
- ☒ e. @Target

43 Which of the following options are true for StringBuffer class?(choose 3)

- Answer: ☒ a. StringBuffer is threadsafe
- ☐ b. 'capacity' property indicates the maximum number of characters that a StringBuffer can have
  - ☒ c. StringBuffer is extended from String class
  - ☐ d. Buffer space in StringBuffer can be shared
  - ☒ e. StringBuffer implements CharSequence interface

44

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The class is fully encapsulated
- ☒ b. The ownerName variable breaks encapsulation
- ☐ c. The cardID and limit variables break polymorphism
- ☐ d. The setCardInformation method breaks encapsulation
- ☐ e. The code demonstrates polymorphism

1 Which of the following are true about ResultSet? (Choose 2)

- Answer: ☐ a. Atleast one record should be there in the ResultSet on opening a query (or) table
- ☒ b. Not all ResultSets are updatable
- ☐ c. The ResultSet object contains null, if there are no records in the table
- ☒ d. It is possible to delete records through ResultSet
- ☐ e. All ResultSet, are Scrollable

2 Consider the following code:

```
import java.util.*;

public class Code10 {
{
final Vector v;
v=new Vector();
}

public Code10() { }

public void codeMethod() {
System.out.println(v.isEmpty());
}

public static void main(String args[]) {
new Code10().codeMethod();
}
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: false
- ☐ b. Runtime error: NullPointerException
- ☒ c. Compilation error: cannot find the symbol
- ☐ d. Compilation error: v is not initialised inside the constructor
- ☐ e. Prints: true

3

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☐ a. Writable interface
- ☐ b. Readable interface
- ☐ c. ObjectSerializable interface
- ☐ d. Cloneable interface
- ☒ e. Serializable interface

4

Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
} //End of bicycle class
} //End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

Answer: ☐ a. System.out.println(iOther);

☐ b. System.out.println(iam);

☒ c. System.out.println(iArgs);

☒ d. System.out.println(s);

5

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☒ a. synchronized

☒ b. final

☐ c. public

☐ d. protected





e. private

6

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

Answer: ☐ a. 0 1 2 3 4 5

☐ b. Indefinite Loop

☐ c. 1 2 3 4 5

☒ d. 0 1 2 3 4

☐ e. 0 1 2 3 4 0 1 2 3 4

7

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;
```

```
return rslt;  
}
```

```
public static void main(String args[]) {  
    System.out.println(new Key1().testAns("no", 5));  
}  
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. NO
- ☐ b. true
- ☒ c. Compile-time error
- ☐ d. Runtime Error
- ☐ e. false

8 Which of the following is the immediate super interface of CallableStatement?

- Answer: ☐ a. CallableStatement
- ☒ b. PreparedStatement
- ☐ c. ResultSet
- ☐ d. Statement
- ☒ e. Connection

9 Consider the following code:

```
public class UnwiseThreads implements Runnable {
```

```
public void run() {  
    while(true) { }  
}  
  
public static void main(String args[]) {  
    UnwiseThreads ut1 = new UnwiseThreads();  
    UnwiseThreads ut2 = new UnwiseThreads();  
    UnwiseThreads ut3 = new UnwiseThreads();  
    ut1.run();  
    ut2.run();  
    ut3.run();  
}  
}
```

Which of the following is correct for the above given program?

- Answer: ☒ a. Compilation error "ut2.run() is never reached"
- ☐ b. The code compiles and runs 3 non ending non daemon threads
- ☐ c. The code compiles but runs only 1 non ending, non daemon thread
- ☐ d. Runtime Error "IllegalThreadStateException"

11

Which of the following is the best-performing implementation of Set interface?

- Answer: ☐ a. LinkedHashSet
- ☐ b. TreeSet
- ☐ c. Hashtable
- ☐ d. SortedSet

☒ e. HashSet

12 Consider the following scenario:

Real Chocos Private Limited deals in manufacturing variety of chocolates.  
This organization manufactures three varieties of chocolates.

1. Fruit Chocolates
2. Rum Chocolates
3. Milk Chocolates

A software system needs to be built.

Which of the following options identifies the Classes and Objects?

- Answer: ☐ a. Class: Real Chocos Private Limited  
Objects: Chocolate
- ☒ b. Class: Chocolate  
Objects: Fruit Chocolates, Rum Chocolates, Milk Chocolates
- ☐ c. Class: Choclote  
Objects: Milk Chocolates
- ☐ d. Class: Fruit Chocolates  
Objects: Rum Chocolates

13 Consider the following code snippet:

```
class Animal {  
    String name;  
    public boolean equals(Object o) {  
        Animal a = (Animal) o;  
        // Code Here  
    }  
}
```

```
class TestAnimal {  
    public static void main(String args[]) {  
        Animal a = new Animal();  
        a.name = "Dog";  
        Animal b = new Animal();  
        b.name = "dog";  
  
        System.out.println(a.equals(b));  
    }  
}
```

Which of the following code snippets should be replaced for the comment line (//Code Here) in the above given code, to get the output as true?

- Answer: ☒ a. `return this.name.equalsIgnoreCase(a.name);`
- ☐ b. `return this.name.equals(a.name);`
- ☐ c. `return super.equals(a);`
- ☐ d. `return this.name == a.name;`
- ☐ e. `return this.name.hashCode() == a.name.hashCode();`

14

Consider the following code:

```
class A { }  
class B extends A { }  
public class Code2 {  
    public void method(A a) {  
        System.out.println("A");  
    }  
    public void method(B b) {  
        System.out.println("B");  
    }  
    public static void main(String args[]) {  
        new Code2().method(new Object());  
    }  
}
```

}

Which of the following will be the output for the above code?

- Answer: ☐ a. Throws ClassCastException at runtime
- ☐ b. Prints: B
- ☒ c. Compilation Error 'Cannot find the symbol'
- ☐ d. Prints: A

15

Consider the following code:

```
class Planet { }
```

```
class Earth extends Planet { }
```

```
public class WelcomePlanet {  
    public static void welcomePlanet(Planet planet) {  
        if (planet instanceof Earth) {  
            System.out.println("Welcome!");  
        } else if (planet instanceof Planet) {  
            System.out.println("Planet!");  
        } else {  
            System.exit(0);  
        }  
    }  
}
```

```
public static void main(String args[]) {  
    WelcomePlanet wp = new WelcomePlanet();  
    Planet planet = new Earth();  
    welcomePlanet(planet);  
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. An exception is thrown at runtime

- ☐ b. Planet!
- ☐ c. The code runs with no output
- ☒ d. Welcome!
- ☐ e. Compilation fails

16

Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + ", ");  
        System.out.println(args.length);  
    }  
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

- Answer: ☒ a. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list
- ☐ b. Runtime Error: NoSuchMethodError
  - ☐ c. variable arguments cannot be used with enhanced for-loop
  - ☐ d. Compilation Error: var-args cannot be used as arguments for main() method

17

Consider the following code:

```
class UT1 {  
    static byte m1() {  
        final char c = 'u0001';  
        return c;  
    }  
}
```

```
}

static byte m3(final char c) {return c;}

public static void main(String[] args) {
    char c = 'u0003';
    System.out.print(""+m1()+m3(c));
}
}
```

Which of the following gives the valid output of the above code?

- Answer: ☒ a. Compile-time error
- ☐ b. Prints: 13
- ☐ c. Run-time error
- ☐ d. Prints: 4
- ☐ e. None of the listed options

18 An Annotation Type \_\_\_\_\_.

- Answer: ☐ a. is a meta-tag used to pass message between the code and JVM.
- ☐ b. defines the structure of an interface
- ☐ c. defines the structure of an Application
- ☐ d. defines the structure of an Object
- ☒ e. defines the structure of an Annotation

19 Which of the following are correct regarding hashCode?(Choose 2)



- Answer: ☒ a. It improves performance
- ☐ b. the numeric key is unique
- ☒ c. it is a 32 bit numeric digest key
- ☐ d. hashCode() is defined in String class
- ☐ e. hashCode() value cannot be a zero-value

20

Given the following object hierarchy and code for the upgrade method:

```
java.lang.Object
+----mypkg.BaseWidget
|
+----TypeAWidget
```

// the following is a method in the BaseWidget class

```
1. public TypeAWidget upgrade() {
2.     TypeAWidget A = (TypeAWidget) this;
3.     return A;
4. }
```

Which of the following will be the result of the below statements?

```
5. BaseWidget B = new BaseWidget();
6. TypeAWidget A = B.upgrade();
```

- Answer: ☐ a. The compiler would object to line 2.
- ☒ b. A runtime ClassCastException would be generated in line 2.
- ☐ c. As this refers to the BaseWidget, a parent can accept its child
- ☐ d. After line 6 executes, the object referred to as A will in fact be a TypeAWidget.

21

Consider the following program:

```
public class ThreadJoin extends Thread{
    public static void main(String[] args) {
        Thread t1 = new Thread("T1");
        Thread t2 = new Thread("T2");
        try {
            t1.join();
            t2.join();
        } catch (InterruptedException e) {
            System.out.println("Main Thread interrupted.");
        }
    }

    public void run(){
        System.out.println("Run executed");
    }
}
```

What will be the output of the above program?

- Answer: ☒ a. Run-time error
- ☐ b. Compile-time error
- ☐ c. Prints "Main Thread interrupted."
- ☒ d. Program ends without printing anything
- ☐ e. Prints "Run executed" twice

22

Which are all platform independent among the following? (Choose 3)

- Answer: ☒ a. JAR Files
- ☐ b. Java Virtual Machine (JVM)

☐ c. Java Development Kit (JDK)

☒ d. Java Class Files

☒ e. Java Source Files

23

Which of the following options is true about multiple inheritance?

Answer: ☐ a. Inheriting from a class which is already in an inheritance hierarchy

☒ b. Inheriting from more than one super class

☐ c. Inheriting from two super classes

☐ d. Inheriting from a single class

24

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

Answer: ☐ a. List

☒ b. SortedSet

☐ c. Set

☐ d. ArrayList

☒ e. TreeSet

25

Which of the following options are true for StringBuffer class?(choose 3)

Answer: ☒ a. 'capacity' property indicates the maximum number of

characters that a StringBuffer can have

- ☐ b. StringBuffer is extended from String class
- ☒ c. StringBuffer implements CharSequence interface
- ☒ d. StringBuffer is threadsafe
- ☐ e. Buffer space in StringBuffer can be shared

26

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The class is fully encapsulated
- ☐ b. The setCardInformation method breaks encapsulation
- ☐ c. The code demonstrates polymorphism
- ☐ d. The cardID and limit variables break polymorphism
- ☒ e. The ownerName variable breaks encapsulation

27

Consider the following partial code:

```
interface A { public int getValue(); }
```

```
class B implements A {  
    public int getValue() { return 1; }  
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

Answer: ☐ a. public void add(C c1, C c2) { c1.getValue(); }

☒ b. public void add(A a, B b) { a.getValue(); }

☒ c. public void add(B b) { b.getValue(); }

☒ d. public void add(A a) { a.getValue(); }

☐ e. public void add(C c) { c.getValue(); }

28

Consider the following program:

```
import java.io.*;
```

```
public class CrypticCatch {  
    public static void main(String[] args) throws Exception {  
        try {  
            try {  
                try {  
                    throw new FileNotFoundException();  
                } catch (Exception e3) {  
                    throw e3;  
                }  
            }  
        }  
    }  
}
```

```
} catch(IOException e2) {  
    throw e2;  
}  
} catch(FileNotFoundException e1) {  
    System.out.println("File not found exception caught");  
}  
System.out.println("Exception handled successfully");  
}  
}
```

What will be the output of the above program?

- Answer: ☐ a. Runtime error
- ☐ b. File not found exception caught
- ☐ c. Compile time error. Since exceptions should be caught in reversed hierarchy order
- ☐ d. Exception handled successfully
- ☒ e. File not found exception caught  
Exception handled successfully

29

Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

- Answer: ☒ a. @Retention
- ☐ b. @Deprecated
- ☐ c. @Override
- ☐ d. @SuppressWarnings
- ☒ e. @Target

30

What are the new updations to java.io.File class in JDK 1.6?(Choose 2)

- Answer: ☒ a. Methods to retrieve disk usage information
- ☐ b. Methods to set or query file permissions
- ☐ c. Methods to attach the file to an email
- ☒ d. Methods to encrypt the file with password
- ☐ e. No new methods are introduced in JDK 1.6

Consider the following code:

```
1. public class DagRag {  
2. public static void main(String [] args) {  
3.  
4. int [][] x = new int[2][4];  
5.  
6. for(int y = 0; y < 2; y++) {  
7. for(int z = 0; z < 4; z++) {  
8. x[y][z] = z;  
9. }  
10. }  
11.  
12. dg: for(int g = 0; g < 2; g++) {  
13. rg: for(int h = 0; h < 4; h++) {  
14. System.out.println(x[g][h]);  
15.  
16. }  
17. System.out.println("The end.");  
18.  
19. }  
20.  
21. }  
22. }
```

Which of the following code snippet when inserted at lines 15 and 18 respectively, will make

the above program to generate the below output?

0  
1  
2  
3  
The end.

- Answer: ☐ a. if(g==3) break rg;  
if(h==0) break dg;
- ☐ b. if(h > 3) break dg;  
if(g > 0) break rg;
- ☒ c. if(h==3) break rg;  
if(g==0) break dg;
- ☐ d. if(h > 3) break dg;  
if(g > 0) break dg;

32

Consider the following code:

```
public abstract class Shape {  
    private int x;  
    private int y;  
  
    public abstract void draw();  
  
    public void setAnchor(int x, int y) {  
        this.x = x;  
        this.y = y;  
    }  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

- Answer: ☒ a. public class Circle extends Shape {  
 private int radius;  
 public void setRadius(int radius) { this.radius = radius; }



```
public int getRadius() { return radius; }  
public void draw() { /* code here */ }  
}
```

- ☐ b. public class Circle implements Shape {  
private int radius;  
}
- ☐ c. public class Circle extends Shape {  
public int radius;  
private void draw() { /\* code here \*/ }  
}
- ☒ d. public abstract class Circle extends Shape {  
private int radius;  
}
- ☐ e. public class Circle extends Shape {  
private int radius;  
public void draw();  
}

33

Consider the following code snippet:

```
public class TestString9 {  
public static void main(String st[]){  
String s1 = "java";  
String s2 = "java";  
String s3 = "JAVA";  
s2.toUpperCase();  
s3.toUpperCase();  
boolean b1 = s1==s2;  
boolean b2 = s1==s3;  
System.out.print(b1);  
System.out.print(" "+b2);  
}  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. false true
- ☐ b. true true
- ☒ c. true false
- ☐ d. Runtime error
- ☐ e. false false

34

Consider the following code snippet:

```
import java.io.*;

public class IOCode2 {
    public static void main(String args[]) throws FileNotFoundException {
        // Insert Code here
        System.out.println("Welcome to File Programming");
    }
}
```

Which of the following code snippets when substituted to the comment line (// Insert Code here), will redirect the output generated by the System.out.println() methods, in the above code?

- Answer: ☐ a. System.out.setOut(new PrintStream("C:/Data"));
- ☐ b. System.out.redirectOutput(new PrintStream("C:/Data"));
- ☐ c. System.redirectOutput(new PrintStream("C:/Data"));
- ☒ d. System.setOut(new PrintStream("C:/Data"));
- ☐ e. System.setOut(new FileWriter("C:/Data"));

35

Which of the following types of driver provides maximum decoupling between

database and Java application?

- Answer: ☐ a. Type II driver
- ☒ b. Type III driver
- ☐ c. Type I driver
- ☐ d. Type IV driver

36

Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() { }
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }
}

public class TestCol7 {
    public static void main(String args[]){
        TreeSet students = new TreeSet();
        students.add(new Student("Raju"));
        students.add(new Student("Krishna"));
        students.add(new Student("Vijay"));

        System.out.println(students);
    }
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☒ a. The Student class should implement Comparable interface.
- ☐ b. The Student class should implement Cloneable interface
- ☐ c. The Student class should implement Serializable interface
- ☐ d. The Student class should implement Comparator interface.
- ☐ e. The Student class should implement Externalizable interface

37

Consider the following code snippet:

```
1. class Garbage { }
2. class GC1 {
3. public static void main(String a[]) {
4. Garbage s = new Garbage();
5. {
6. s = new Garbage();
7. }
8. s = new Garbage();
9. }
10. }
```

Which of the following options gives the correct combination of lines that makes objects eligible for garbage Collection?

- Answer: ☒ a. lines: 4, 6
- ☐ b. lines: 4, 6, 8
- ☐ c. None of the object is eligible for Garbage Collection
- ☐ d. lines: 6, 8
- ☐ e. lines: 8

38

Which of the following options are true? (Choose 2)

- Answer: ☒ a. The catch block can have another try-catch-finally block
- ☐ b. In a try-catch-finally structure, finally block and catch block can be placed in any order
- ☐ c. On using nested try-catch blocks, only the outer most try-catch block can have the finally block
- ☒ d. The finally block can have another try-catch-finally block nested inside

39

Consider the following program:

```
public class TThread implements Runnable {
    public void run() {
        try {
            Thread.sleep(100000);
        } catch (Exception objE) {
            System.out.println ("Exception Handler");
        }
        System.out.println ("Run method ends here");
    }

    public static void main (String[] argv) {
        Thread thread = new Thread(new TThread ());
        thread.start();

        thread.interrupt();
        System.out.println ("Main method ends here");
    }
}
```

What will be the output of the above program?

Answer: ☐ a. None of the listed options

- ☐ b. Exception Handler  
Run method ends here  
Main method ends here
- ☐ c. Run method ends here  
Exception Handler  
Main method ends here
- ☒ d. Main method ends here  
Exception Handler  
Run method ends here
- ☐ e. Main method ends here  
Run method ends here  
Exception Handler

40

Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```

Which of the following gives the correct value printed at line 6?

- Answer: ☒ a. Prints: 12.3
- ☐ b. Prints: -2.0
- ☐ c. Prints: 10.3

41

Consider the following Statements:

Statement A: The threads are scheduled using fixed priority scheduling.

Statement B: Thread priority can be set after it is created using the public int setPriority() method declared in the Thread class.

Which of the following statements is correct?

- Answer: ☐ a. Both Statement A and B are true
- ☒ b. Statement A is false and Statement B is true
- ☐ c. Statement A is true and Statement B is false
- ☐ d. Both Statement A and B are false

42

Consider the following code snippet:

```
import java.util.*;

public class TestCol4 {
    public static void main(String[] args) {
        Set h = new HashSet();
        h.add("One");
        h.add("Two");
        h.add("Three");
        h.add("Four");
        h.add("One");
        h.add("Four");

        List l = new ArrayList();

        l.add("One");
        l.add("Two");
        l.add("Three");

        h.retainAll(l);

        System.out.println("Size:" + l.size() + h.size());
    }
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Size: 63  
☒ b. Size: 33  
☐ c. Size: 66  
☐ d. Compilation error  
☐ e. Size: 36

**43** Consider the following program:

```
1. class CheckedException extends RuntimeException { }  
2. class UncheckedException extends Exception { }  
3. public class Check {  
4.     public static void main(String args[]) {  
5.         generateException1();  
6.         generateException2();  
7.     }  
8.  
9.     private static void generateException1() {  
10.        throw new CheckedException();  
11.    }  
12.  
13.     private static void generateException2() {  
14.        throw new UncheckedException();  
15.    }  
16. }
```

Which of the following is true regarding the above given program?

- Answer: ☐ a. Compilation error at line 6  
☐ b. Compilation error at line 5  
☒ c. Compilation error at line 14  
☐ d. No compilation error but throws RuntimeException on running the code  
☐ e. Compilation error at line 10

**44** Consider the following partial code:

```
class Bean {  
    interface I {  
        void beanInterface();  
    }  
}
```



```
class BeanI extends Bean implements I { }  
}
```

```
public class BeanImpl {  
    public static void main(String args[]) {  
        Bean bean = new Bean();  
        Bean.BeanI beanI = bean. new BeanI();  
        beanI.beanInterface();  
    }  
}
```

Which of the following changes made to the class Bean without changing the class BeanImpl, will make the above code to compile properly?

- Answer: ☐ a. The inner interface I should be removed and kept outside the Bean class
- ☐ b. The inner class BeanI should be declared as abstract
- ☐ c. The outer class Bean should be declared as abstract
- ☒ d. Add the following method to Bean class  
`public void beanInterface() { }`
- ☐ e. The inner class should be removed and kept outside the Bean class

45

Consider the following program:

```
class UserDefinedException extends Error { }
```

```
public class Tastelt {  
    public static void main(String args[]) {  
        try {  
            try {  
                throw new Error();  
            }  
            catch(UserDefinedException u1) {  
                throw u1;  
            }  
            catch(Exception e1) {  
                System.out.println("This is the required output");  
            }  
            finally {  
                throw new UserDefinedException();  
            }  
        }  
    }  
}
```

```
}  
catch(UserDefinedException u2) {  
    System.out.println("This is not the output");  
}  
catch(Error e2) {  
    System.out.println("This is the output");  
}  
}  
}
```

What will be the output for the above program?

- Answer: ☐ a. Runtime Error
- ☒ b. This is not the output
- ☐ c. This is the output
- ☐ d. Compile-time error
- ☐ e. This is the required output

1. Which of the following is the best-performing implementation of Set interface?

- Answer: ☒ a. HashSet
- ☐ b. TreeSet
- ☐ c. Hashtable
- ☐ d. LinkedHashSet
- ☐ e. SortedSet

2 Consider the following code snippet:

```
public class Welcome {  
    String title;  
    int value;  
  
    public Welcome() {  
        title += " Planet";  
    }  
  
    public void Welcome() {  
        System.out.println(title + " " + value);  
    }  
  
    public Welcome(int value) {  
        this.value = value;  
        title = "Welcome";  
        Welcome();  
    }  
  
    public static void main(String args[]) {  
        Welcome t = new Welcome(5);  
    }  
}
```

Which of the following option will be the output for the above code snippet?

- Answer: ☐ a. Compilation fails
- ☐ b. Welcome Planet 5
- ☒ c. Welcome 5
- ☐ d. Welcome Planet
- ☐ e. The code runs with no output

3 Consider the following code:

```
class ExampleFive {  
    public static void main(String[] args) {  
        final int i = 22;  
        byte b = i;  
        System.out.println(i + ", " + b);  
    }  
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. Prints: 22, 20
- ☐ b. Runtime Error: Cannot type cast int to byte
- ☒ c. Prints: 22, 22
- ☐ d. Compile Time Error: Loss of precision

4 Consider the following code snippet:

```
abstract class Director {  
    protected String name;  
  
    Director(String name) {  
        this.name = name;  
    }  
}
```

```

    }
    abstract void occupation();
    }

    class FilmDirector extends Director {
    FilmDirector(String name) {
    super(name);
    }

    void occupation() {
    System.out.println("Director " + name + " directs films");
    }
    }

    public class TestDirector {
    public static void main(String[] args) {
    FilmDirector fd = new FilmDirector("Manirathnam");
    fd.occupation();
    new Director("Manirathnam") {
    void occupation() {
    System.out.println("Director " + name + " also produces films");
    }
    }.occupation();
    }
    }

```

Which of the following will be the output of the above code snippet?

- Answer: ☒ a. Prints: Director Manirathnam also produces films
- ☐ b. Compilation fails at TestDirector class
- ☐ c. Prints: Director Manirathnam directs films
- ☐ d. Runtime Error
- ☒ e. Prints: Director Manirathnam directs films  
Director Manirathnam also produces films

5

Consider the following code snippet:

```
class TestString2 {  
    public static void main(String args[]) {  
        String s1 = "Test1";  
        String s2 = "Test2";  
  
        s1.concat(s2);  
  
        System.out.println("'" + s1.charAt(s1.length() - 3) + s1.indexOf(s2));  
    }  
}
```

What will be the output of the above code snippet?

Answer: ☐ a. s5

☒ b. s-1

☐ c. t4

☐ d. 15

☐ e. T4

6

Consider the following code:

```
1. public class SwitchIt {  
2. public static void main(String[] args) {  
3. int w1 = 1;  
4. int w2 = 2;  
5. System.out.println(getW1W2(w1, w2));  
6. }  
7.  
8. public static int getW1W2(int x, int y) {  
9. switch (x) {  
10. case 1: x = x + y;  
11. case 2: x = x + y;  
12. }
```

```
13. return x;  
14. }  
15. }
```

Which of the following gives the valid output of above code?

- Answer: ☒ a. Compilation succeeds and the program prints "5"
- ☐ b. Compilation fails because of an error on line 9
- ☐ c. Compilation succeeds and the program prints "3"
- ☐ d. Compilation fails because of errors on lines 10 and 11

7

Consider the following code snippet:

```
class Train {  
    String name = "Shatapdhi";  
}  
  
class TestTrain {  
    public static void main(String a[]) {  
        Train t = new Train();  
        System.out.println(t); // Line a  
        System.out.println(t.toString()); // Line b  
    }  
}
```

Which of the following statements are true?(Choose 3)

- Answer: ☒ a. Line a prints the corresponding classname with Object's  
hashcode in Hexadecimal
- ☐ b. Both Line a and Line b prints "Shatapdhi"
- ☒ c. Both Line a and Line b will print the corresponding classname  
with Object's hashcode in Hexa Decimal
- ☐ d. Output of Line a and Line b will be different



e. Output of Line a and Line b will be same

8

Which of the following is true about finalize() method?

Answer: ☒

a. The finalize() method is guaranteed to run once and only once before the garbage collector deletes an object



b. finalize() is called when an object becomes eligible for garbage collection



c. an object can be uneligibilize for GC from within finalize()



d. Calling finalize() method will make the object eligible for Garbage Collection



e. finalize() method can be overloaded

9

Consider the following program:

```
class RE {  
    public static void main(String args[]) {  
        try {  
            String s = null;  
            System.out.println(s.length());  
        }  
        catch(NullPointerException npe) {  
            System.out.println("NullPointerException handled");  
            throw new Exception(npe.getMessage());  
        }  
    }  
}
```

What will be the output of the above program?

Answer: ☐

a. Code compiles and on running creates and throws Exception type object



- ☐ b. Code compiles but run without any output
- ☒ c. Code does not compile
- ☐ d. Code compiles and on running it prints "NullPointerException handled" then creates and throws Exception type object

10 Which of the following options will protect the underlying collections from getting modified?

- Answer: ☒ a. `unmodifiableCollection(Collection<? extends T> c);`
- ☐ b. `Collections.checked`
  - ☐ c. `synchronizedCollection(Collection<T> c);`
  - ☒ d. None of the listed options

11 Which of the following are correct regarding hashCode?(Choose 2)

- Answer: ☐ a. the numeric key is unique
- ☒ b. It improves performance
  - ☐ c. it is a 32 bit numeric digest key
  - ☐ d. `hashCode()` value cannot be a zero-value
  - ☒ e. `hashCode()` is defined in String class

12 Which of the following are true about inheritance?(Choose 3)

- Answer: ☒ a. In an inheritance hierarchy, a subclass can also act as a super class

- ☒ b. Inheritance enables adding new features and functionality to an existing class without modifying the existing class
- ☒ c. In an inheritance hierarchy, a superclass can also act as a subclass
- ☐ d. Inheritance is a kind of Encapsulation
- ☐ e. Inheritance does not allow sharing data and methods among multiple classes

13

Consider the following program:

```
public class TryIt {  
    public static void main(String args[]) {  
        try {  
            int i = 0;  
            try {  
                i = 100 / i;  
            }  
            catch(Error e) {  
                System.out.println("Divide by Zero error");  
            }  
            System.out.println("Error Handled");  
        }  
        catch(Exception e) {  
            System.out.println("Unexpected exception caught");  
        }  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Divide by Zero error  
Error Handled  
Unexpected exception caught
- ☐ b. Program compiles and runs without any output

- ☐ c. Divide by Zero error  
Error Handled
- ☒ d. Unexpected exception caught
- ☐ e. Error Handled  
Unexpected exception caught

14 At which of the following given situations, unit tests are required to be run on the modules?(Choose 3)

Answer: ☐ a. When the modules are deployed to the server

- ☒ b. When the other methods, referred in a method in a module is modified
- ☒ c. When class members are modified
- ☒ d. When a method in a module is completed or modified
- ☐ e. When the modules are compiled

15 Consider the following code:

```
1 public class A {  
2     public void m1() {System.out.print("A.m1, ");}  
3     protected void m2() {System.out.print("A.m2, ");}  
4     private void m3() {System.out.print("A.m3, ");}  
5     void m4() {System.out.print("A.m4, ");}  
6  
7     public static void main(String[] args) {  
8         A a = new A();  
9         a.m1();  
10        a.m2();  
11        a.m3();  
12        a.m4();  
13    }  
14 }
```

Which of the following gives the lines that need to be removed in order to compile and run the above code correctly?

Answer: ☐ a. Lines 10, 11

☒ b. No need to comment any line. Will compile and run

☐ c. Lines 10, 11 and 12

☐ d. Line 11

16

Which of the following options give the names of data structures that can be used for elements that have ordering, but no duplicates? (Choose 2)

Answer: ☐ a. ArrayList

☐ b. List

☒ c. TreeSet

☐ d. Set

☒ e. SortedSet

17

Which of the following class in java.sql package maps the SQL data types to Java datatypes?

Answer: ☐ a. No explicit data type mapping. Automatically mapped on Query Call.

☒ b. JDBCTypes

☐ c. Types

☐ d. JDBCSQLTypes

☐ e. SQLTypes

18

Which of the following options gives the difference between == operator and equals() method?

- Answer: ☐ a. Equals compares hash value and == compares character sequence
- ☐ b. No difference;they are essentially the same
- ☐ c. if equals() is true then == is also true
- ☒ d. ==compares object's memory address but equals character sequence
- ☐ e. == works on numbers equals() works on characters

19

Consider the following code:

```
package test;
```

```
class Target {  
    String name = "hello";  
}
```

Which of the following options are valid that can directly access and change the value of the variable 'name' in the above code? (Choose 2)

- Answer: ☐ a. any class
- ☒ b. any class that extends Target within the test package
- ☐ c. any class that extends Target outside the test package
- ☐ d. only the Target class
- ☒ e. any class in the test package

20

Which of the following are the valid ways of conversion from Wrapper type to primitive type? (Choose 3)

Answer: ☐ a. new Boolean("true").intValue();

☒ b. new Double(24.5d).byteValue();

☐ c. new Integer(1).booleanValue();

☒ d. new Float(100).intValue();

☒ e. new Integer(100).intValue();

21

Which of the following classes is new to JDK 1.6?

Answer: ☐ a. java.io.File

☐ b. java.io.Serializable

☐ c. java.io.FileFilter

☒ d. java.io.Console

☐ e. java.io.Externalizable

22

Which of the following statements are correct regarding Static Blocks?(Choose 3)

Answer: ☐ a. A class that have static block, should have the main() method defined in it

☒ b. A class can have more than one static block

☒ c. Static blocks are executed only once

☒ d. Static blocks are executed before main() method

☐ e. A static block can call other methods in a class

23 Which of the following ways can be used to access the String value in the first column of a ResultSet? (Assume rs is the ResultSet object)

- Answer: ☒ a. rs.getString(1);
- ☐ b. rs.getString("one");
- ☐ c. None of listed options
- ☐ d. rs.getString("first");
- ☐ e. rs.getString(0);

24 Which of the following options gives the relationship between a Spreadsheet Object and Cell Objects?

- Answer: ☐ a. Polymorphism
- ☐ b. Association
- ☒ c. Aggregation
- ☐ d. Inheritance
- ☐ e. Persistence

25 Consider the following program:

```
class A implements Runnable {  
    public void run() {  
        System.out.print(Thread.currentThread().getName());  
    }  
}
```

```
class B implements Runnable {  
    public void run() {  
        new A().run();  
        new Thread(new A(),"T2").run();  
        new Thread(new A(),"T3").start();  
    }  
}
```

```
class C {  
    public static void main (String[] args) {  
        new Thread(new B(),"T1").start();  
    }  
}
```

What will be the output of the above program?

Answer: ☐ a. Prints: T1T2T2

☐ b. Prints: T1T2T3

☐ c. Prints: T1T1T2

☐ d. Prints: T1T1T1

☒ e. Prints: T1T1T3

26

Consider the following program:

```
public class Exp4 {  
    static String s = "smile!..";  
    public static void main(String[] args) {  
        new Exp4().s1();  
        System.out.println(s);  
    }  
}
```

```
void s1() {  
    try {  
        s2();  
    }  
}
```



```

    }
    catch (Exception e) {
        s += "morning";
    }
}

void s2() throws Exception {
    s3();
    s += "evening";
    s3();
    s += "good";
}

void s3() throws Exception {
    throw new Exception();
}
}

```

What will be the output of the above program?

- Answer: ☐ a. smile!..eveningmorning
- ☐ b. smile!..morningevening
- ☒ c. smile!..morning
- ☐ d. smile!..morningeveninggood
- ☐ e. smile!..

27

A monitor called 'mon' has 5 threads in its waiting pool; all these waiting threads have the same priority. One of the threads is thread1. How can you notify thread1 so that it alone moves from Waiting state to Ready State?

- Answer: ☐ a. Execute mon.notify(thread1); from synchronized code of any object
- ☐ b. Execute thread1.notify(); from any code(synchronized or not) of any object

- ☐ c. Execute thread1.notify(); from synchronized code of any object
- ☐ d. Execute notify(thread1); from within synchronized code of mon
- ☒ e. You cannot specify which thread will get notified

28

Consider the following scenario:

Here is part of the hierarchy of exceptions that may be thrown during file IO operations:

Exception

+IOException

+File Not Found Exception

You have a method X that is supposed to open a file by name and read data from it.

Given that X does not have any try-catch statements, which of the following option is true?

- Answer: ☐ a. The method X must be declared as throwing FileNotFoundException
- ☐ b. Any method calling X must use try-catch, specifically catching FileNotFoundException
- ☒ c. The method X must be declared as throwing IOException or Exception
- ☐ d. No special precautions need be taken

29

The return value of execute() method in Statement interface is \_\_\_\_\_.

Answer: ☐ a. array of int

- ☐ b. boolean
- ☒ c. ResultSet
- ☐ d. array of ResultSet
- ☐ e. int value

30

Consider the following program:

```
public class D extends Thread {  
    public void run() {  
        System.out.println("Before start method");  
        this.stop();  
        System.out.println("After stop method");  
    }  
  
    public static void main(String[] args) {  
        D a = new D();  
        a.start();  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. 'Before start method' and 'After stop method'
- ☐ b. Compilation error
- ☒ c. 'Before start method' only
- ☐ d. Runtime exception

31

Consider the following code:

```
public class Choco {  
    Choco() { System.out.print("Choco"); }  
}
```

```
class Bar {  
    Bar() { System.out.print("bar"); }  
    public void go() { System.out.print("sweet"); }  
}
```

```
public static void main(String[] args) {  
    Choco c = new Choco();  
    c.makeBar();  
}  
void makeBar(){  
    // Insert code here  
}  
}
```

Which of the following code snippet when substituted individually to the above commented line (// Insert code here) will give the following output?

Chocobarsweet

- Answer: ☐ a. new Choco().go();
- ☒ b. new Bar().go();
- ☐ c. new Choco(). new Bar().go();
- ☐ d. (new Bar() {}).go();
- ☐ e. go();

32

Which of the following actions include the external library required by Java application at runtime in order to run properly? (choose 2)

- Answer: ☐ a. Compressing the class into zip files and converting it into executable modules, and then packaging it into a jar file
- ☒ b. Adding the folder name or jar filename to the CLASSPATH variable, where the class files of the library exists
- ☐ c. Running the application with the following switches  
java -cp <class search path of directories and zip/jar files>

ApplicationClassName

```
java -classpath <class search path of directories and zip/jar files> ApplicationClassName
```

- ☐ d. Cannot refer to an external library, it should be included before the application is packaged.
- ☒ e. Pointing the system's PATH variable to the folder or the jar filename where the class files of the library exists

33

You need to create a class that implements the Runnable interface to do background image processing. Out of the following list of method declarations, select the method that must satisfy the requirements.

Answer: ☐ a. public void start()

☒ b. public void run()

☐ c. public void stop()

☐ d. public void suspend()

34

Which of the following gives the set of Annotations declared in java.lang package?

Answer: ☐ a. @Retention, @Target

☒ b. @Deprecated, @Override, @SuppressWarnings

☐ c. @Comment, @Class

☐ d. @Documented, @Inherited

35

Consider the following code:

```
class ABC {  
    public void method1() {  
        DEF def = new DEF();  
        def.method2();  
    }  
}  
  
class DEF {  
    public XYZ xyz;  
  
    public String method2() {  
        return xyz.method3();  
    }  
}  
  
class XYZ {  
    public String value;  
  
    public String method3() {  
        value = "XYZ";  
        return value;  
    }  
}  
  
class TestCode {  
    public static void main(String args[]) {  
        ABC abc = new ABC();  
        abc.method1();  
    }  
}
```

Which of the following will be the output if the above code is compiled and executed?

- Answer: ☐ a. An exception is thrown at runtime
- ☐ b. Prints: XYZ
- ☒ c. Compilation fails

☐ d. Prints: DEF

☐ e. Prints: ABC

36

To which of the following elements, annotations can be applied? (Choose 3)

Answer: ☒ a. fields

☐ b. jar files

☒ c. classes

☒ d. methods

☐ e. class files

37

Consider the following scenario:

A Java application needs to stream a video from a movie file.

Which of the following options gives the correct combination of stream classes that can be used to implement the above requirement?

Answer: ☐ a. LineInputStream and BufferedInputStream

☐ b. FileReader and BufferedReader

☒ c. InputStreamReader and FileInputStream

☐ d. FileInputStream and FilterInputStream

☐ e. FileInputStream and BufferedInputStream

38

Consider the following code:

```
public class SwitchIt {  
    public static void main(String args[]) {  
        int x = 10;  
  
        switch(x) {  
            case 10:  
                for(int i=0; i<x; ++i)  
                    break;  
  
            case 20:  
                System.out.println(x);  
                break;  
  
            case 30:  
                System.out.println(x*2);  
                break;  
  
            default:  
                System.out.println(x*3);  
        }  
    }  
}
```

Which of the following will be the output for the above program?

- Answer: ☐ a. 10
- ☐ b. 11
- ☒ c. No output
- ☐ d. 30

39

Consider the following code:

```
class A { }  
class B extends A { }  
public class Code2 {  
    public void method(A a) {
```



```
System.out.println("A");
}
public void method(B b) {
System.out.println("B");
}
public static void main(String args[]) {
new Code2().method(new Object());
}
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: B
- ☒ b. Throws ClassCastException at runtime
- ☐ c. Compilation Error 'Cannot find the symbol'
- ☐ d. Prints: A

40

Consider the following code snippet:

```
class Lock1 {
    Lock1() {}
    Lock1(Lock2 lock2) { this.lock2 = lock2; }
    Lock2 lock2;
}

class Lock2 {
    Lock2() {}
    Lock2(Lock1 lock1) { this.lock1 = lock1; }
    Lock1 lock1;
}

class GC6 {
    public static void main(String args[]) {
        Lock1 l1 = new Lock1();
        Lock2 l2 = new Lock2(l1);
        l1.lock2 = l2;
    }
}
```

Which of the objects are eligible for garbage collection in the above code?

- Answer: ☐ a. l1
- ☐ b. l2
- ☒ c. None of the objects eligible
- ☐ d. lock1
- ☐ e. lock2

41 Consider the following code snippet:

```
import java.io.*;

class Student {
    private String studentID;
    private String studentName;

    public Student() { }
    public Student(String studentID, String studentName) {
        this.studentID = studentID;
        this.studentName = studentName;
    }

    public String toString() {
        return "Student ID : " + studentID + " " +
            "Student Name : " + studentName;
    }
}

public class IOCode3 {
    public static void main(String args[]) throws FileNotFoundException,
        IOException {
        ObjectOutputStream out = new ObjectOutputStream(new
            FileOutputStream("C:/ObjectData")); // Line 1
        out.writeObject(new Student("100", "Student One")); // Line 2
        out.close();
    }
}
```

```
}  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Code will compile and execute without any error
- ☒ b. throws IOException at // Line 1
- ☐ c. throws IOException at // Line 2
- ☐ d. throws NotSerializableException at // Line 2
- ☐ e. throws NotSerializableException at // Line 1

42

Consider the following code snippet:

```
interface i1 {  
    int i = 0;  
}  
  
interface i2 {  
    int i = 0;  
}  
  
class inter implements i1, i2 {  
    public static void main(String[] a) {  
        System.out.println(i);  
    }  
}
```

Which of the following options will be the output of the above code snippet?

- Answer: ☐ a. No output
- ☒ b. Prints: 0
- ☐ c. Runtime Error



d. Compilation Error

43

Consider the following code:

```
1. class ExampleSix {  
2. String msg = "Type is ";  
3. public void showType(int n) {  
4. String tmp;  
5. if(n > 0) tmp = "positive";  
6. System.out.println(msg + tmp);  
7. }  
8. }
```

On running the above code it throws the compile-time error- the variable tmp is not initialised.

Which of the following changes to the above code will make the code to compile properly? (Choose 3)

Answer: ☐ a. Delcare the variable tmp as StringBuffer type

☒ b. Declare the variable tmp as static

☒ c. Insert the following line at line 6  
else tmp = "not positive";

☒ d. Change line 4 as follows  
String tmp = null;

☐ e. Remove line 4 and insert it at line 2

44

Consider the following code:

```
class One {  
public One() {
```

```
System.out.print(1);  
}  
}  
class Two extends One {  
public Two() {  
System.out.print(2);  
}  
}  
class Three extends Two {  
public Three() {  
System.out.print(3);  
}  
}  
public class Numbers {  
public static void main(String[] argv) {  
new Three();  
}  
}
```

Which of the following will be the output for the above program?

- Answer: ☐ a. 321
- ☐ b. No output
- ☒ c. 123
- ☐ d. 32
- ☐ e. 3

45

Consider the following code snippet:

```
class Student {  
String studentID;  
String studentName;  
double score;  
}
```

The instances of the above defined class holds the information of individual

student. These details need to be maintained in a data structure, that

- \* allows searching of student details using studentID
- \* ascending order of Student objects based on studentID

Which of the following collection classes can be used to implement the above scenario?

- Answer: ☐ a. TreeSet
- ☐ b. HashMap
- ☐ c. HashSet
- ☐ d. ArrayList
- ☒ e. TreeMap
-

1

Consider the following code:

```
interface Greek { }

class Alpha implements Greek { }

class Beta extends Alpha {}

class Delta extends Beta {
    public static void main( String[] args ) {
        Beta x = new Beta();
        // insert code here
    }
}
```

Which of the following code snippet when inserted individual at the commented line (// insert code here), will cause a java.lang.ClassCastException?

Answer: ☐ a. Greek f = (Beta)(Alpha)x;

☐ b. Alpha a = x;

☐ c. Greek f = (Alpha)x;

☐ d. Beta b = (Beta)(Alpha)x;

☒ e. Greek f = (Delta)x;

2

Consider the following code snippet:

```
class Node {
    Node node;
}

class NodeChain {
    public static void main(String a[]) {
        Node node1 = new Node(); // Line 1
        node1.node = node1;
    }
}
```

```
// Code here  
}  
}
```

Which of the following code snippets when replaced at the comment line (// Code Here) in the above code will make the object created at Line 1, eligible for garbage collection? (Choose 2)

Answer: ☐ a. node1.node = new Node();

☒ b. node1 = null;

☐ c. node1.node = null;

☐ d. node1 = node1.node;

☒ e. node1 = new Node();

3

You need to create a class that implements the Runnable interface to do background image processing. Out of the following list of method declarations, select the method that must satisfy the requirements.

Answer: ☒ a. public void run()

☐ b. public void start()

☐ c. public void stop()

☐ d. public void suspend()

4

Consider the following code:

```
class Component {  
    private int param;  
    public void setParam(int param) { this.param = param; }  
    public int getParam() { return param; }  
}
```



```
}
```

```
class Container {  
    private Component component;  
    public void setComponent(Component component) { this.component =  
        component; }  
    public Component getComponent() { return component; }  
}
```

```
public class TestContainerComponent {  
    public static void main(String args[]) {  
        Container container = new Container();  
        Component component = new Component();
```

```
        int j = 10;  
        component.setParam(j);  
        container.setComponent(component);
```

```
        // Insert code here  
        System.out.println(container.getComponent().getParam());  
    }  
}
```

Which of the following code snippets when individually replaced at the commented line (// Insert code here) in the above code will produce the output 100? (Choose 3)

Answer: ☐ a. container.setComponent(component); component=new Component(); component.setParam(100);

☒ b. component = new Component(); component.setParam(100);  
container.setComponent(component);

☒ c. component.setParam(100);

☒ d. component = new Component(); component.setParam(100);

☐ e. container.getComponent().setParam(100);

5

Consider the following code:

```
public class TestOne {  
    public static void main(String args[]) {  
        byte x = 3;  
        byte y = 5;  
        System.out.print((y%x) + " ");  
        System.out.println(y == ((y/x) *x +(y%x)));  
    }  
}
```

Which of the following gives the valid output for above?

Answer: ☐ a. Prints: 1, true

☒ b. Prints 2, false

☐ c. Prints: 1, false

☐ d. Prints: 2, true

6

Consider the following code:

```
public class Code17 {  
    public static void main(String args[]) {  
        new Code17();  
    }  
    {  
        System.out.print("Planet ");  
    }  
    {  
        System.out.print("Welcome ");  
    }  
}
```

Which of the following will be the valid output for the above code?

Answer: ☐ a. Welcome Planet

- ☐ b. Compilation Error
- ☐ c. Compiles and Executes with no output
- ☐ d. Planet
- ☒ e. Planet Welcome

7

Consider the following program:

```
class A implements Runnable {  
    public void run() {  
        System.out.print(Thread.currentThread().getName());  
    }  
}
```

```
class B implements Runnable {  
    public void run() {  
        new A().run();  
        new Thread(new A(),"T2").run();  
        new Thread(new A(),"T3").start();  
    }  
}
```

```
class C {  
    public static void main (String[] args) {  
        new Thread(new B(),"T1").start();  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Prints: T1T2T2
- ☐ b. Prints: T1T2T3
- ☐ c. Prints: T1T1T2

- ☒ d. Prints: T1T1T3
- ☐ e. Prints: T1T1T1

8 From JDK 1.6, which of the following interfaces is also implemented by `java.util.TreeSet` class?

- Answer: ☒ a. `NavigableSet`
- ☐ b. `Deque`
  - ☐ c. `NavigableMap`
  - ☐ d. `NavigableList`

9 Consider the following scenario:

Mr. Ram is working for a Software Company. He needs to save and reload objects from a Java application. For security reasons, the default Sun Microsystem's implementation of saving and loading of Java Objects is not used. He needs to write his own module for the same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☐ a. `Cloneable` interface
- ☒ b. `Serializable` interface
  - ☐ c. `Readable` interface
  - ☐ d. `Externalizable` interface
  - ☐ e. `Writable` interface

10

Consider the following code:

```
1. public class Garment {  
2. public enum Color {  
3. RED(0xff0000), GREEN(0x00ff00), BLUE(0x0000ff);  
4. private final int rgb;  
5. Color( int rgb) { this.rgb = rgb; }  
6. public int getRGB() { return rgb; }  
7. };  
8. public static void main( String[] argv) {  
9. // insert code here  
10. }  
11. }
```

Which of the following code snippets, when inserted independently at line 9, allow the Garment class to compile? (Choose 2)

Answer: ☒☒ a. Color treeColor = Color.GREEN;☒

b. Color purple = new Color( 0xff00ff);

☐

c. Color skyColor = BLUE;

☐

d. if( RED.getRGB() &lt; BLUE.getRGB() ) {}

☐

e. if( Color.RED.ordinal() &lt; Color.BLUE.ordinal() ) {}

11

Consider the following code:

```
public abstract class Shape {  
private int x;  
private int y;  
  
public abstract void draw();  
  
public void setAnchor(int x, int y) {  
this.x = x;  
this.y = y;
```

```
}  
}
```

Which of the following implementations use the Shape class correctly? (Choose 2)

Answer: ☒

```
a. public class Circle extends Shape {  
    private int radius;  
    public void setRadius(int radius) { this.radius = radius; }  
    public int getRadius() { return radius; }  
    public void draw() { /* code here */ }  
}
```

☐ b. public class Circle extends Shape {  
 private int radius;  
 public void draw();  
}

☒ c. public abstract class Circle extends Shape {  
 private int radius;  
}

☐ d. public class Circle implements Shape {  
 private int radius;  
}

☐ e. public class Circle extends Shape {  
 public int radius;  
 private void draw() { /\* code here \*/ }  
}

12

Which of the following flow control features does Java support? (Choose 2)

Answer: ☒

a. Labeled continue

☐ b. Labeled goto

☐ c. Labeled throw

☐ d. Labeled catch

☒ e. Labeled break

13

Consider the following code:

```
class Resource { }
class UserThread extends Thread {
    public Resource res;
    public void run() {
        try {
            synchronized(res) {
                System.out.println("Planet");
                res.wait();
                Thread.sleep(1000);
                res.notify();
                System.out.println("Earth");
            }
        } catch (InterruptedException e) { }
    }
}

public class StartUserThreads {
    public static void main(String[] args) {
        Resource r = new Resource();
        UserThread ut1 = new UserThread();
        ut1.res = r;
        UserThread ut2 = new UserThread();
        ut2.res = r;
        ut1.start();
        ut2.start();
    }
}
```

Which of the following will give the correct output for the above code?

Answer: ☐ a. Runtime Error "IllegalThreadStateException"

- ☐ b. Prints the following output 2 times: Planet  
(waits for 1000 milli seconds)  
Earth
- ☒ c. Compile-time Error
- ☐ d. Prints the following output 1 time: Planet  
(waits for 1000 milli seconds)  
Earth
- ☐ e. Prints the following output:  
Planet  
Planet  
(get into long wait. Never ends)

15

Consider the following code:

```
class Alpha {  
    protected Beta b;  
}
```

```
class Gamma extends Alpha { }
```

```
class Beta { }
```

Which of the following statement is True?

- Answer: ☐ a. Beta has-a Gamma and Gamma is-a Alpha.
- ☒ b. Gamma has-a Beta and Gamma is-a Alpha
- ☐ c. Alpha is-a Gamma and has-a Beta.
- ☐ d. Gamma is-a Beta and has-a Alpha.
- ☐ e. Alpha has-a Beta and Alpha is-a Gamma.



16

Consider the following scenario:

You are writing a set of classes related to cooking and have created your own exception hierarchy derived from `java.lang.Exception` as follows:

Exception

+--Bad TasteException

+--Bitter Exception

+--Sour Excpetion

`BadTasteException` is defined as an abstract class. You have a method `eatMe` that may throw a `BitterException` or a `SourException`.

Which of the following method declarations are acceptable to the compiler?  
(Choose 3)

- Answer: ☒ a. `public void eatMe() throws BitterException, SourException`
- ☐ b. `public void eatMe() throws Throwable`
- ☐ c. `public void eatMe() throw BadTasteException`
- ☒ d. `public void eatMe() throws BadTasteException`
- ☒ e. `public void eatMe() throws RuntimeException`

17

Consider the following code snippet:

```
String deepak = "Did Deepak see bees? Deepak did.";
```

Which of the following method calls would refer to the letter `b` in the string referred by the variable `deepak`?

Answer: ☐ a. `charAt(13)`

☒ b. `charAt(15)`

☐ c. charAt(12)

☐ d. charAt(16)

☐ e. charAt(14)

18

Which of the following codes will compile and run properly?

Answer: ☒

```
a. public class Test2 {  
    static public void main(String[] in) {  
        System.out.println("Test2");  
    }  
}
```

☐ b. public class Test4 {  
 static int main(String args[]) {  
 System.out.println("Test4");  
 }  
}

☐ c. public class Test1 {  
 public static void main() {  
 System.out.println("Test1");  
 }  
}

☐ d. public class Test3 {  
 public static void main(String args) {  
 System.out.println("Test3");  
 }  
}

☐ e. public class Test5 {  
 static void main(String[] data) {  
 System.out.println("Test5");  
 }  
}

19

Consider the following code snippet:

```
import java.io.*;

public class IOCode1 {
    public static void main(String args[]) throws IOException {
        BufferedReader br1 = new BufferedReader(
            new InputStreamReader(System.in));
        BufferedWriter br2 = new BufferedWriter(
            new OutputStreamWriter(System.out));

        String line = null;
        while( (line = br1.readLine()) != null ) {
            br2.write(line);
            br2.flush();
        }
        br1.close();
        br2.close();
    }
}
```

What will be the output for the above code snippet?

- Answer: ☐ a. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z, flushes (erases) the same from the console.
- ☐ b. Reads the text from keyboard character by character and prints the same to the console on typing every character.
- ☒ c. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line
- ☐ d. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line, then the same is flushed (erased) from the console.
- ☐ e. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z

20

Which of the following options gives the relationship between a Pilot class and Plane class?

- Answer: ☒ a. Inheritance
- ☐ b. Polymorphism
- ☐ c. Persistence
- ☐ d. Aggregation
- ☒ e. Association

21

Both TYPE\_SCROLL\_SENSITIVE and TYPE\_SCROLL\_INSENSITIVE types ResultSets will make changes visible if they are closed and then reopened. State True or False.

Answer: ☒ True ☐ False

22

Consider the following code snippet:

```
import java.util.*;
import java.text.*;

public class TestCol5 {
    public static void main(String[] args) {
        String dob = "17/03/1981";
        // Insert Code here
    }
}
```

Which of the following code snippets, when substituted to (//Insert Code here) in the above program, will convert the dob from String to Date type?

Answer: ☒ a. `DateFormat df = new SimpleDateFormat("dd/MM/yyyy");`  
`try {`

```
Date d = df.parse(dob);  
} catch(ParseException pe) { }
```

- ☐ b. `GregorianCalendar g = new GregorianCalendar(dob);`

```
Date d = g.getDate();
```

- ☐ c. `Calendar c = new Calendar(dob);`

```
Date d = g.getDate();
```

- ☐ d. `Date d = new Date(dob);`

- ☐ e. `CalendarFormat cf = new  
SimpleCalendarFormat("dd/MM/yyyy");  
try {  
Date d = cf.parse(dob);  
} catch(ParseException pe) { }`

23

Consider the following program:

```
class joy extends Exception { }  
class smile extends joy { }  
interface happy {  
void a() throws smile;  
void z() throws smile;  
}
```

```
class one extends Exception { }  
class two extends one { }  
abstract class test {  
public void a()throws one { }  
public void b() throws one { }  
}
```

```
public class check extends test {  
public void a() throws smile {  
System.out.println("welcome");  
throw new smile();  
}
```

```

public void b() throws one {
    throw new two();
}

public void z() throws smile {
    throw new smile();
}

public static void main(String args[]) {
    try {
        check obj=new check();
        obj.b();
        obj.a();
        obj.z();
    } catch(smile s) {
        System.out.println(s);
    } catch(two t) {
        System.out.println(t.getClass());
    } catch(one o) {
        System.out.println(o);
    } catch(Exception e) {
        System.out.println(e);
    }
}
}

```

What will be the output of the above program?

- Answer: ☐ a. welcome  
class two
- ☒ b. throws a compile time exception as overridden method a()  
does not throw exception smile
- ☐ c. class two
- ☐ d. throws a compile time exception as overridden method z()  
does not throw exception smile
- ☐ e. two

24

Consider the following code:

```
public class WrapIt {  
    public static void main(String[] args) {  
        new WrapIt().testC('a');  
    }  
  
    public void testC(char ch) {  
        Integer ss = new Integer(ch);  
        Character cc = new Character(ch);  
        if(ss.equals(cc)) System.out.print("equals ");  
        if(ss.intValue()==cc.charValue()) {  
            System.out.println("EQ");  
        }  
    }  
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. Compile-time error: Wrapper types cannot be compared using equals
- ☒ b. Compile-time error: Integer wrapper cannot accept char type
- ☐ c. Prints: equals
- ☐ d. Prints: EQ
- ☐ e. Prints: equals EQ

25

Consider the following code snippet:

```
class TestString3 {  
    public static void main(String args[]) {  
        String s1 = "Hello";  
        StringBuffer sb = new StringBuffer(s1);  
    }  
}
```

```
sb.reverse();
s1.concat(sb.toString());

System.out.println(s1 + sb + s1.length() + sb.length());
}
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. HelloolleH55
- ☐ b. HelloolleH44
- ☐ c. HelloHello44
- ☐ d. HelloHello33
- ☐ e. HelloHello55

26

The purpose of Soft Reference Type object is \_\_\_\_\_.

- Answer: ☒ a. to automatically delete objects from a container as soon clients stop referencing them
- ☐ b. to allow clean up after finalization but before the space is reclaimed
- ☐ c. to keep objects alive provided there is enough memory
- ☐ d. to keep objects alive only while they are in use (reachable) by clients

27

Consider the following code:

```
public class Key1 {
    public boolean testAns( String ans, int n ) {
        boolean rslt;
```



```
if (ans.equalsIgnoreCase("YES") & n > 5)
    rslt = true;
```

```
return rslt;
}
```

```
public static void main(String args[]) {
    System.out.println(new Key1().testAns("no", 5));
}
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. Compile-time error
- ☒ b. Runtime Error
- ☐ c. NO
- ☐ d. false
- ☐ e. true

28

Which of the following methods are defined in Object class? (Choose 3)

- Answer: ☒ a. toString()
- ☐ b. compareTo(Object)
- ☒ c. hashCode()
- ☒ d. equals(Object)
- ☐ e. run()

29

Consider the following code:

```
public class Code4 {  
    private int second = first;  
    private int first = 1000;  
  
    public static void main(String args[]) {  
        System.out.println(new Code4().second);  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Throws a Runtime error 'Illegal forward reference'
- ☐ b. 1000
- ☒ c. Compiler complains about forward referencing of member variables first and second
- ☐ d. Compiler complains about private members is not accessible from main() method

30

Which of the following are true about inheritance?(Choose 3)

- Answer: ☒ a. Inheritance enables adding new features and functionality to an existing class without modifying the existing class
- ☒ b. In an inheritance hierarchy, a superclass can also act as a subclass
- ☐ c. Inheritance is a kind of Encapsulation
- ☐ d. Inheritance does not allow sharing data and methods among multiple classes
- ☒ e. In an inheritance hierarchy, a subclass can also act as a superclass

31

Consider the following code snippet:

```
public class Welcome {  
    String title;  
    int value;  
  
    public Welcome() {  
        title += " Planet";  
    }  
  
    public void Welcome() {  
        System.out.println(title + " " + value);  
    }  
  
    public Welcome(int value) {  
        this.value = value;  
        title = "Welcome";  
        Welcome();  
    }  
  
    public static void main(String args[]) {  
        Welcome t = new Welcome(5);  
    }  
}
```

Which of the following option will be the output for the above code snippet?

- Answer: ☐ a. Welcome Planet
- ☐ b. The code runs with no output
- ☐ c. Compilation fails
- ☒ d. Welcome 5
- ☐ e. Welcome Planet 5

32

Which of the following are characteristics of Annotations?(Choose 2)

- Answer: ☒ a. Annotations are not part of a program.
- ☐ b. Annotations are predefined classes.
- ☒ c. Annotations are data about program.
- ☐ d. Annotations are static methods.

33

Consider the following code:

```
public class ObParam{
    public int b = 20;

    public static void main(String argv[]){
        ObParam o = new ObParam();
        methodA(o);
    }

    public static void methodA(ObParam a) {
        a.b++;
        System.out.println(a.b);
        methodB(a);
        System.out.println(a.b);
    }

    public void methodB(ObParam b) {
        b.b--;
    }
}
```

Which of the following gives the correct output for the above code?

- Answer: ☐ a. Prints: 21 21
- ☐ b. Prints: 20 21
- ☒ c. Compilation Error: Non-static method methodB() cannot be

referenced from static context methodA()

- ☐ d. Prints: 20 20
- ☐ e. Prints: 21 20

34

Consider the following code snippet:

```
import java.util.*;

public class TestCol6 {
    public static void main(String args[] ){
        ArrayList a = new ArrayList(); // Line 1
        a.add(new Integer(10));
        a.add(new String("Hello"));
        a.add(new Double(34.9));
    }
}
```

Which of the following code snippets when replaced at the line marked //Line 1, will make the ArrayList a to accept only Wrapper types of primitive numerics?

- Answer: ☐ a. `ArrayList<Double> a = new ArrayList<Double>();`
- ☐ b. `ArrayList<Integer> a = new ArrayList<Double>();`
- ☐ c. `ArrayList<WrapperType> a = new ArrayList<WrapperType>();`
- ☒ d. `ArrayList<Number> a = new ArrayList<Number>();`
- ☐ e. `ArrayList<Integer> a = new ArrayList<Integer>();`

35

Which of the following statements are true? (Choose 2)

- Answer: ☐ a. All exceptions are thrown programmatically from the code or

#### API

- ☐ b. All exceptions are thrown by JVM
- ☐ c. JVM cannot throw user-defined exceptions
- ☒ d. JVM thrown exceptions can be thrown programmatically
- ☒ e. All RuntimeException are thrown by JVM

36

The following class definitions are in separate files. Note that the Widget and BigWidget classes are in different packages:

```
1. package conglomolo;  
2. public class Widget extends Object{  
3. private int myWidth;  
4. XXXXXX void setWidth( int n ) {  
5. myWidth = n;  
6. }  
7. }
```

// the following is in a separate file and in separate package

```
8. package conglomolo.widgets;  
9. import conglomolo.Widget ;  
10. public class BigWidget extends Widget {  
11. BigWidget() {  
12. setWidth( 204 );  
13. }  
14. }
```

Which of the following modifiers, used in line 4 instead of XXXXXX, would allow the BigWidget class to access the setWidth method (as in line 12)? (Choose 2)

- Answer: ☐ a. default (blank), that is, the method declaration would read  
void setWidth( int n )
- ☐ b. final

☐ c. private

☒ d. protected

☒ e. public

37 Consider s1 and s2 are sets.

Which of the following options gives the exact meaning of the method call s1.retainAll(s2)?

Answer: ☐ a. transforms s1 into the union of s1 and s2

☐ b. transforms s1 into the (asymmetric) set difference of s1 and s2

☒ c. transforms s1 into the intersection of s1 and s2.

☐ d. copies elements from s2 to s1

☐ e. returns true if s2 is a subset of s1

38 Consider the following partial listing of the Widget class:

```
1. class Widget extends Thingee {  
2. static private int widgetCount = 0;  
3. static synchronized int addWidget() { widgetCount++;  
4. return widgetCount;  
5. }  
6. String wName;  
7. public Widget( int mx, String T ) {  
8. wName = "I am Widget #" + addWidget();  
9. }  
10. // more methods follow  
11. }
```

Which of the following gives the significance of the word "private" in line 2?

- Answer: ☒ a. Since widgetCount is private, only methods in the Widget class can access it.
- ☐ b. If another class tries to access widgetCount, a runtime exception will be thrown.
- ☐ c. Since widgetCount is private, only the addWidget method can access it.
- ☐ d. Since widgetCount is private, only methods in the Widget class and any derived classes can access it.

39

Consider the following program:

```
class CatchableException extends Throwable { }

class ThrowableException extends CatchableException { }

public class ThrowCatchable {
    public static void main(String args[]) {
        try {
            tryThrowing();
        }
        catch(CatchableException c) {
            System.out.println("Catchable caught");
        }
        finally {
            tryCatching();
        }
    }

    static void tryThrowing() throws CatchableException {
        try {
            tryCatching();
            throw new ThrowableException();
        }
        catch(NullPointerException re) {
            throw re;
        }
    }
}
```



```
}
```

```
static void tryCatching() {  
    System.out.println(null + " pointer exception");  
}  
}
```

What will be the output of the above program?

- Answer: ☐ a. null pointer exception  
Catchable caught  
null pointer exception
- ☐ b. runtime error
- ☒ c. Catchable caught  
null pointer exception  
null pointer exception
- ☐ d. compile-time error
- ☐ e. null pointer exception  
null pointer exception  
Catchable caught

40

Which of the following statement is true?

- Answer: ☐ a. To call the join() method, a thread must own the lock of the object on which the call is to be made
- ☐ b. To call the yield() method, a thread must own the lock of the object on which the call is to be made.
- ☒ c. To call the wait() method, a thread must own the lock of the object on which the call is to be made.
- ☐ d. To call the wait() method, a thread must own the lock of the current thread.

- ☐ e. To call the sleep() method, a thread must own the lock of the object which the call is to be made.

41 Which of the following methods is used to check whether ResultSet object contains records?

- Answer: ☐ a. last()
- ☐ b. hasRecords()
- ☐ c. previous()
- ☒ d. next()
- ☐ e. first()

42 Which of the following are true about SQLWarning class in JDBC API?

- Answer: ☒ a. SQLWarning is the subclass of SQLException
- ☐ b. SQLWarning and SQLException can be used interchangeably
- ☐ c. SQLWarning affects the normal program execution
- ☐ d. SQLWarning messages are accessible through the Statement object
- ☒ e. SQLWarning can be caught and handled using try-catch

43 Consider the following code:

```
@interface Author {  
    String name();  
    String date();  
}
```

```
}
```

Which of the following is the correct way of implementing the above declared annotation type?

- Answer: ☐ a. `Author(  
name = "Deepak",  
date = "02/04/2008"  
)  
class MyClass() { }`
- ☐ b. `@Author(  
name = "Deepak",  
)  
class MyClass() { }`
- ☐ c. `@Author(  
"Deepak",  
"02/04/2008"  
)  
class MyClass() { }`
- ☐ d. `SELECT * BULK COLLECT INTO emp_details_t from emp;`
- ☒ e. `@Author(  
name = "Deepak",  
date = "02/04/2008"  
)  
class MyClass() { }`

44

Delimiters themselves be considered as tokens. State True or False.

Answer: ☐ True ☒ False

45

Consider the following code:

```
public class ExampleSeven {
```

```
public static void main(String [] args) {  
    String[] y = new String[1];  
    String x = "hello";  
    y[0] = x;  
  
    // Code here  
    System.out.println("match");  
} else {  
    System.out.println("no match");  
}  
}  
}
```

Which of the following code snippet when substituted at the commented line (// Code here) in the above code will make the program to print "no match"?

- Answer: ☐ a. if (x != y[0].toString()) {
- ☐ b. if (x & y[0]) {
- ☐ c. if (x.equals(y[0])) {
- ☒ d. if (!x.equals(y[0])) {

1 Which of the following are uses of Object class?(Choose 3)

Answer: ☒ a. to achieve inheritance at user-defined class level

☒ b. to generate String representation of an object

☒ c. to get the hashCode for an object

☐ d. to achieve polymorphism at user-defined class level

☒ e. to handle any Java Object in the name of Object

2 Which of the following options are true for StringBuffer class?(choose 3)

Answer: ☒ a. StringBuffer is extended from String class

☒ b. StringBuffer is threadsafe

☐ c. 'capacity' property indicates the maximum number of characters that a StringBuffer can have

☐ d. StringBuffer implements Charsequence interface

☐ e. Buffer space in StringBuffer can be shared

3 Consider the following code snippet:

```
class Train {  
    String name = "Shatapdhi";  
}  
  
class TestTrain {  
    public static void main(String a[]) {  
        Train t = new Train();  
        System.out.println(t); // Line a  
        System.out.println(t.toString()); // Line b  
    }  
}
```

```
}  
}
```

Which of the following statements are true?(Choose 3)

- Answer: ☒ a. Output of Line a and Line b will be same
- ☐ b. Output of Line a and Line b will be different
- ☒ c. Line a prints the corresponding classname with Object's hashcode in Hexadecimal
- ☒ d. Both Line a and Line b will print the corresponding classname with Object's hashcode in Hexa Decimal
- ☐ e. Both Line a and Line b prints "Shatapdhi"

4

Which of the following are true regarding PreparedStatement?(choose 3)

- Answer: ☐ a. PreparedStatement are the SQL templates available in the database server, that can be used directly without writing complex SQL code
- ☐ b. PreparedStatement cannot be used to create Scrollable ResultSet
- ☒ c. Parameters can be passed to PreparedStatement at run-time
- ☒ d. PreparedStatement are precompiled SQL statements that are faster in execution
- ☐ e. PreparedStatement is the sub interface of Statement interface

5

Consider the following code snippet:

```
public class TestString10{  
    public void print() {
```

```
String s = "Hello";
StringBuffer sb = new StringBuffer("Hello");
concatenateStrings(s, sb);
System.out.println(s+" "+sb);
}

public void concatenateStrings(String str, StringBuffer strBuff){
StringBuffer sk = strBuff;
str = str + " world";
sk.append(" world");
}

public static void main (String[] args) {
TestString10 t = new TestString10();
t.print();
}
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. Hello Hello world
- ☐ b. world world world
- ☐ c. Hello Hello Hello
- ☐ d. world Hello Hello
- ☐ e. Hello world Hello

6

Consider the following code:

```
1. public class Circle1 {
2.     private String string = "String1";
3.     void work() {
4.         String x = "String2";
5.         class Circle2 {
6.             public void peepOut() {
7.                 System.out.println(string);
```

```

8.      System.out.println(x);
9.      }
10.     }
11.     new Circle2().peepOut();
12.  }
13.
14.  public static void main(String args[]) {
15.      Circle1 c1 = new Circle1();
16.      c1.work();
17.  }
18. }

```

Which of the following changes made to the above code will make the code to compile and execute properly and gives the following output?

String1

String2

- Answer: ☒ a. The variable at line 4 should be declared as final
- ☐ b. The variable at line 2 should be declared as final
- ☐ c. The method at line 6 should be defined as final method
- ☐ d. The inner class Circle 2 should be an abstract class
- ☐ e. The object for the inner class Circle2 should be created in main() method

7

Consider s1 and s2 are sets.

Which of the following options gives the exact meaning of the method call s1.retainAll(s2)?

- Answer: ☐ a. transforms s1 into the union of s1 and s2
- ☒ b. transforms s1 into the intersection of s1 and s2.



- ☐ c. returns true if s2 is a subset of s1
- ☐ d. transforms s1 into the (asymmetric) set difference of s1 and s2
- ☐ e. copies elements from s2 to s1

8

Consider the following scenario:

A Chat application written in Java, currently works with a general room facility, where the messages posted by the logged user are displayed. A common synchronized object is used to Queue up the messages received from the users.

Now, the application needs additional feature called personal messaging, that enables the user to make one-to-one communication.

Which of the following helps to implement the requirement?

- Answer: ☒ a. A new synchronized object need to be created for every one-to-one personal messaging request from the user
- ☐ b. The personal messaging feature cannot be added when there is a general room facility
  - ☐ c. A part of the synchronized object that already exists for the general room can be used
  - ☐ d. Just two more threads need to be created at the user end

9

Under which of the following scenarios a checked exception is thrown? (Choose 2)

Answer: ☒ a. 5th element of an array is accessed, whose size is 3

☐ b. A file that actually does not exist, is opened for reading

- ☐ c. An attempt to connect to the database is made but failed.
- ☐ d. length() method is called on a String object, that is assigned to null
- ☐ e. Given username and password is checked with database and found invalid

10

Which of the following statement is true?

- Answer: ☒ a. To call the sleep() method, a thread must own the lock of the object which the call is to be made.
- ☐ b. To call the join() method, a thread must own the lock of the object on which the call is to be made
- ☒ c. To call the wait() method, a thread must own the lock of the object on which the call is to be made.
- ☐ d. To call the yield() method, a thread must own the lock of the object on which the call is to be made.
- ☐ e. To call the wait() method, a thread must own the lock of the current thread.

11

Consider the following code:

```
class Animal {  
    public String noise() { return "noise"; }  
}  
  
class Dog extends Animal {  
    public String noise() { return "bark"; }  
}  
  
class Cat extends Animal {  
    public String noise() { return "meow"; }  
}
```

```
class MakeNoise {  
    public static void main(String args[]) {  
        Animal animal = new Dog();  
        Cat cat = (Cat)animal;  
        System.out.println(cat.noise());  
    }  
}
```

Which of the following option will be the output of the above code snippet?

Answer: ☐ a. noise

☐ b. bark

☐ c. meow

☒ d. Compilation fails

☐ e. An exception is thrown at runtime

12

Consider the following code:

```
public class GetArray {  
    public static void main(String args[]) {  
        float invt[][];  
        float[] prct, grts[];  
        float[][] sms, hms[];  
        // Insert statement1 here  
        // Insert statement2 here  
        // Insert statement3 here  
    }  
}
```

Which of the following listed statements can be inserted at the above commented lines

(// Insert statement1 here, // Insert statement2 here, // Insert statement3 here)

to make the program to compile without errors? (Choose 3)

- Answer: ☒ a. grts = new float[1][4];
- ☒ b. invt = grts;
- ☐ c. hms = new float[2][5];
- ☒ d. invt = new float[4][2];
- ☐ e. grts = new float[1];

13

Consider the following code:

```
public class SwitchCase {  
    public static void main(String args[]) {  
        int x = 10;  
        switch(x) {  
            case 10: System.out.println("10");  
            case 10: System.out.println("10");  
            case 20: System.out.println("20");  
            default: System.out.println("30");  
        }  
    }  
}
```

Which of the following will be the output for the above program?

- Answer: ☐ a. 10  
10  
20
- ☐ b. 10  
20
- ☐ c. 10  
10

- ☒ d. Compilation Error
- ☐ e. 30

14 Which of the following is the process of creating a new class from an existing class?

- Answer: ☐ a. Polymorphism
- ☐ b. Abstraction
- ☒ c. Inheritance
- ☐ d. Reusability

15 Consider the following code snippet:

```
String deepak = "Did Deepak see bees? Deepak did.";
```

Which of the following options will give the output for the method call `deepak.charAt(10)`?

- Answer: ☐ a. None of the listed options
- ☐ b. s
- ☐ c. h
- ☒ d. space

16 Consider the following code:

```
package com.java.test;
```

```
public class A {  
    public void m1() {System.out.print("A.m1, ");}   
    protected void m2() {System.out.print("A.m2, ");}   
    private void m3() {System.out.print("A.m3, ");}   
    void m4() {System.out.print("A.m4, ");}   
}
```

```
class B {  
    public static void main(String[] args) {  
        A a = new A();  
        a.m1(); // 1  
        a.m2(); // 2  
        a.m3(); // 3  
        a.m4(); // 4  
    }  
}
```

Assume that both of the above classes are stored in a single source file called 'A.java'. Which of the following gives the valid output of the above code?

Answer: ☐ a. Prints: A.m1, A.m2, A.m3, A.m4,

☒ b. Compile-time error at 3.

☐ c. Compile-time error at 4.

☐ d. Compile-time error at 2.

☐ e. Compile-time error at 1.

17

From a Collection object c, another Collection object needs to be created. It should contain the same elements in the same order as that of source object c, but with all duplicates eliminated.

Which of the following options provide the valid code to accomplish the above given scenario?

Answer: ☐ a. new HashSet<Type>(c);

- ☐ b. All of the listed options
- ☐ c. new LinkedTreeSet<Type>(c);
- ☒ d. new LinkedHashSet<Type>(c);

18 From JDK 1.6, which of the following interfaces is also implemented by java.util.TreeSet class?

- Answer: ☒ a. NavigableSet
- ☐ b. NavigableList
  - ☐ c. NavigableMap
  - ☐ d. Deque

19 Which of the following modifier cannot be applied to the declaration of a field (member of a class)?

- Answer: ☐ a. public
- ☐ b. final
  - ☒ c. abstract
  - ☐ d. private
  - ☐ e. protected

20 Which of the following statements are correct regarding Instance Block?(Choose 3)

- Answer: ☒ a. A class can have more than one instance block
- ☐ b. An instance block cannot initialise the class members
- ☐ c. Instance blocks are executed only when the instances are created from main() method of that class
- ☒ d. Instance blocks are executed before constructors
- ☒ e. Instance blocks are executed for every created instance

21

Which of the following is the correct syntax for Annotation declaration?

- Answer: ☐ a. interface author{  
    @String name(),  
    String date()  
}
- ☐ b. @interface author{  
    @String name();  
    @String date();  
}
- ☐ c. interface author{  
    String name(),  
    String date()  
}
- ☐ d. interface @author{  
    String name(),  
    String date()  
}
- ☒ e. @interface author{  
    String name();  
    String date();  
}



Consider the following code:

```
class Resource { }
class UserThread extends Thread {
    public Resource res;
    public void run() {
        try {
            synchronized(res) {
                System.out.println("Planet");
                res.wait();
                Thread.sleep(1000);
                res.notify();
                System.out.println("Earth");
            }
        } catch (InterruptedException e) { }
    }
}

public class StartUserThreads {
    public static void main(String[] args) {
        Resource r = new Resource();
        UserThread ut1 = new UserThread();
        ut1.res = r;
        UserThread ut2 = new UserThread();
        ut2.res = r;
        ut1.start();
        ut2.start();
    }
}
```

Which of the following will give the correct output for the above code?

- Answer: ☐ a. Runtime Error "IllegalThreadStateException"
- ☐ b. Compile-time Error
- ☐ c. Prints the following output 2 times: Planet  
(waits for 1000 milli seconds)  
Earth

- ☒ d. Prints the following output:  
Planet  
Planet  
(get into long wait. Never ends)
- ☐ e. Prints the following output 1 time: Planet  
(waits for 1000 milli seconds)  
Earth

23 Which of the following options gives the relationship between a Spreadsheet Object and Cell Objects?

Answer: ☐ a. Polymorphism

☐ b. Association

☐ c. Inheritance

☒ d. Aggregation

☐ e. Persistence

24 Consider the following program:

```
class joy extends Exception { }  
class smile extends joy { }  
interface happy {  
    void a() throws smile;  
    void z() throws smile;  
}
```

```
class one extends Exception { }  
class two extends one { }  
abstract class test {  
    public void a()throws one { }  
    public void b() throws one { }
```

```

}

public class check extends test {
    public void a() throws smile {
        System.out.println("welcome");
        throw new smile();
    }

    public void b() throws one {
        throw new two();
    }

    public void z() throws smile {
        throw new smile();
    }

    public static void main(String args[]) {
        try {
            check obj=new check();
            obj.b();
            obj.a();
            obj.z();
        } catch(smile s) {
            System.out.println(s);
        } catch(two t) {
            System.out.println(t.getClass());
        } catch(one o) {
            System.out.println(o);
        } catch(Exception e) {
            System.out.println(e);
        }
    }
}

```

What will be the output of the above program?

- Answer: ☒ a. throws a compile time exception as overridden method a() does not throw exception smile
- ☐ b. welcome  
class two

- ☐ c. two
- ☐ d. throws a compile time exception as overridden method z() does not throw exception smile
- ☒ e. class two

25

Consider the following code snippet:

```
public class Tastelt{  
    public void show() {  
        System.out.println("one");  
    }  
    public static void main(String[] args) {  
        Tastelt t = new Tastelt() {  
            public void show() {  
                System.out.println("two");  
                super.show();  
            }  
        };  
        t.show();  
    }  
}
```

Which of the following option will be the output for the above code snippet?

- Answer: ☐ a. one  
two
- ☒ b. two  
one
- ☐ c. Compilation fails. Cannot use super keyword inside an anonymous class
- ☐ d. Runtime exception. Cannot find the super class version of show() method

26

Consider the following code snippet:

```
public class Welcome {  
    String title;  
    int value;  
    public Welcome() {  
        title += " Planet";  
    }  
  
    public Welcome(int value) {  
        this.value = value;  
        title = "Welcome";  
        Welcome();  
    }  
  
    public static void main(String args[]) {  
        Welcome t = new Welcome();  
        System.out.println(t.title);  
    }  
}
```

Which of the following options will be the output for the above code snippet?

Answer: ☐ a. Welcome

☐ b. Welcome Planet

☒ c. Compilation fails

☐ d. The code runs with no output

☐ e. Welcome Planet 5

27

Consider the following program:

```
public class Exp3 {  
    public static void main(String[] args) {  
        try {
```

```
if (args.length == 0) return;  
System.out.println(args[0]);  
} finally {  
System.out.println("The end");  
}  
}  
}
```

Which of the following options are true regarding the output of the above program? (Choose 2)

- Answer: ☒ a. If run with no arguments, the program will print "The end"
- ☒ b. If run with one argument, the program will print the given argument followed by "The end"
- ☐ c. If run with one argument, the program will simply print the given argument
- ☐ d. The program will throw an `ArrayIndexOutOfBoundsException`
- ☐ e. If run with no arguments, the program will produce no output

28

Consider the following code snippets:

```
class GC2 {  
    public GC2 getIt(GC2 gc2) {  
        return gc2;  
    }  
  
    public static void main(String a[]) {  
        GC2 g = GC2();  
        GC2 c = GC2();  
  
        c = g.getIt(c);  
    }  
}
```

How many objects are eligible for Garbage Collection?

Answer: ☐ a. four

☐ b. one

☒ c. none of the objects are eligible

☐ d. two

☐ e. three

29

Consider the following scenario:

A given String needs to be searched, in text file, and report the number of occurrences with corresponding line numbers.

Which of the following stream classes can be used to implement the above requirement?

Answer: ☐ a. FileInputStream and PipedInputStream

☐ b. FileInputStream and InputStreamReader

☐ c. InputStreamReader and FilterInputStream

☐ d. FileInputStream and SearchInputStream

☒ e. FileReader and BufferedReader

30

Given the following method in an application:

```
1. public String setFileType( String fname ){  
2. int p = fname.indexOf( '.' );  
3. if( p > 0 ) fname = fname.substring( 0,p );  
4. fname += ".TXT";
```

```
5. return fname;  
6. }
```

and given that another part of the class has the following code

```
7. String TheFile = "Program.java";  
8. File F = new File( setFileType( TheFile ) );  
9. System.out.println( "Created " + TheFile );
```

Which of the following will be the output for the statement in line 9?

- Answer: ☐ a. Created Program.txt
- ☐ b. Created Program
- ☒ c. Created Program.java
- ☐ d. Created Program.java.txt

31

Consider the following code snippet:

```
import java.io.*;  
  
public class IOCode1 {  
    public static void main(String args[]) throws IOException {  
        BufferedReader br1 = new BufferedReader(  
            new InputStreamReader(System.in));  
        BufferedWriter br2 = new BufferedWriter(  
            new OutputStreamWriter(System.out));  
  
        String line = null;  
        while( (line = br1.readLine()) != null ) {  
            br2.write(line);  
            br2.flush();  
        }  
        br1.close();  
        br2.close();  
    }  
}
```



}

What will be the output for the above code snippet?

- Answer: ☐ a. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line, then the same is flushed (erased) from the console.
- ☒ b. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line
- ☐ c. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z, flushes (erases) the same from the console.
- ☐ d. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z
- ☐ e. Reads the text from keyboard character by character and prints the same to the console on typing every character.

32

Which of the following statements are true? (choose 2)

- Answer: ☒ a. A program can suggest that garbage collection be performed but not force it
- ☒ b. An object becomes eligible for garbage collection when all references denoting it are set to null
- ☐ c. None of the listed options
- ☐ d. Garbage collection is platform independent
- ☐ e. The automatic garbage collection of the JVM prevents programs from ever running out of memory

33

Consider the following code:

```
public class WrapIt {  
    public static void main(String[] args) {  
        new WrapIt().testC('a');  
    }  
  
    public void testC(char ch) {  
        Integer ss = new Integer(ch);  
        Character cc = new Character(ch);  
        if(ss.equals(cc)) System.out.print("equals ");  
        if(ss.intValue()==cc.charValue()) {  
            System.out.println("EQ");  
        }  
    }  
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. Compile-time error: Integer wrapper cannot accept char type
- ☐ b. Prints: EQ
- ☒ c. Compile-time error: Wrapper types cannot be compared using equals
- ☐ d. Prints: equals EQ
- ☐ e. Prints: equals

34

Consider a List based object L, with size of 10 elements e, and the following two lines of code:

```
L.add("e");  
L.remove("e");
```

Which of the following options gives the status about the List object L after executing the above two lines of code?

- Answer: ☐ a. New elements are added and old ones are taken out but size is increasing

- ☒ b. New elements are added and old ones are taken out but there will be a change in size
- ☐ c. No change because we are adding and deleting the same element
- ☐ d. New elements are added and old ones are taken out but no change in size
- ☐ e. New elements can be added but cannot be removed

35

Consider the following code:

```
class A {  
    public void method(Object object) {  
        System.out.println("Object");  
    }  
    public void method(String string) {  
        System.out.println("String");  
    }  
    public static void main(String args[]) {  
        new A().method(null);  
    }  
}
```

Which of the following options will be the output for the above code?

- Answer: ☐ a. Compilation Error 'Cannot pass null as method arguments'
- ☐ b. Prints: String
- ☒ c. Throws NullPointerException at runtime
- ☐ d. Prints: Object

36

Consider the following code snippet:

```
class MyClass {
```

```
int myValue;
```

```
@Override  
public boolean equals(Object o1, Object o2){  
    MyClass mc1=(MyClass) o1;  
    MyClass mc1=(MyClass) o2;  
    if(mc1.myValue==mc2.myValue)  
        return true;  
    return false;  
}  
}
```

what is the correct output of the above code snippet?

- Answer: ☐ a. ClassCastException will be thrown.
- ☐ b. @Override cannot be used for equals() method.
- ☒ c. Compile error: class doesn't override a method from it's superclass @Override.
- ☐ d. Program compiles successfully and executes.

37

Consider the following program:

```
import java.io.*;  
  
public class SteppedTryCatch {  
    public static void main(String[] args) {  
        try {  
            try {  
                try {  
                    // Line 1  
                } catch(Exception e3) {  
                    System.out.println("Exception 1");  
                    // Line 2  
                }  
            } catch(IOException e2) {  
                System.out.println("Exception 2");  
            }  
        }  
    }  
}
```

```
// Line 3
}  
} catch(FileNotFoundException e1) {  
System.out.println("Exception 3");  
}  
}  
}
```

You need to make the above program to print the output as

Exception 1

Exception 2

Exception 3

Which of the following when substituted in place of commented lines (// Line 1, Line 2 and Line 3) produce the desired output?

- Answer: ☐ a. The code is wrong. Exceptions should be caught in reversed hierarchy order.
- ☒ b. Line 1 : throw new Exception();  
Line 2 : throw new IOException();  
Line 3 : throw new FileNotFoundException();
- ☐ c. Line 1 : throw new IOException();  
Line 2 : throw new FileNotFoundException();  
Line 3 : throw new Exception();
- ☐ d. Line 1 : throw new IOException();  
Line 2 : throw new IOException();  
Line 3 : throw new IOException();
- ☐ e. Line 1 : throw new FileNotFoundException();  
Line 2 : throw new IOException();  
Line 3 : throw new Exception();

38

Consider the following code:

```
class MyThread extends Thread {  
MyThread() {  
System.out.print(" MyThread");
```

```
}  
public void run() { System.out.print(" queen"); }  
public void run(String s) { System.out.print(" jack"); }  
}
```

```
public class TestThreads {  
    public static void main (String [] args) {  
        Thread t = new MyThread() {  
            public void run() { System.out.print(" king"); }  
        };  
        t.start();  
    }  
}
```

Which of the following gives the correct valid output for the above code?

- Answer: ☒ a. queen king
- ☐ b. king queen
- ☐ c. Compilation fails.
- ☒ d. MyThread king
- ☐ e. MyThread queen

39

Which of the following are interfaces in JDBC API?(choose 3)

- Answer: ☐ a. SQLWarning
- ☐ b. Statement
- ☐ c. Connection
- ☒ d. DriverManager
- ☐ e. CallableStatement

40

Consider the following code:

```
public class Choco {  
    Choco() { System.out.print("Choco"); }  
    class Bar {  
        Bar() { System.out.print("bar"); }  
        public void go() { System.out.print("sweet"); }  
    }  
  
    public static void main(String[] args) {  
        Choco c = new Choco();  
        c.makeBar();  
    }  
    void makeBar(){  
        // Insert code here  
    }  
}
```

Which of the following code snippet when substituted individually to the above commented line (// Insert code here) will give the following output?

Chocobarsweet

- Answer: ☐ a. go();
- ☒ b. new Choco(). new Bar().go();
- ☐ c. (new Bar() {}).go();
- ☐ d. new Bar().go();
- ☐ e. new Choco().go();

41

Consider the following code:

```
public class Code17 {  
    public static void main(String args[]) {
```

```
new Code17();  
}  
{  
System.out.print("Planet ");  
}  
{  
System.out.print("Welcome ");  
}  
}
```

Which of the following will be the valid output for the above code?

- Answer: ☐ a. Compiles and Executes with no output
- ☐ b. Welcome Planet
- ☒ c. Planet Welcome
- ☐ d. Planet
- ☐ e. Compilation Error

42

Consider the following code:

```
1. class Test {  
2. public static void main(String args[]) {  
3. double d = 12.3;  
4. Dec dec = new Dec();  
5. dec.dec(d);  
6. System.out.println(d);  
7. }  
8. }  
9. class Dec{  
10. public void dec(double d) { d = d - 2.0d; }  
11. }
```

Which of the following gives the correct value printed at line 6?

- Answer: ☐ a. Prints: -2.0



☐ b. Prints: 10.3

☒ c. Prints: 12.3

☐ d. Prints: 0.0

43 All kinds of looping constructs designed using while loop can also be constructed using do-while loop.  
State True or False.

Answer: ☐ True ☒ False

44 ResultSet programming is more efficient, where there are frequent insertions, updates and deletions. State True or False.

Answer: ☐ True ☒ False

45 Consider the following code snippet:

```
import java.util.*;
import java.text.*;

public class TestCol5 {
    public static void main(String[] args) {
        String dob = "17/03/1981";
        // Insert Code here
    }
}
```

Which of the following code snippets, when substituted to (//Insert Code here) in the above program, will convert the dob from String to Date type?

Answer: ☒

```
a. DateFormat df = new SimpleDateFormat("dd/MM/yyyy");  
try {  
    Date d = df.parse(dob);  
} catch(ParseException pe) { }
```

☐

```
b. GregorianCalendar g = new GregorianCalendar(dob);
```

```
    Date d = g.getDate();
```

☐

```
c. Date d = new Date(dob);
```

☐

```
d. CalendarFormat cf = new  
    SimpleCalendarFormat("dd/MM/yyyy");  
try {  
    Date d = cf.parse(dob);  
} catch(ParseException pe) { }
```

☐

```
e. Calendar c = new Calendar(dob);  
    Date d = g.getDate();
```

1

Consider the following code:

```
1. public class GetArray2 {  
2. public static void main(String [] args) {  
3. int [][] holdit = new int[6][];  
4. for(int x = 0;x<6;x++) {  
5. holdit[x] = new int[3];  
6. holdit[x][0] = (x + 0);  
7. holdit[x][1] = (x + 1);  
8. holdit[x][2] = (x + 2);  
9. System.out.println(holdit[x][0]+" "+holdit[x][1]+" "+holdit[x][2]);  
10. }  
11. }  
12. }
```

Which of the following gives the valid output for above?

Answer: ☐ a. Compilation fails because of an error on line 5

☒ b. Compilation succeeds and the program prints:

```
0 1 2  
1 2 3  
2 3 4  
3 4 5  
4 5 6  
5 6 7
```

☐ c. Compilation fails because of an error on line 3

☐ d. Compilation succeeds and the program prints:

```
1 1 1  
2 2 2  
3 3 3  
4 4 4  
5 5 5  
6 6 6
```

2

Consider the following code:

```
public class Code9 {  
    public static void main(String args[]) {  
        System.out.println(Math.abs(Integer.MIN_VALUE));  
    }  
}
```

Which of the following will be the output for the above given program? (Choose 2)

Answer: ☐ a. Compilation Error

- ☐ b. Compiles successfully and prints a value which is less than zero
- ☐ c. Compiles successfully and prints a value which is equal to Integer.MIN\_VALUE
- ☐ d. Compiles successfully and prints a value which is equal to - Integer.MAX\_VALUE
- ☐ e. Compiles successfully and prints a value which is equal to Integer.MIN\_VALUE + 1

3

Consider the following scenario:

An application needs to write a log file on the sequence of actions it takes while running.

Which of the following stream classes can be used to implement the above requirement?

Answer: ☒ a. FileOutputStream

☐ b. LogWriter

☐ c. PrintWriter

☐ d. OutputStream

4 Consider the following program:

```
import java.io.*;

public class SteppedTryCatch {
    public static void main(String[] args) {
        try {
            try {
                try {
                    // Line 1
                } catch (Exception e3) {
                    System.out.println("Exception 1");
                } // Line 2
            } catch (IOException e2) {
                System.out.println("Exception 2");
            } // Line 3
        } catch (FileNotFoundException e1) {
            System.out.println("Exception 3");
        }
    }
}
```

You need to make the above program to print the output as

Exception 1

Exception 2

Exception 3

Which of the following when substituted in place of commented lines (// Line 1, Line 2 and Line 3) produce the desired output?

Answer: ☐ a. Line 1 : throw new IOException();  
Line 2 : throw new FileNotFoundException();  
Line 3 : throw new Exception();

- ☒ b. Line 1 : throw new Exception();  
Line 2 : throw new IOException();  
Line 3 : throw new FileNotFoundException();
- ☐ c. The code is wrong. Exceptions should be caught in reversed hierarchy order.
- ☐ d. Line 1 : throw new IOException();  
Line 2 : throw new IOException();  
Line 3 : throw new IOException();
- ☐ e. Line 1 : throw new FileNotFoundException();  
Line 2 : throw new IOException();  
Line 3 : throw new Exception();

5 What of the following is the default Scroll type for a ResultSet object?

- Answer: ☒ a. ResultSet.TYPE\_SCROLL\_SENSITIVE
- ☐ b. ResultSet.TYPE\_SCROLLABLE
  - ☐ c. ResultSet.TYPE\_SCROLL\_INSENSITIVE
  - ☒ d. ResultSet.TYPE\_FORWARD\_ONLY
  - ☐ e. ResultSet.TYPE\_SCROLL\_BIDIRECTIONAL

6 Consider the following code snippet:

```
import java.io.*;

public class IOCode1 {
    public static void main(String args[]) throws IOException {
        BufferedReader br1 = new BufferedReader(
            new InputStreamReader(System.in));
        BufferedWriter br2 = new BufferedWriter(
            new OutputStreamWriter(System.out));
```

```
String line = null;
while( (line = br1.readLine()) != null ) {
    br2.write(line);
    br2.flush();
}
br1.close();
br2.close();
}
```

What will be the output for the above code snippet?

- Answer: ☐ a. Reads the text from keyboard character by character and prints the same to the console on typing every character.
- ☐ b. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z, flushes (erases) the same from the console.
- ☒ c. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line
- ☐ d. Reads the text from keyboard and prints the same to the console on pressing Ctrl Z
- ☐ e. Reads the text from keyboard line by line and prints the same to the console on pressing ENTER key at the end of every line, then the same is flushed (erased) from the console.

7

A monitor called 'mon' has 5 threads in its waiting pool; all these waiting threads have the same priority. One of the threads is thread1. How can you notify thread1 so that it alone moves from Waiting state to Ready State?

- Answer: ☐ a. Execute `mon.notify(thread1);` from synchronized code of any object
- ☐ b. Execute `notify(thread1);` from within synchronized code of mon

- ☐ c. You cannot specify which thread will get notified
- ☐ d. Execute thread1.notify(); from synchronized code of any object
- ☒ e. Execute thread1.notify(); from any code(synchronized or not) of any object

8 Which of the following options are true about Associations?(choose 2)

- Answer: ☒ a. Association refers to a class reuses the properties and methods of another class
- ☒ b. Association refers to an object composed of set of other objects
- ☐ c. Association refers to binding of related data and behaviours into a single entity
- ☐ d. Associations are bi-directional
- ☐ e. In Associations, cardinality refers to the number of related objects

9 Consider the following code snippet:

```
import java.util.*;

public class TestCol3 {
    public static void main(String[] args) {
        List l = new ArrayList();
        l.add("One");
        l.add("Two");
        l.add("Three");
        l.add("Four");
        l.add("One");
        l.add("Four");
    }
}
```



```
Set h = new HashSet();
h.addAll(l);

System.out.println("Size:" + l.size() + h.size());
}
}
```

What will be the output of the following code snippet?

- Answer: ☒ a. Size: 64
- ☐ b. Size: 44
- ☐ c. Size: 66
- ☐ d. Compilation error
- ☐ e. Size: 46

10

Consider the following code snippets:

```
class GC2 {
    public GC2 getIt(GC2 gc2) {
        return gc2;
    }

    public static void main(String a[]) {
        GC2 g = GC2();
        GC2 c = GC2();

        c = g.getIt(c);
    }
}
```

How many objects are eligible for Garbage Collection?

- Answer: ☐ a. two

- ☒ b. none of the objects are eligible
- ☐ c. three
- ☐ d. four
- ☐ e. one

11 Which of the following gives the correct sequence of execution of callback methods in a JUnit TestCase?

- Answer: ☒ a. 1. setUp() method  
2. testXXX() method  
3. tearDown() method  
Above sequence is for every testXXX() method in the TestCase
- ☐ b. 1. setUp() method  
2. tearDown() method  
3. All testXXX() methods
- ☐ c. 1. All testXXX() methods  
2. setUp() method  
3. tearDown() method
- ☒ d. 1. setUp() method  
2. All testXXX() methods  
3. tearDown() method

12 Consider the following code:

```
class TM {  
    public static void main(String a[]) {  
        System.out.println(a[0]+a[0].length()+a.length);  
    }  
}
```

Select the valid inputs and outputs. (Choose 2)

- Answer: ☐ a. Input : java TM "Trick1"+"Trick2" "Trick3"  
Output: Trick1+Trick2132
- ☐ b. Input : java TM 'J2SE', 'J2EE', 'J2ME'  
Output: J2SE43
- ☐ c. Input : java TM 123+456 "abc" "Tricky"  
Output: 57933
- ☐ d. Input : java TM 'This is really tricky'  
Output: This is really tricky211
- ☐ e. Input : java TM "123", abc+234  
Output: 123,42

13

Consider the following partial code:

```
public class CreditCard {  
    private String cardID;  
    private Integer limit;  
    public String ownerName;  
  
    public void setCardInformation(String cardID, String ownerName, Integer limit) {  
        this.cardID = cardID;  
        this.ownerName = ownerName;  
        this.limit = limit;  
    }  
}
```

Which of the following statement is True regarding the above given code?

- Answer: ☐ a. The class is fully encapsulated
- ☒ b. The ownerName variable breaks encapsulation
- ☐ c. The setCardInformation method breaks encapsulation
- ☐ d. The cardID and limit variables break polymorphism

☐ e. The code demonstrates polymorphism

14 State which of the following are default delimiters?(Choose 3)

- Answer: ☐ a. form feed character
- ☐ b. tab character
- ☐ c. the dollar character
- ☐ d. space character
- ☐ e. the underscore character

15 Consider the following code snippet:

```
public class Demo extends Object {
    String Title;

    public Demo( String t ){
        Title = t;
    }

    public void showTitle() {
        System.out.println( "Title is " + Title );
    }
}

class DerivedDemo extends Demo {
    public void setTitle( String tt ) { Title = tt ; }
}

public class Tastelt {
    public static void main(String args[]) {
        DerivedDemo dd = new DerivedDemo();
        dd.showTitle();
    }
}
```

```
}  
}
```

Which of the following option will be the output for the above code snippet?

- Answer: ☐ a. Prints: "Title is null" to standard output.
- ☐ b. A NullPointerException is thrown at Runtime
- ☐ c. A ClassCastException is thrown at Runtime
- ☒ d. Compilation Error

16

Consider the following code:

```
package com.java.test;  
public class A {  
    public void m1() {System.out.print("A.m1, ");}  
    protected void m2() {System.out.print("A.m2, ");}  
    private void m3() {System.out.print("A.m3, ");}  
    void m4() {System.out.print("A.m4, ");}  
}  
  
class B {  
    public static void main(String[] args) {  
        A a = new A();  
        a.m1(); // 1  
        a.m2(); // 2  
        a.m3(); // 3  
        a.m4(); // 4  
    }  
}
```

Assume that both of the above classes are stored in a single source file called 'A.java'. Which of the following gives the valid output of the above code?

- Answer: ☐ a. Prints: A.m1, A.m2, A.m3, A.m4,
- ☐ b. Compile-time error at 4.

- ☒ c. Compile-time error at 3.
- ☐ d. Compile-time error at 2.
- ☐ e. Compile-time error at 1.

17 Consider the following code snippet:

```
import java.util.*;

public class TestCol6 {
    public static void main(String args[] ){
        ArrayList a = new ArrayList(); // Line 1
        a.add(new Integer(10));
        a.add(new String("Hello"));
        a.add(new Double(34.9));
    }
}
```

Which of the following code snippets when replaced at the line marked //Line 1, will make the ArrayList a to accept only Wrapper types of primitive numerics?

- Answer: ☐ a. `ArrayList<Integer> a = new ArrayList<Integer>();`
- ☐ b. `ArrayList<WrapperType> a = new ArrayList<WrapperType>();`
- ☐ c. `ArrayList<Integer> a = new ArrayList<Double>();`
- ☐ d. `ArrayList<Double> a = new ArrayList<Double>();`
- ☒ e. `ArrayList<Number> a = new ArrayList<Number>();`

Which of the following types of driver provides maximum decoupling between database and Java application?

Answer: ☒ a. Type IV driver

☐ b. Type II driver

☐ c. Type I driver

☐ d. Type III driver

19 Which of the following statements are true about String Arrays? (Choose 2)

Answer: ☐ a. Array index can be a negative value

☒ b. String[][] s;

☐ c. Array decaration: String[6] strarray;

☒ d. String[][] s = new String[5][];

☐ e. Array index can be a long value

20 Consider the following code:

```
public class WrapIt {
    public static void main(String[] args) {
        new WrapIt().testC('a');
    }

    public void testC(char ch) {
        Integer ss = new Integer(ch);
        Character cc = new Character(ch);
        if(ss.equals(cc)) System.out.print("equals ");
        if(ss.intValue()==cc.charValue()) {
            System.out.println("EQ");
        }
    }
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. Prints: EQ
- ☐ b. Prints: equals
- ☒ c. Compile-time error: Wrapper types cannot be compared using equals
- ☐ d. Prints: equals EQ
- ☐ e. Compile-time error: Integer wrapper cannot accept char type

21

Consider the following code:

```
class One {  
    public One() {  
        System.out.print(1);  
    }  
}  
  
class Two extends One {  
    public Two() {  
        System.out.print(2);  
    }  
}  
  
class Three extends Two {  
    public Three() {  
        System.out.print(3);  
    }  
}  
  
public class Numbers {  
    public static void main(String[] argv) {  
        new Three();  
    }  
}
```

Which of the following will be the output for the above program?



Answer: ☐ a. 3

☐ b. No output

☐ c. 321

☐ d. 32

☒ e. 123

22

Consider the following code:

```
public class Pass {  
    static int j=20;  
    public static void main(String argv[]) {  
        int i=10;  
        Pass p = new Pass();  
        p.amethod(i);  
        System.out.println(i);  
        System.out.println(j);  
    }  
  
    public void amethod(int x) {  
        x=x*2;  
        j=j*2;  
    }  
}
```

Which of the following gives the correct output for the above code?

Answer: ☒ a. Prints: 10, 40

☐ b. Prints: 20, 40

☐ c. Compile time Error: Method parameter does not match variable

☐ d. Prints: 10,20

23

Consider the following code:

```
public class TH2 {  
    public static synchronized void main(String[] args) throws  
        InterruptedException {  
        Thread t = new Thread();  
        t.start();  
        System.out.print("keep");  
        t.wait(10000);  
        System.out.print("Smiling");  
    }  
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. It prints keepSmiling with a 10000-second delay between keep and Smiling.
- ☐ b. It prints keepSmiling with a 10-second delay between keep and Smiling
- ☒ c. An exception is thrown at runtime
- ☐ d. It prints keep and never exits
- ☐ e. It prints keepSmiling and exits almost immediately

24

Consider the following program:

```
class TestThread extends Thread {  
    public static void main(String apps[]) {  
        Thread t = null;  
        TestThread tc = new TestThread();  
        for (int i = 0; i < 5; i++) {
```

```
t = new Thread(tc);  
// Insert Code Here  
}  
  
public void run() {  
    System.out.println("Hello");  
}  
}
```

Which of the following code when substituted to the commented line (//Insert Code) will make the program to execute properly?

Answer: ☐ a. t.join()

☒ b. t.start()

☐ c. No additional code required

☐ d. t.run()

☐ e. t.sleep(1000)

25

Which of the following options give the names of the data structures that can be used for Range-View operations, but no nulls?(choose 2)

Answer: ☐ a. SortedSet

☒ b. List

☐ c. Map

☒ d. Vector

26

Consider the following code:

class A is defined in packageone as follows:

```
package com.packageone;
public class A {
    private int x;

    public A(int x) {
        this();
        this.x = x;
    }

    abstract void print();
}
```

And class B is defined in packagetwo as follows:

```
package com.packagetwo;
import com.packageone.A;
class B extends A {
    B(int x) {
        super(x);
    }

    void print() {
        System.out.println(x);
    }
}

class C {
    public static void main(String args[]) {
        A a = new B(10);
    }
}
```

Which of the following changes will make the code to run properly? (Choose 3)

Answer: ☐ a. class B should be declared public abstract

☒ b. class A should be declared public abstract

☐ c. The print method in class B should refer the x as super.x

☐ d. The member x in class A should be declared as protected

☐ e. this() method call should be removed from the class A constructor

27

Which of the following classes is used to handle the abnormal situation that may occur during database calls using JDBC API?

Answer: ☒ a. SQLException

☐ b. Driver

☐ c. Connection

☐ d. DriverManager

☐ e. Statement

28

Consider the following code:

```
public class ThrowsException {
    static void throwMethod() {
        System.out.println("Inside throwMethod.");
        throw new IllegalAccessException("exception");
    }

    public static void main(String args[]) {
        try {
            throwMethod();
        }
        catch (IllegalAccessException e) {
            System.out.println("Caught " + e);
        }
    }
}
```

}

Which of the following gives the output for the above given code?

- Answer: ☐ a. Compiles successfully, nothing is printed
- ☒ b. Compilation Error
- ☐ c. Runtime Error
- ☐ d. Inside showMethod. followed by caught: java.lang.IllegalAccessException: exception

29

To which of the following elements, annotations can be applied? (Choose 3)

- Answer: ☒ a. classes
- ☒ b. fields
- ☐ c. jar files
- ☐ d. class files
- ☒ e. methods

30

Consider the following:

Class A contains the following:

- i. Instance Block
- ii. main() method
- iii. Static Block
- iv. Default Constructor of A

Assume an instance of class A is created in the main() method. Which of the following gives the correct sequence of execution of above mentioned

elements?

Answer: ☒ a. iii, ii, i, iv

☐ b. iii, i, ii, iv

☐ c. ii, i, iv, iii

☐ d. i, iv, iii, ii

☐ e. iv, iii, ii, i

31

Consider the following code snippet:

```
interface InterfaceOne {  
    int ID = 10;  
    int getAccess();  
}
```

```
interface InterfaceTwo {  
    int ID = 20;  
    int getAccess();  
}
```

```
class InterfaceImpl implements InterfaceOne, InterfaceTwo {  
    public int getAccess() {  
        if (this instanceof InterfaceOne) {  
            return InterfaceOne.ID;  
        } else {  
            return InterfaceTwo.ID;  
        }  
    }  
}
```

```
public class Code {  
    public static void main(String args[]) {  
        InterfaceOne i1 = new InterfaceImpl();  
        System.out.println(i1.getAccess());  
    }  
}
```

```
InterfaceTwo i2 = (InterfaceTwo) i1;  
System.out.println(i2.getAccess());  
}  
}
```

Which of the following will be the output for the above code snippet?

- Answer: ☐ a. 10  
10
- ☐ b. 10  
20
- ☒ c. Compile time error. Incompatible Type conversion.
- ☐ d. 20  
10
- ☐ e. 20  
20

32

Which of the following statements is true about NavigableSet interface?

- Answer: ☐ a. a SortedSet extended with navigation methods for Maps.
- ☐ b. a SortedSet extended with navigation methods for Lists.
- ☒ c. a new class implementation of Set which can navigate the ResultSet object
- ☐ d. a SortedSet extended with navigation methods reporting closest matches for given search targets.

33

Consider the following code:

```
class Planet { }
```



```
class Earth extends Planet { }

public class WelcomePlanet {
    public static void welcomePlanet(Planet planet) {
        if (planet instanceof Earth) {
            System.out.println("Welcome!");
        } else if (planet instanceof Planet) {
            System.out.println("Planet!");
        } else {
            System.exit(0);
        }
    }
}

public static void main(String args[]) {
    WelcomePlanet wp = new WelcomePlanet();
    Planet planet = new Earth();
    welcomePlanet(planet);
}
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. The code runs with no output
- ☐ b. Compilation fails
- ☒ c. Welcome!
- ☐ d. Planet!
- ☐ e. An exception is thrown at runtime

34

Consider the following code:

```
1. public class Boxer1{
2. Integer i;
3. int x;
4.
5. public Boxer1(int y) {
```

```
6. x = i+y;  
7. System.out.println(x);  
8. }  
9.  
10. public static void main(String[] args) {  
11. new Boxer1(new Integer(4));  
12. }  
13. }
```

Which of the following will be the output of the above program?

- Answer: ☐ a. Compilation fails because of an error in line 11
- ☒ b. A NullPointerException occurs at runtime
- ☐ c. Prints: 4
- ☐ d. A NumberFormatException occurs at runtime

35

Consider the following program:

```
1. class CheckedException extends RuntimeException { }  
2. class UncheckedException extends Exception { }  
3. public class Check {  
4. public static void main(String args[]) {  
5. generateException1();  
6. generateException2();  
7. }  
8.  
9. private static void generateException1() {  
10. throw new CheckedException();  
11. }  
12.  
13. private static void generateException2() {  
14. throw new UncheckedException();  
15. }  
16. }
```

Which of the following is true regarding the above given program?

- Answer: ☐ a. No compilation error but throws RuntimeException on running the code
- ☐ b. Compilation error at line 10
- ☒ c. Compilation error at line 14
- ☐ d. Compilation error at line 5
- ☐ e. Compilation error at line 6

36

Consider the following code snippet:

```
public class TestString10{
    public void print() {
        String s = "Hello";
        StringBuffer sb = new StringBuffer("Hello");
        concatinatesStrings(s, sb);
        System.out.println(s+" "+sb);
    }

    public void concatinatesStrings(String str, StringBuffer strBuff){
        StringBuffer sk = strBuff;
        str = str + " world";
        sk.append(" world");
    }

    public static void main (String[] args) {
        TestString10 t = new TestString10();
        t.print();
    }
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Hello Hello Hello

- ☐ b. world Hello Hello
- ☒ c. Hello Hello world
- ☐ d. Hello world Hello
- ☐ e. world world world

37

Consider the following code:

```
package test;  
  
class Target {  
    String name = "hello";  
}
```

Which of the following options are valid that can directly access and change the value of the variable 'name' in the above code? (Choose 2)

- Answer: ☐ a. any class in the test package
- ☐ b. any class that extends Target outside the test package
- ☐ c. any class
- ☐ d. only the Target class
- ☐ e. any class that extends Target within the test package

38

Which of the following is the process of creating a new class from an existing class?

- Answer: ☐ a. Polymorphism
- ☒ b. Inheritance

☐ c. Abstraction

☐ d. Reusability

39

Consider s1 and s2 are sets.

Which of the following options gives the exact meaning of the method call s1.retainAll(s2)?

Answer: ☐ a. transforms s1 into the union of s1 and s2

☒ b. transforms s1 into the intersection of s1 and s2.

☐ c. copies elements from s2 to s1

☐ d. returns true if s2 is a subset of s1

☐ e. transforms s1 into the (asymmetric) set difference of s1 and s2

40

Consider the following code segment:

```
public class ExampleThree {  
    public static void main(String args[]) {  
        int i = 1; // Line 1  
        short s = 1; // Line 2  
        long l = 1; // Line 3  
        i = l + i; // Line 4  
        l = s + i; // Line 5  
    }  
}
```

Which of the following gives the line in the above program that will result in error?

- Answer: ☒ a. Line 4
- ☐ b. Line 7
- ☐ c. Line 6
- ☐ d. Line 3
- ☐ e. Line 5

41 Which of the following pre-defined annotations requires that an annotation type should itself annotate with, in order to make the information in an user-defined annotation type appear in Javadoc-generated documentation?

- Answer: ☐ a. @Override
- ☒ b. @Documented
- ☐ c. @Comment
- ☐ d. @Deprecated

42 Consider there are two threads, "Thread A" and "Thread B". "Thread A" holds a lock on "Object X". "Thread B" is blocked inside a wait call on Object X.

Which of the following will make the "Thread B" runnable?

- Answer: ☐ a. Thread A's wait() times out.
- ☒ b. Thread A releases the lock on B by calling the notifyAll()
- ☐ c. Thread A is interrupted.
- ☐ d. Thread B is interrupted.

- ☒ e. Thread B releases the lock on object X and calls the notify() method on thread

43

Which of the following options are true? (Choose 2)

- Answer: ☐ a. Error objects are thrown only by JVM
- ☐ b. Errors can be thrown programmatically
- ☐ c. A class can extend Error class and can be used as user-defined Error class
- ☐ d. Errors are handled only by JVM
- ☐ e. Errors cannot be handled programmatically using try-catch blocks.

44

Which of the following statements are true? (choose 2)

- Answer: ☐ a. An object becomes eligible for garbage collection when all references denoting it are set to null
- ☐ b. The automatic garbage collection of the JVM prevents programs from ever running out of memory
- ☐ c. A program can suggest that garbage collection be performed but not force it
- ☐ d. None of the listed options
- ☐ e. Garbage collection is platform independent

45

Which of the following statements are true regarding equals() method?(Choose 3)

Answer: ☐

a. Defined in the Object class

☐

b. Essential for inheriting a class

☐

c. Used for object's content comparison

☐

d. It is polymorphic

☐

e. Declared in the Object class

---



1

Consider the following code snippet:

```
interface Equalizer {  
    boolean equals(Object o1, Object o2);  
}  
  
public class EqualIt {  
    String name;  
    public EqualIt(String name) {  
        this.name = name;  
    }  
  
    public void TestIt() {  
        System.out.println(  
            new Equalizer() {  
                public boolean equals(Object o1, Object o2) {  
                    return o1.equals(o2);  
                }  
            }.equals(this, this)  
        );  
    }  
    public static void main(String[] args) {  
        new EqualIt("Welcome Planet").TestIt();  
    }  
}
```

Which of the following will be the output of the above code snippet?

- Answer: ☒ a. true
- ☐ b. Welcome Planet
- ☐ c. Compile-time error
- ☐ d. false
- ☐ e. Runtime error

2

Which of the following are the valid ways of creating wrapper type objects?  
(Choose 3)

Answer: ☐ a. Integer integer = new Integer("false");

☐ b. Byte bite = new Byte("-128");

☐ c. Boolean b = new Boolean("23.9");

☐ d. Character c = new Character("a");

☐ e. Float f = new Float("45.67d");

3

Under which of the following scenarios a checked exception is thrown? (Choose 2)

Answer: ☐ a. Given username and password is checked with database and found invalid

☐ b. 5th element of an array is accessed, whose size is 3

☐ c. length() method is called on a String object, that is assigned to null

☐ d. A file that actually does not exist, is opened for reading

☐ e. An attempt to connect to the database is made but failed.

4

Which of the following annotations are defined in java.lang package? (Choose 3)

Answer: ☐ a. @Deprecated

☐ b. @Retention

☐ c. @Target

- ☐ d. @Override
- ☐ e. @SuppressWarnings

5 Consider the following code:

```
public class ObParam{
    public int b = 20;

    public static void main(String argv[]){
        ObParam o = new ObParam();
        methodA(o);
    }

    public static void methodA(ObParam a) {
        a.b++;
        System.out.println(a.b);
        methodB(a);
        System.out.println(a.b);
    }

    public void methodB(ObParam b) {
        b.b--;
    }
}
```

Which of the following gives the correct output for the above code?

- Answer: ☒ a. Prints: 21 21
- ☐ b. Prints: 20 20
- ☒ c. Compilation Error: Non-static method methodB() cannot be referenced from static context methodA()
- ☐ d. Prints: 21 20

☐ e. Prints: 20 21

6

Consider the following code:

```
public class Test1 {  
    public static void main(String[] args) {  
        xMethod(new double[] {3, 3});  
        xMethod(new double[5]);  
        xMethod(new double[3] {1, 2, 3});  
    }  
  
    public static void xMethod(double[] a) {  
        System.out.println(a.length);  
    }  
}
```

Which of the following statement is true regarding the above code?

- Answer: ☐ a. The program has a syntax error because xMethod(new double[5]) is incorrect.
- ☐ b. The program has a runtime error because a is null.
- ☐ c. The program has a syntax error because xMethod(new double[] {3, 3}) is incorrect.
- ☒ d. The program has a syntax error because xMethod(new double[3] {1, 2, 3}) is incorrect.

7

Consider the following code:

```
public class GoTest {  
    public static void main(String[] args) {  
        One Xone= new One(); one.talk();  
        Two two = new Two(); two.talk();  
        Talkable talkable = new Three();  
        talkable.talk();  
    }  
}
```

```

    }
}

class One {
    public void talk() {
        System.out.println("one");
    }
}

class Two extends One {
    public void talk() {
        System.out.println("two");
    }
}

class Three extends Two implements Talkable {}

interface Talkable {
    void talk();
}

```

Which of the following option will be the output of the above given code?

Answer: ☐ a. Runtime error

☐ b.  
one  
two  
two

☐ c.  
one  
one  
two

☒ d. Compilation error

☐ e.  
one  
two  
one

8

Consider the following scenario:

A window is splitted into four parts and each part is updated independently by four concurrent threads.

Which of the following is true regarding the above scenario?

- Answer: ☒ a. The window object need to be synchronized among the four thread objects
- ☐ b. All the four thread objects need to be synchronized
- ☐ c. The window object need not be synchronized
- ☐ d. All the four threads keeps running even after updating the window

9

Consider the following code snippet:

```
abstract class BaseTest extends Object implements Runnable {  
    public void run() { }  
}  
  
class AdvancedTest extends BaseTest { }  
  
public class TestIt {  
    public boolean checkTest( Object obj ) {  
        return ( obj instanceof BaseTest ) & ( obj instanceof Runnable );  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new TestIt().checkTest(new AdvancedTest()));  
        System.out.println(new TestIt().checkTest(new Thread()));  
    }  
}
```

Which of the following option will be the output for the above code snippet?

Answer: ☒ a. Compile-time error

☐ b. false  
false

☐ c. true  
false

☐ d. true  
true

☐ e. false  
true

10

Consider the following program:

```
interface I {  
    void m1() throws Exception;  
}
```

```
class A implements I {  
    // Line 1  
    {  
        System.out.println("A: m1");  
    }  
}
```

```
class B implements I {  
    // Line 2  
    {  
        System.out.println("B: m1");  
    }  
}
```

```
class C implements I {  
    // Line 3  
    {  
        System.out.println("C: m1");  
    }  
}
```

```
}
```

```
public class UseABC {  
    public static void main(String args[]) throws Exception {  
        I i[] = { new A(), new B(), new C() };  
        for(I c : i) c.m1();  
    }  
}
```

Which of the following set of code snippets when replaced to the commented Lines (Line 1, Line 2 and Line 3) will make the program compile properly and produce the following output? (Choose 3)

A: m1

B: m1

C: m1

- Answer: ☐ a. Line 1: public void m1() throws IOException  
Line 2: public void m1() throws FileNotFoundException  
Line 3: public void m1() throws Exception
- ☐ b. Line 1: public void m1() throws Error  
Line 2: public void m1() throws Exception  
Line 3: public void m1() throws Throwable
- ☐ c. Line 1: public void m1() throws NoClassDefFoundError  
Line 2: public void m1() throws Error  
Line 3: public void m1()
- ☐ d. Line 1: public void m1() throws NullPointerException  
Line 2: public void m1() throws RuntimeException  
Line 3: public void m1()
- ☐ e. Line 1: public void m1()  
Line 2: public void m1()  
Line 3: public void m1()

11

Consider the following scenario:

Mr.Vijay is working for a Software Company. He needs to save and reload objects from a Java application. He needs to write a module to accomplish the



same.

Which of the following options can be used to accomplish the above requirement?

- Answer: ☐ a. Cloneable interface
- ☐ b. Writable interface
- ☐ c. Readable interface
- ☒ d. Serializable interface
- ☐ e. ObjectSerializable interface

12

Consider the following code:

```
public class Example {  
    public static void main(String[] args) {  
        Byte b = 10;  
        Short s = Short.valueOf( (b + 1) );  
        Integer i = s + 1;  
        Long l = Long.valueOf( (i + 1) );  
        System.out.println(l);  
    }  
}
```

Which of the following gives the valid output of the above code?

- Answer: ☒ a. Compile-time error
- ☐ b. Runtime error
- ☐ c. Prints: 12
- ☐ d. Prints: 13

13

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☐ a. protected

☐ b. public

☒ c. synchronized

☒ d. final

☒ e. private

14

Which of the following options gives the relationship between a Spreadsheet Object and Cell Objects?

Answer: ☐ a. Inheritance

☐ b. Polymorphism

☒ c. Association

☐ d. Aggregation

☐ e. Persistence

15

Consider the following code snippet:

```
public class TestString10{
    public void print() {
        String s = "Hello";
        StringBuffer sb = new StringBuffer("Hello");
        concatenateStrings(s, sb);
        System.out.println(s+" "+sb);
    }
}
```

```
public void concatenateStrings(String str, StringBuffer strBuff){  
    StringBuffer sk = strBuff;  
    str = str + " world";  
    sk.append(" world");  
}
```

```
public static void main (String[] args) {  
    TestString10 t = new TestString10();  
    t.print();  
}  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. world Hello Hello
- ☐ b. Hello Hello Hello
- ☐ c. Hello world Hello
- ☒ d. Hello Hello world
- ☐ e. world world world

16

Which of the following are uses of Object class?(Choose 3)

- Answer: ☒ a. to get the hashCode for an object
- ☒ b. to handle any Java Object in the name of Object
- ☒ c. to generate String representation of an object
- ☒ d. to achieve inheritance at user-defined class level
- ☒ e. to achieve polymorphism at user-defined class level

17

Consider the following code:

```
public class Key1 {  
    public boolean testAns( String ans, int n ) {  
        boolean rslt;  
  
        if (ans.equalsIgnoreCase("YES") & n > 5)  
            rslt = true;  
  
        return rslt;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Key1().testAns("no", 5));  
    }  
}
```

Which of the following will be the output of the above program?

Answer: ☒ a. false☐ b. NO☒ c. Compile-time error☐ d. true☐ e. Runtime Error

18

Which of the following code snippets show valid inheritance? (Choose 3)

Answer: ☐

a. class A {

int v;

```
    public String sayHello() {  
        return "Hello";  
    }  
}
```

```
public class B extends A {  
  
    public int sayHello(int a) {  
        return 3 + a;  
    }  
}  
}
```

☐ b. class A {

```
    int v;
```

```
    public String sayHello() {  
        return "Hello";  
    }  
}
```

```
    class B {
```

```
        A a;
```

```
        public String sayHello() {  
            return "Hello from B";  
        }  
    }
```

☐ c. class A {

```
    int v;
```

```
    final String sayHello() {  
        return "Hello";  
    }  
}
```

```
    class B extends A {
```

```
        public int sayHello(int a) {  
            return 3 + a;  
        }  
    }
```

```
}
```



```
d. class A {
```

```
int a;
```

```
public String methodA(String s) {
```

```
String var = "My App" + s;
```

```
return var;
```

```
}
```

```
}
```

```
class B extends A {
```

```
public String methodA(String s) {
```

```
String bar = "Bar" + s;
```

```
return bar;
```

```
}
```

```
}
```



```
e. interface MyInterface {
```

```
public void myMethod(String s);
```

```
}
```

```
class A implements MyInterface {
```

```
public void myMethod(String s) {
```

```
// Some Implementation
```

```
}
```

```
}
```

19

Which of the following is the type of driver for which Sun Microsystems provides the driver implementation?

Answer: ☐ a. Type III driver



b. Type I driver

- ☐ c. Type II driver
- ☐ d. Sun Microsystems provides only specification, and does not provide any implementation for any type of JDBC drivers
- ☐ e. Type IV driver

20

Consider the following code:

```
import java.util.*;

public class Code11 {
    final Vector v;

    {
        v=new Vector();
    }

    public Code11() { }

    public void codeMethod() {
        System.out.println(v.isEmpty());
    }

    public static void main(String args[]) {
        new Code11().codeMethod();
    }
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Prints: false
- ☐ b. Runtime error: NullPointerException
- ☐ c. Compilation error: final members should be initialised inside constructor
- ☒ d. Prints: true

- ☒ e. Compilation error: final members should be initialised on declaration

21 Consider the following code:

```
public class ThrowsException {
    static void throwMethod() {
        System.out.println("Inside throwMethod.");
        throw new IllegalAccessException("exception");
    }

    public static void main(String args[]) {
        try {
            throwMethod();
        }
        catch (IllegalAccessException e) {
            System.out.println("Caught " + e);
        }
    }
}
```

Which of the following gives the output for the above given code?

- Answer: ☐ a. Runtime Error
- ☒ b. Inside showMethod. followed by caught: java.lang.IllegalAccessException: exception
- ☐ c. Compiles successfully, nothing is printed
- ☐ d. Compilation Error

22 Consider the following code snippet:

```
10.237.6.89 class Lock1 {
    Lock1() {}
    Lock1(Lock2 lock2) { this.lock2 = lock2; }
```



```

    Lock2 lock2;
}

class Lock2 {
    Lock2() {}
    Lock2(Lock1 lock1) { this.lock1 = lock1; }
    Lock1 lock1;
}

class GC6 {
    public static void main(String args[]) {
        Lock1 l1 = new Lock1();
        Lock2 l2 = new Lock2(l1);
        l1.lock2 = l2;
    }
}

```

Which of the objects are eligible for garbage collection in the above code?

Answer: ☐ a. lock2

☐ b. l1

☐ c. lock1

☐ d. l2

☐ e. None of the objects eligible

23

Which of the following gives the difference between Queue interface and List?(Choose 2)

Answer: ☐ a. Queue is strictly FIFO but List may not be

☐ b. Queue methods gives same results as List except when Queue is empty

☐ c. Queue does not allow duplicates whereas List allows

- ☐ d. Queue is essentially the same as List
- ☐ e. Queue implements all of List interface but not vice versa

24

Consider the following code:

```
1. public class EqualsTest {  
2. public static void main( String args[] ) {  
3. float A = 1.0F / 3.0F;  
4. if( ( A * 3.0) == 1.0F ) System.out.println( "Equal" );  
5. else System.out.println( "Not Equal" );  
6. }  
7. }
```

Which of the following will be the output of the above program?

- Answer: ☐ a. The compiler objects to line 3.
- ☐ b. The compiler objects to using == with primitives in line 4.
- ☒ c. The program compiles and prints "Not Equal".
- ☐ d. The program compiles and prints "Equal".

25

Consider the following scenario:

Here is part of the hierarchy of exceptions that may be thrown during file IO operations:

Exception

+IOException

+File Not Found Exception

You have a method X that is supposed to open a file by name and read data from it.

Given that X does not have any try-catch statements, which of the following

option is true?

- Answer: ☐ a. No special precautions need be taken
- ☐ b. Any method calling X must use try-catch, specifically catching FileNotFoundException
- ☐ c. The method X must be declared as throwing FileNotFoundException
- ☒ d. The method X must be declared as throwing IOException or Exception

26

Consider the following code:

```
class A {  
    public A getMe() {  
        return this;  
    }  
}  
  
class B extends A {  
    public static void main(String args[]) {  
        A a = new B() {  
            public A getMe() {  
                return this;  
            }  
        };  
        System.out.println(a.getClass().getSuperclass().getName());  
    }  
}
```

Which of the following will be the output of the above code snippet?

- Answer: ☐ a. Anonymous
- ☐ b. Runtime error

☐ c. Object

☐ d. B

☒ e. A

27

What methods does the java.lang.Runtime class provide related to memory management?(Choose 3)

Answer: ☒ a. to query the total memory and free memory

☒ b. to create new memory locations

☒ c. to invoke Garbage collector

☒ d. to dump the objects to storage device

☒ e. to run finalize methods explicitly

28

Which of the following are valid return types of an annotation member? (Choose 3)

Answer: ☒ a. annotations

☒ b. Class

☒ c. ResultSet

☒ d. String

☒ e. StringBuffer

29

Consider the following code snippet:

```
import java.io.*;

class Test implements Serializable {
    transient int a = 10;
    int b;

    public String toString() {
        return "a = " + a + ", " + "b = " + b;
    }
}

public class IOCode4 {
    public static void main(String args[]) throws FileNotFoundException,
        IOException, ClassNotFoundException {
        ObjectOutputStream out = new ObjectOutputStream(new
            FileOutputStream("C:/ObjectData"));
        Test t1 = new Test();
        t1.a = 20;
        t1.b = 30;
        out.writeObject(t1);
        out.close();

        ObjectInputStream in = new ObjectInputStream(new
            FileInputStream("C:/ObjectData"));
        Test t2 = (Test) in.readObject(); // Line 1
        System.out.println(t2);
        in.close();
    }
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. a = 20, b = 30
- ☐ b. a = 10, b = 0
- ☐ c. throws TransientException at the commented line (// Line 1)
- ☐ d. a = 10, b = 30

☒ e. a = 0, b = 30

30

What happens if a thread cannot get the lock on an object?

Answer: ☐ a. Thread receives the lock immediately

☐ b. Compilation error

☒ c. Object moves the thread to the wait pool

☐ d. Thread overrides the lock

☐ e. Runtime exception

31

Which of the following interfaces are newly added to the collection framework in JDK 1.6? (Choose 3)

Answer: ☒ a. Dequeue

☒ b. Queue

☒ c. Stack

☒ d. NavigableSet

☒ e. NavigableMap

32

Which of the following statements are true regarding variable arguments?(Choose 2)

Answer: ☐ a. When used in mixed with normal arguments, variable arguments type should be the last in the arguments list

- ☐ b. Variable argument type identifiers are internally treated as collections
- ☐ c. Only primitive data types can be used as variable arguments
- ☐ d. Variable argument type identifiers are internally treated as arrays
- ☐ e. When used in mixed with normal arguments, variable arguments type should be the first in the arguments list

33

Consider the following code:

```
public class Code16 {  
    static {  
        System.out.print("Planet ");  
    }  
    public static void main(String... args) {  
  
    }  
    static {  
        System.out.print("Welcome ");  
    }  
}
```

Which of the following will be the valid output for the above code?

Answer: ☐ a. Welcome Planet

☒ b. Planet Welcome

☐ c. Compilation Error

☐ d. Planet

☐ e. Compiles and Executes with no output

34

Consider the following code:

```
import java.util.*;
```

```
class Arrays2List {  
    public static void main(String args[]) {  
        String numbers[] = { "One", "Two", "Three", "Four", "Five" };
```

```
        // Line 1
```

```
        // Line 2
```

```
    }
```

```
}
```

Which one of the following options when substituted to //Line 1 and Line 2 converts the String array into ArrayList of Strings?

- Answer: ☒ a. Line 1: `ArrayList<String> l;`  
Line 2: `l = Arrays.asList(numbers);`
- ☐ b. Line 1: `ArrayList<String> l;`  
Line 2: `l = toArrayList(numbers);`
- ☐ c. Line 1: `ArrayList<String> l;`  
Line 2: `l = numbers.toArrayList();`
- ☐ d. Line 1: `List<String> l;`  
Line 2: `l = numbers.toList();`
- ☒ e. Line 1: `List<String> l;`  
Line 2: `l = Arrays.asList(numbers);`

35

Which of the following are correct for Set interface?(Choose 2)

- Answer: ☐ a. the elements are ordered
- ☐ b. the elements are sorted
- ☒ c. cannot contain NULLs



- ☐ d. the elements are NOT ordered
- ☐ e. Can contain Nulls

36 For any two objects a and b of same type, which of the following statements are true regarding the equals() and hashCode() methods? (Choose 3)

- Answer: ☐ a. a.equals(b) returns true, and a.hashCode() may not be equal to b.hashCode()
- ☐ b. If a.hashCode() is not equal to b.hashCode() then a.equals(b) should return false
  - ☐ c. a.hashCode() is equal to b.hashCode(), but a.equals(b) may return false
  - ☐ d. Both hashCode() and equals() are called one-to-one internally to synchronize, the hashcode of two objects
  - ☐ e. if a.equals(b) returns true then a.hashCode() should be equal to b.hashCode()

37 Consider the following code snippet:

```
String hi="Hi";  
String mom="mom";
```

Which of the following are the valid ways to concatenate the above two Strings to get the String "Himom"?

- Answer: ☒ a. hi.concat(mom)
- ☒ b. new String("Hi"+"mom")
- ☐ c. it cannot be done

☒ d. hi + mom

☐ e. hi & mom

38 Which of the following methods is used to check whether ResultSet object contains records?

Answer: ☐ a. last()

☒ b. next()

☐ c. hasRecords()

☐ d. first()

☐ e. previous()

39 Consider the following program:

```
class DataRunner implements Runnable {  
    private int t;  
    public DataRunner that;  
  
    DataRunner() { }  
  
    DataRunner(int t) { this.t = t; }  
  
    public void run() {  
        try {  
            System.out.println("Locked");  
            that.wait(3000);  
            that.notify();  
            System.out.println("Released");  
        } catch (InterruptedException e) { }  
    }  
}  
  
public class CryptThread {
```

```

public static void main(String[] args) {
    DataRunner dr1 = new DataRunner(1);
    DataRunner dr2 = new DataRunner(2);
    dr1.that = dr2;
    dr2.that = dr1;
    new Thread(dr1).start();
    new Thread(dr2).start();
}
}

```

Which of the following options suggests the valid changes to the above code, in order to get the below output

Locked

Locked

(wait for 3 seconds)

Released

Released

- Answer: ☐ a. The code inside the run() method in the DataRunner class should be kept inside the synchronized block by synchronizing current object using 'this'
- ☒ b. No changes required.
- ☐ c. The run() method inside the DataRunner class has to be declared as synchronized
- ☐ d. The code inside the run() method in the DataRunner class should be kept inside the synchronized block by synchronizing the instance object reference variable 'that'

40

Consider the following code snippet:

```

import java.util.*;

public class TestCol2 {
    public static void main(String[] args) {
        Vector col = new Vector();
        col.add(new Integer(1));
        col.add(new Integer("2"));
    }
}

```

```
col.add(new Float(3.2d));  
col.add(col.elementAt(1));  
col.setElementAt(col.elementAt(2),0);  
System.out.println(col);  
}  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. [1,2,3.2,2]
- ☐ b. [3.2, 3.2, 2, 2]
- ☒ c. [3.2,2,3.2,2]
- ☐ d. Runtime error
- ☐ e. compilation error

41 Delimiters themselves be considered as tokens. State True or False.

Answer: ☒ True ☐ False

42 Consider the following code:

```
1. public class SprtOne {  
2. public static void main(String [] args) {  
3. int m = 25;  
4. while(m > 10) {  
5. if ((m / 2) > 10) {  
6. System.out.println(m + " - Not there yet");  
7. }  
8. else {  
9. System.out.println(m + " - it's there");  
10. }  
11. m--;
```

```
12. }  
13. System.out.println(m + " Finished");  
14. }  
15. }
```

Which of the following option is a valid comment on the output of the above code?

- Answer: ☒ a. Last message printed is '10 - Finished'
- ☐ b. Last message printed is '11 - Finished'
- ☐ c. Last message printed is '9 - Finished'
- ☐ d. Last message printed is '12 - Finished'

43 Which of the following options is true about multi-level inheritance?

- Answer: ☐ a. Inheriting from more than one super class
- ☐ b. Inheriting from a single class
- ☒ c. Inheriting from a class which is already in an inheritance hierarchy
- ☐ d. Inheriting from two super classes

44 Consider the following code:

```
public class Sand implements Runnable {  
    Runnable t;  
    Sand() { }  
    Sand(Thread t) {  
        this.t = this;  
    }  
    public static void main(String[] args) {
```

```

new Thread(new Sand(new Thread(new Sand()))).start();

}

public void run() {
    synchronized(this) {
        System.out.println("Welcome");
        new Thread(t).start();
        System.out.println("Planet");
    }
}
}

```

Which of the following gives the valid output for the above code?

Answer: ☐ a. Prints: Welcome  
Planet  
Welcome  
Planet

☐ b. Prints the below output repeatedly without ending the program:  
Welcome  
Planet

☐ c. Prints: Welcome  
Welcome

☐ d. Runtime Error

☒ e. Compilation Error

45

It is possible to create a table using JDBC API. State True or False.

Answer: ☒ True ☐ False

1

Consider the following code:

```
public class Code17 {  
    public static void main(String args[]) {  
        new Code17();  
    }  
    {  
        System.out.print("Planet ");  
    }  
    {  
        System.out.print("Welcome ");  
    }  
}
```

Which of the following will be the valid output for the above code?

- Answer: ☐ a. Compilation Error
- ☐ b. Compiles and Executes with no output
- ☐ c. Planet
- ☐ d. Welcome Planet
- ☒ e. Planet Welcome

2

Which of the following options will protect the underlying collections from getting modified?

- Answer: ☐ a. Collections.checked
- ☐ b. unmodifiableCollection(Collection<? extends T> c);
- ☒ c. None of the listed options
- ☐ d. synchronizedCollection(Collection<T> c);

3

Consider the following program:

```
class A extends Thread {  
    public A(Runnable r) {}  
    public void run() {System.out.print("A");}  
}
```

```
class B implements Runnable {  
    public void run() {System.out.print("B");}  
}
```

```
class C {  
    public static void main(String[] args) {  
        new A(new B()).start();  
    }  
}
```

What will be the output of the above program?

Answer: ☐ a. Compile-time error

☒ b. Prints: A

☐ c. Prints: BA

☐ d. Prints: AB

☐ e. Prints: B

4

Which of the following are the valid ways of creating wrapper type objects?  
(Choose 3)

Answer: ☒ a. Byte bite = new Byte("-128");

☐ b. Integer integer = new Integer("false");

☒ c. Boolean b = new Boolean("23.9");



☐ d. Character c = new Character("a");

☒ e. Float f = new Float("45.67d");

5

Consider the following code:

```
class Resource1 { }
class Resource2 { }
class ResourceConsumer extends Thread {
    Resource1 res1;
    Resource2 res2;
    ResourceConsumer(Resource1 res1, Resource2 res2) {
        this.res1 = res1;
        this.res2 = res2;
    }

    public void run() {
        try {
            synchronized(res1) {
                System.out.println("Planet");
                res1.wait(1000);
                System.out.println("Earth");
                res2.notify();
                System.out.println("Welcome");
            }
        } catch (InterruptedException ie) { }
    }
}

public class NeverEnding {
    public static void main(String[] args) {
        ResourceConsumer rc1 = new ResourceConsumer(
            new Resource1(), new Resource2());
        rc1.start();
    }
}
```

Which of the following gives the valid output for the above given code?

- Answer: ☐ a. Prints: Planet  
(waits for 1000 milli seconds)  
Earth  
throws `IllegalThreadMonitorStateException` at runtime
- ☒ b. Prints nothing and throws  
`IllegalThreadMonitorStateException` at runtime
- ☐ c. Prints: Planet  
(waits for 1000 milli seconds)  
Earth  
Welcome
- ☐ d. Prints: Planet  
(waits for 1000 milli seconds)  
Earth  
Welcome  
throws `IllegalThreadMonitorStateException` at runtime
- ☐ e. Compile-time Error

6

Consider the following program:

```
public class D extends Thread {  
    public void run() {  
        System.out.println("Before start method");  
        this.stop();  
        System.out.println("After stop method");  
    }  
  
    public static void main(String[] args) {  
        D a = new D();  
        a.start();  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Runtime exception
- ☐ b. Compilation error
- ☐ c. 'Before start method' and 'After stop method'
- ☒ d. 'Before start method' only

7 Null can be used as value for the parameterized INSERT and UPDATE query. State True or False.

Answer: ☒ True ☐ False

8 Consider the following code:

```
public class Pass {  
    static int j=20;  
    public static void main(String argv[]) {  
        int i=10;  
        Pass p = new Pass();  
        p.amethod(i);  
        System.out.println(i);  
        System.out.println(j);  
    }  
  
    public void amethod(int x) {  
        x=x*2;  
        j=j*2;  
    }  
}
```

Which of the following gives the correct output for the above code?

Answer: ☒ a. Prints: 10, 40

- ☐ b. Prints: 10,20
- ☐ c. Prints: 20, 40
- ☐ d. Compile time Error: Method parameter does not match variable

9 Which of the following options are true about Associations?(choose 2)

- Answer: ☐ a. Association refers to a class reuses the properties and methods of another class
- ☒ b. In Associations, cardinality refers to the number of related objects
- ☐ c. Association refers to an object composed of set of other objects
- ☒ d. Associations are bi-directional
- ☐ e. Association refers to binding of related data and behaviours into a single entity

10 Consider the following program:

```
public class ExceptionType {  
    public static void main(String args[]) {  
        String s = null;  
        try {  
            System.out.println(s.length());  
        }  
        catch(Exception e) {  
            System.out.println("Exception 1");  
        }  
        finally {  
            try {  
                generateException();  
            }  
        }  
    }  
}
```

```
}  
catch(Exception e) {  
    System.out.println("Exception 2");  
}  
}  
}
```

```
static void generateException() throws IllegalArgumentException {  
    throw new IllegalArgumentException();  
}  
}
```

Which of the following statements are true regarding the above given program?  
(Choose 3)

- Answer: ☒ a. The output "Exception 2" is because of the exception thrown programmatically
- ☐ b. The output "Exception 2" is because of the Exception thrown by JVM
- ☒ c. The Exception thrown by generateException() method is an Unchecked Exception
- ☐ d. The output "Exception 1" is because of the Exception thrown programmatically
- ☒ e. The output "Exception 1" is because of the Exception thrown by JVM

11 Consider the following code snippet:

```
class Thing { }  
  
class GC5 {  
    public static void main(String args[]) {  
        Thing h = new Thing();  
        Thing w = new Thing();  
  
        h = new GC5().kill(h, w);  
    }  
}
```

```
}
```

```
public Thing kill(Thing h, Thing w) {  
    killSecondTime(h);  
    killSecondTime(w);
```

```
    return w;  
}
```

```
public void killSecondTime(Thing killable) {  
    killable = null;  
}  
}
```

How many objects are eligible for Garbage Collection?

Answer: ☐ a. four

☒ b. one

☐ c. no objects are eligible

☐ d. two

☐ e. three

12

Which of the following modifiers cannot be used with the abstract modifier in a method declaration?(Choose 3)

Answer: ☒ a. final

☒ b. private

☐ c. protected

☐ d. public

☒ e. synchronized

13 Consider the following code snippet:

```
interface InterfaceA {  
    String toString();  
}  
  
public class TestInterfaceA {  
    public static void main(String[] args) {  
        System.out.println(new InterfaceA() {  
            public String toString() {  
                return "test";  
            }  
        });  
    }  
}
```

Which of the following option will be the output of the above code snippet?

Answer: ☐ a. Runtime Error

☐ b. hashCode of the InterfaceA object in Hexa Decimal

☒ c. test

☐ d. Compilation Error

14 Which of the following annotations are defined in java.lang.annotation package? (Choose 2)

Answer: ☒ a. @Target

☐ b. @Override

- ☐ c. @Deprecated
- ☒ d. @Retention
- ☐ e. @SuppressWarnings

15 Consider the following:

Given that a class Test, declares a member variable named 'Scores' as an array of int as follows:

```
int Scores[];
```

Which of the following code fragments would correctly initialize the member variable Scores as an array of 4 int with the value of zero, if used in the constructor? (Choose 2)

- Answer: ☒ a. Scores = new int[4];
- ☒ b. Scores = new int[4];  
for( int i = 0 ; i < 4 ; i++ ){ Scores[i] = 0 ; }
- ☐ c. Scores = new Scores[4];
- ☐ d. Scores = { 0,0,0,0 };
- ☐ e. int Scores[ = {0,0,0,0};

16 Consider the following code:

```
public class Code13 {  
    public static void main(String... args) {  
        for(String s:args)  
            System.out.print(s + " , ");  
        System.out.println(args.length);  
    }  
}
```



```
}
```

Which of the following will be the output if the above code is attempted to compile and execute?

- Answer: ☐ a. Compilation Error: var-args cannot be used as arguments for main() method
- ☐ b. variable arguments cannot be used with enhanced for-loop
- ☐ c. Runtime Error: NoSuchMethodError
- ☒ d. Program compiles successfully and prints the passed arguments as comma separated values and finally prints the length of the arguments-list

17

Consider the following code snippet:

```
import java.util.*;
class Student {
    String studentName;
    Student() {}
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }
}

public class TestCol7 {
    public static void main(String args[]){
        TreeSet students = new TreeSet();
        students.add(new Student("Raju"));
        students.add(new Student("Krishna"));
        students.add(new Student("Vijay"));

        System.out.println(students);
    }
}
```

```
}
```

Running the above code, throws Runtime exception.

Which of the following options will make the code run properly?

- Answer: ☐ a. The Student class should implement Serializable interface
- ☒ b. The Student class should implement Comparable interface.
- ☐ c. The Student class should implement Cloneable interface
- ☐ d. The Student class should implement Externalizable interface
- ☐ e. The Student class should implement Comparator interface.

18

Consider the following code snippet:

```
String a = "abc";
```

```
For the expression a="\\"+a+"\\"
```

What will be the output of the above code snippet?

- Answer: ☐ a. abc
- ☐ b. "a= abc"
- ☐ c. \"abc\"
- ☐ d. \"\"abc\"\"
- ☒ e. "abc"

19

Consider the following code snippet:

```
interface Things {
```

```
public static final int SIMPLE = 3;
void work(int t);
}
```

```
public class TestThings implements Things {
public static void main(String [] args) {
int x = 5;
new TestThings().work(++x);
}
```

```
public void work(int s) {
s += SIMPLE + ++s;
System.out.println("w " + s);
}
}
```

Which of the following will be the output of the above given code snippet?

Answer: ☐ a. An exception is thrown at runtime

☐ b. w 10

☒ c. w 16

☐ d. w 14

☐ e. Compilation fails

20

Consider the following code:

```
public class Code4 {
private int second = first;
private int first = 1000;

public static void main(String args[]) {
System.out.println(new Code4().second);
}
}
```

Which of the following will be the output for the above code?

- Answer: ☒ a. Compiler complains about forward referencing of member variables first and second
- ☐ b. Compiler complains about private members is not accessible from main() method
- ☐ c. 1000
- ☐ d. Throws a Runtime error 'Illegal forward reference'

21

Which of the following options are true? (Choose 2)

- Answer: ☐ a. Error objects are thrown only by JVM
- ☒ b. Errors can be thrown programmatically
- ☐ c. Errors are handled only by JVM
- ☐ d. Errors cannot be handled programmatically using try-catch blocks.
- ☒ e. A class can extend Error class and can be used as user-defined Error class

22

From JDK 1.6, which of the following interfaces is also implemented by java.util.TreeMap class?

- Answer: ☐ a. Deque
- ☐ b. NavigableList
- ☐ c. NavigableSet

23

Consider the following code:

```
public class ThrowsException {
    static void throwMethod() {
        System.out.println("Inside throwMethod.");
        throw new IllegalArgumentException("exception");
    }

    public static void main(String args[]) {
        try {
            throwMethod();
        }
        catch (IllegalArgumentException e) {
            System.out.println("Caught " + e);
        }
    }
}
```

Which of the following gives the output for the above given code?

Answer: ☐ a. Runtime Error

☒ b. Compilation Error

☐ c. Inside showMethod. followed by caught:  
java.lang.IllegalArgumentException: exception

☐ d. Compiles successfully, nothing is printed

24

Consider the following scenario:

A CAD application written in Java needs to save and load the drawings prepared using the application. The performance in saving and loading the drawing is the concerned issue.

Which of the following options gives the correct combination of stream classes that can accomplish the above requirement?

- Answer: ☐ a. FileReader and BufferedReader, FileWriter and BufferedWriter
- ☐ b. Line Input Stream and Buffered Input Stream, Line Output Stream and Buffered Output Stream
- ☒ c. File Input Stream and Filter Input Stream, File Output Stream and Filter Output Stream
- ☐ d. File Input Stream and Buffered Input Stream, File Output Stream and Buffered Output Stream
- ☐ e. Input StreamReader and File Input Stream, Output StreamWriter and File Output Stream

25

Which of the following statements are True regarding inner classes? (Choose 3)

- Answer: ☒ a. A class defined as a member of a class
- ☐ b. A class defined outside a public class but inside a package
- ☒ c. Extending an existing class at the time of instantiation
- ☐ d. A class defined inside a package without using class keyword
- ☒ e. A class defined inside a method

26

Which of the following exhibits the different ways of constructing a String object?(Choose 3)

- Answer: ☐ a. String s = new String[5];
- ☒ b. String can be constructed from byte arrays

- ☒ c. String can be made from character arrays
- ☒ d. String s = new String("");
- ☐ e. String s = new String(null);

27

Consider the following scenario:

Three threads are running concurrently, fetching the HTML pages from three different websites, to show them on three different windows.

Which of the following is true regarding the above scenario?

- Answer: ☒ a. After fetching the HTML pages and displaying it to the corresponding windows, the threads keep running. So that when a link is clicked on those pages, the same thread can fetch the clicked link.
- ☐ b. After fetching the HTML pages and display it to the window, the threads goes to dead state
  - ☐ c. All the three thread objects need to be synchronized
  - ☐ d. All the three window objects need to be synchronized

28

Which of the following options are true about abstract implementations in Collections?(choose 3)

- Answer: ☒ a. It provides static factory class
- ☒ b. All major interfaces are supported
  - ☐ c. They provide hooks for custom implementations
  - ☐ d. Map is not supported

- ☒ e. All major implementations like Hashtable, Vectors are supported

29

Consider the following code segment:

```
public class ExampleTwo {  
    public static void main(String args[]) {  
        int z = 8;  
        z += --z;  
        System.out.println("Value of z : " + z);  
    }  
}
```

Which of the following gives the valid output for above?

- Answer: ☐ a. Prints: "Value of z: 16"
- ☐ b. Prints: "Value of z: 14"
- ☐ c. A runtime ArithmeticException will be thrown.
- ☒ d. Prints: "Value of z: 15"

30

Consider the following code:

```
1. class ExampleSix {  
2. String msg = "Type is ";  
3. public void showType(int n) {  
4. String tmp;  
5. if(n > 0) tmp = "positive";  
6. System.out.println(msg + tmp);  
7. }  
8. }
```

On running the above code it throws the compile-time error- the variable tmp is not initialised.



Which of the following changes to the above code will make the code to compile properly? (Choose 3)

- Answer: ☐ a. Declare the variable tmp as static
- ☐ b. Insert the following line at line 6  
else tmp = "not positive";
- ☒ c. Remove line 4 and insert it at line 2
- ☒ d. Delcare the variable tmp as StringBuffer type
- ☒ e. Change line 4 as follows  
String tmp = null;

31

Which of the following is the correct syntax for Annotation declaration?

- Answer: ☐ a. interface author{  
@String name(),  
String date()  
}
- ☒ b. @interface author{  
String name();  
String date();  
}
- ☐ c. @interface author{  
@String name();  
@String date();  
}
- ☐ d. interface @author{  
String name(),  
String date()  
}
- ☐ e. interface author{  
String name(),

```
String date()  
}
```

32

Which of the following are true regarding CallableStatement?(choose 2)

- Answer: ☐ a. Used to call a Query and Open ResultSet
- ☐ b. Used to create a Stored Procedure from a Java application
- ☒ c. Accepts the SQL datatypes defined in java.sql.Types as the return types from database
- ☒ d. Used to call a Stored Procedure
- ☐ e. Accepts only the Java primitive types returned from the database

33

Consider the following code snippet:

```
interface First {  
    int part();  
}  
  
public class Alpha {  
    class A implements First {  
        public int part() { return 1; }  
    }  
  
    public int firstpart(First first) { return first.part(); }  
  
    public void testFirst() {  
        class A implements First {  
            public int part() { return 2; }  
        }  
  
        System.out.println(firstpart(new A()));  
    }  
}
```

```
public static void main(String args[]) {  
    new Alpha().testFirst();  
}  
}
```

Which of the following will be the output of the above code snippet?

Answer: ☐ a. Compilation fails

☒ b. 1

☐ c. 1 2

☐ d. 2

☐ e. 2 1

34

Consider the following code snippet:

```
class Vehicle {  
    String name;  
  
    // method definition  
}  
  
class TestVehicle {  
    public static void main(String a[]) {  
        Vehicle v = new Vehicle();  
        v.name = "Santro";  
        System.out.println(v); // Line 1  
    }  
}
```

Which of the following code pieces, when replaced for the comment line (// Code Here), so that (// Line 1) gives the output "Santro"?

Answer: ☒ a. public String toString() { return name; }

- ☐ b. protected String showString() { return name; }
- ☐ c. public String Vehicle() { return name; }
- ☐ d. protected String toString() { return name; }
- ☐ e. public String showObject() { return name; }

35

Consider the following code snippet:

```
public class TestString8 {  
    public static void main(String [] args) {  
        String d = "java ";  
        d += d;  
        d += "world of ";  
        d.concat("programming ");  
        d.toUpperCase();  
        System.out.println(d);  
    }  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. java java
- ☐ b. java
- ☐ c. JAVA JAVA WORLD OF PROGRAMMING
- ☒ d. java java world of
- ☐ e. java java world of programming

36

Consider the following code:

```
public class SwitchCase {
```

```
public static void main(String args[]) {  
    int x = 10;  
    switch(x) {  
        case 10: System.out.println("10");  
        case 10: System.out.println("10");  
        case 20: System.out.println("20");  
        default: System.out.println("30");  
    }  
}  
}
```

Which of the following will be the output for the above program?

- Answer: ☐ a. 10  
10  
20
- ☐ b. 30
- ☐ c. 10  
10
- ☐ d. 10  
20
- ☒ e. Compilation Error

37

What of the following is the default Scroll type for a ResultSet object?

- Answer: ☐ a. ResultSet.TYPE\_SCROLLABLE
- ☐ b. ResultSet.TYPE\_SCROLL\_BIDIRECTIONAL
- ☐ c. ResultSet.TYPE\_SCROLL\_INSENSITIVE
- ☐ d. ResultSet.TYPE\_SCROLL\_SENSITIVE
- ☒ e. ResultSet.TYPE\_FORWARD\_ONLY

38

Which of the following statements are true?(Choose 2)

Answer: ☐ a. A class is a collection of objects

☒ b. A package is a collection of classes

☐ c. An object is a collection of packages

☐ d. A package is a collection of objects

☒ e. An object is a collection of properties and methods

39

Which of the following features are provided by the Iterator, which is not available in for-each construct?(Choose 2)

Answer: ☐ a. to change the order of elements in the collection

☐ b. to insert new elements into the collection while iterating

☒ c. Remove the current element

☒ d. Iterate over multiple collections in parallel

☐ e. to move in backward order

40

Consider the following code:

```
1. public class DartCo {  
2. public void getDart(int x) {  
3. int cnt = 0;  
4. do {  
5. if (cnt == 0) {  
6. System.out.println("Welcome!");  
7. }
```

```
8. else {  
9. System.out.println(x);  
10. x++;  
11. }  
12. cnt++;  
13. } while (cnt < 15);  
14. }  
15.  
16. public static void main(String [] args) {  
17. DartCo dc = new DartCo();  
18. dc.getDart(25);  
19. }  
20. }
```

Which of the following gives the value of x at line 9 when the value of cnt equals to 14?

Answer: ☐ a. 25

☒ b. 38

☐ c. 10

☐ d. 34

☐ e. 45

41

Consider the following code snippet:

```
import java.io.*;  
  
public class IOCode6 {  
    public static void main(String args[]) throws FileNotFoundException,  
        IOException, ClassNotFoundException {  
        ObjectOutputStream out = new ObjectOutputStream(new  
            FileOutputStream("C:/ObjectData"));  
        out.writeObject(new Serializable() { }); // Line 1  
        out.close();  
    }  
}
```

```
ObjectInputStream in = new ObjectInputStream(new
FileInputStream("C:/ObjectData"));
System.out.println(in.readObject()); // Line 2
}
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Code does not compile. Shows error 'Unable to create object' at Line 2
- ☐ b. Code does not compile. Shows error 'Cannot create object for Serializable interface' at Line 1
- ☒ c. Code compiles but on running throws 'ClassNotFoundException' at Line 1
- ☐ d. Code compiles but on running throws 'ClassNotFoundException' at Line 2
- ☐ e. Code compiles and runs without any error

42

Which of the following algorithms are used for Garbage Collector implementation? (Choose 3)

Answer: ☐ a. Sweep and Compact algorithm

☒ b. Mark and Sweep algorithm

☐ c. Deduction algorithm

☒ d. Mark and Compact algorithm

☒ e. Reference Counting algorithm

43

Consider the following program:



```

class CatchableException extends Throwable { }

class ThrowableException extends CatchableException { }

public class ThrowCatchable {
    public static void main(String args[]) {
        try {
            tryThrowing();
        }
        catch(CatchableException c) {
            System.out.println("Catchable caught");
        }
        finally {
            tryCatching();
        }
    }

    static void tryThrowing() throws CatchableException {
        try {
            tryCatching();
            throw new ThrowableException();
        }
        catch(NullPointerException re) {
            throw re;
        }
    }

    static void tryCatching() {
        System.out.println(null + " pointer exception");
    }
}

```

What will be the output of the above program?

- Answer: ☐ a. runtime error
- ☐ b. Catchable caught  
null pointer exception  
null pointer exception

- ☐ c. null pointer exception  
null pointer exception  
Catchable caught
- ☐ d. compile-time error
- ☒ e. null pointer exception  
Catchable caught  
null pointer exception

44

Which of the following are true about inheritance?(Choose 3)

Answer: ☐ a. Inheritance is a kind of Encapsulation

- ☒ b. Inheritance enables adding new features and functionality to an existing class without modifying the existing class
- ☒ c. In an inheritance hierarchy, a subclass can also act as a super class
- ☐ d. Inheritance does not allow sharing data and methods among multiple classes
- ☒ e. In an inheritance hierarchy, a superclass can also act as a sub class

45

Consider the following code:

```
class A {  
    public A getMe() {  
        return this;  
    }  
}  
  
class B extends A {  
    public static void main(String args[]) {  
        A a = new B() {
```

```
public A getMe() {  
    return this;  
}  
};  
System.out.println(a.getClass().getSuperclass().getName());  
}  
}
```

Which of the following will be the output of the above code snippet?

- Answer: ☐ a. A
- ☐ b. Runtime error
- ☐ c. Object
- ☒ d. B
- ☐ e. Anonymous

1

Consider the following code:

```
class One {  
    public One() {  
        System.out.print(1);  
    }  
}  
class Two extends One {  
    public Two() {  
        System.out.print(2);  
    }  
}  
class Three extends Two {  
    public Three() {  
        System.out.print(3);  
    }  
}  
public class Numbers {  
    public static void main(String[] argv) {  
        new Three();  
    }  
}
```

Which of the following will be the output for the above program?

Answer: ☒ a. 123

☐ b. 321

☐ c. 3

☐ d. No output

☐ e. 32

2

Consider the following code:

```
public class ExampleSeven {  
    public static void main(String [] args) {  
        String[] y = new String[1];  
    }  
}
```

```
String x = "hello";  
y[0] = x;  
  
// Code here  
System.out.println("match");  
} else {  
System.out.println("no match");  
}  
}  
}
```

Which of the following code snippet when substituted at the commented line (// Code here) in the above code will make the program to print "no match"?

- Answer: ☐ a. if (x.equals(y[0])) {
- ☐ b. if (x != y[0].toString()) {
- ☐ c. if (x & y[0]) {
- ☒ d. if (!x.equals(y[0])) {


3

Consider the following code snippet:

```
String deepak = "Did Deepak see bees? Deepak did.";
```

Which of the following method calls would refer to the letter b in the string referred by the variable deepak?

- Answer: ☐ a. charAt(16)
- ☒ b. charAt(15)
- ☐ c. charAt(12)
- ☐ d. charAt(13)

 e. charAt(14)

4

Consider the following code:

```
class ExceptionOne extends Exception { }

class ExceptionOneOne extends ExceptionOne { }

class ExceptionOneTwo extends ExceptionOne { }

class TestExp {
    public static void main(String args[]) {
        throwExceptions();
    }

    public static void throwExceptions() throws Exception {
        // Insert Code
    }
}
```

Which of the following code snippets when substituted to the commented line (// Insert Code) in the above program will make the program to compile and run properly? (Choose 3)

Answer: ☐ a. throw new Error();

☐ b. throw new Throwable();

☒ c. throw new ExceptionOneOne();

☒ d. throw new Exception();

☒ e. throw new ExceptionOneTwo();

5

Consider the following code:

```

public class ManTin {
    public static void main(String [] args) {
        int j = 2, y = 3, z = 10;
        for (;j < 6;j++) {
            y = (++y + z++);
            System.out.println(y+z);
        }
    }
}

```

Which of the following gives the valid output for the above code?

- Answer: ☒ a. 25  
38  
52  
67
- ☐ b. 25  
39  
54  
70
- ☐ c. 26  
40  
55  
71
- ☐ d. 27  
41  
56  
72

6

Consider the following code:

```

1. public class EqualsTest {
2. public static void main( String args[] ) {
3. float A = 1.0F / 3.0F;
4. if( ( A * 3.0) == 1.0F ) System.out.println( "Equal" );
5. else System.out.println( "Not Equal" );
6. }

```

7. }

Which of the following will be the output of the above program?

- Answer: ☒ a. The program compiles and prints "Not Equal".
- ☐ b. The program compiles and prints "Equal".
- ☐ c. The compiler objects to line 3.
- ☐ d. The compiler objects to using == with primitives in line 4.

7

Consider the following code snippet:

```
import java.util.*;
```

```
class TestString5 {  
    public static void main(String args[]) {  
        String s = "Get Entertained";  
        StringTokenizer st = new StringTokenizer(s, "t");  
        while(st.hasMoreElements())  
            System.out.print(st.nextToken());  
    }  
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. Get Entertained
- ☐ b. EntertainedGet
- ☐ c. Entertained Get
- ☐ d. GetEntertained
- ☒ e. Ge Enerained



8

Consider the following code:

```
package com.java.test;  
public class A {  
    public int x;  
    public static int y;  
    protected static int z;  
}
```

```
package com.java.test1;  
import com.java.test.A;  
public class B {  
    public static void main(String[] args) {  
        A a = new A(), b = new A();  
        a.x++;  
        b.y++;  
        a.z++;  
        System.out.print(a.x + " " + a.y + " " + b.x + " " + b.y + " " + a.z);  
    }  
}
```

Which of the following gives the correct output for the above code?

Answer: ☒ a. Compilation Error 'a.z is not visible'☐ b. Prints:1 0 0 1 0☐ c. Prints: 0 0 0 0 0☐ d. Prints: 1 1 0 1 1☐ e. Runtime Error

9

Consider the following code:

```
interface Data { public void load(); }
```

```
abstract class Info { public abstract void load(); }
```

Which of the following implementation correctly uses the Data interface and Info class?

- Answer: ☐ a. public class Employee implements Info extends Data {  
public void load(){ /\*do something\*/ }  
public void Info.load(){ /\*do something\*/ }  
}
- ☒ b. public class Employee extends Info implements Data {  
public void load() { /\*do something\*/ }  
}
- ☐ c. public class Employee implements Info extends Data {  
public void Data.load(){ /\*do something\*/ }  
public void load(){ /\*do something\*/ }  
}
- ☐ d. public class Employee implements Info extends Data {  
public void load() { /\*do something\*/ }  
}
- ☐ e. public class Employee extends Info implements Data  
public void load(){ /\*do something\*/ }  
public void Info.load(){ /\*do something\*/ }  
}

10

Which of the following gives the exact relationship between Annotation Type and Annotation?

- Answer: ☒ a. Classes and their Objects.
- ☐ b. Declaration methods and classes.
- ☐ c. Classes and interfaces.
- ☒ d. Only declaration elements in class.
- ☐ e. Classes and comments.

11

Consider the following code:

```
1. public class Circle1 {
2.     private String string = "String1";
3.     void work() {
4.         String x = "String2";
5.         class Circle2 {
6.             public void peepOut() {
7.                 System.out.println(string);
8.                 System.out.println(x);
9.             }
10.        }
11.        new Circle2().peepOut();
12.    }
13.
14.    public static void main(String args[]) {
15.        Circle1 c1 = new Circle1();
16.        c1.work();
17.    }
18. }
```

Which of the following changes made to the above code will make the code to compile and execute properly and gives the following output?

String1

String2

- Answer: ☐ a. The object for the inner class Circle2 should be created in main() method
- ☐ b. The variable at line 2 should be declared as final
- ☒ c. The variable at line 4 should be declared as final
- ☐ d. The inner class Circle 2 should be an abstract class
- ☐ e. The method at line 6 should be defined as final method

12

Consider the following code:

```
interface InterfaceFirst {  
    int ID = 10;  
    void show();  
}  
  
interface InterfaceSecond extends InterfaceFirst {  
    int ID = 20;  
    void show();  
}  
  
class Implementation implements InterfaceSecond {  
    public void show() {  
        System.out.println("ID:" + ID);  
    }  
}  
  
public class TestImplementation {  
    public static void main(String args[]) {  
        InterfaceSecond i2 = new Implementation();  
        i2.show();  
        InterfaceFirst i1 = i2;  
        i1.show();  
    }  
}
```

Which of the following will be the output for the above code snippet?

- Answer: ☐ a. 10  
10
- ☒ b. Compilation Error. Duplicate identifier ID found
- ☐ c. 20  
20
- ☐ d. 10  
20
- ☐ e. 20

13

Which of the following are true? (Choose 2)

Answer: ☒

- ☒ a. One thread cannot tell another thread to sleep
- ☐ b. If a thread's priority is explicitly set, it is set to 1
- ☒ c. The join() method joins the current thread to wait list of current object
- ☒ d. No locks are released when a thread goes to sleep
- ☐ e. yield() changes the priority of a thread

14

Consider the following code:

```
import java.io.IOException;

public class ExceptQuest {
    public ExceptQuest() throws IOException {
        throw new IOException();
    }
}
```

Assume that the definition of ExtendedExceptQuest begins with the line

```
public class ExtendedExceptQuest extends ExceptQuest
```

It is required that none of the constructors of ExtendedExceptQuest should throw any checked exception

Which of the following can give a solution for the above scenario?

Answer: ☐

- ☐ a. It can be achieved by avoiding explicit calls to the base class constructor

- ☒ b. It can be achieved by placing the call to the superclass with a super keyword, which is placed in a try block with a catch block to handle the IOException thrown by the super class
- ☐ c. It can be achieved by catching the Exception objects thrown by the super class constructors, using its parent class Exception
- ☐ d. It cannot be done with the above definition of the base class

15

Which of the following options are true? (Choose 3)

- Answer: ☒ a. Subclasses of Exceptions can be caught using try-catch
- ☒ b. Error type objects can be handled only by JVM
- ☐ c. Error is the subclass of Exception
- ☒ d. Subclasses of Error are unchecked
- ☒ e. Subclasses of Throwable can be caught using try-catch

16

Consider the following scenario:

In a word processor program, there are two threads, one to read a file and the other to write to a file. The thread to read a file waits for the thread to write before performing its operation. \_\_\_\_\_ arises when the thread to read a file, reads the file, before the thread to write to a file performs its operation. Choose the correct answer from the following to fill in the blank.

- Answer: ☒ a. Race condition
- ☐ b. Lock starvation condition
- ☐ c. Deadlock condition
- ☐ d. Lock release condition

17

Which of the following options gives the difference between == operator and equals() method?

Answer: ☐ a. if equals() is true then == is also true

☐ b. Equals compares hash value and == compares character sequence

☐ c. No difference;they are essentially the same

☒ d. ==compares object's memory address but equals character sequence

☐ e. == works on numbers equals() works on characters

18

Both TYPE\_SCROLL\_SENSITIVE and TYPE\_SCROLL\_INSENSITIVE types ResultSets will make changes visible if they are closed and then reopened. State True or False.

Answer:

☒ True

☐ False

19

Consider the following scenario:

A company maintains its employees details in the following format using text file 'employees.txt':

EmployeeID <tab> EmployeeName <tab> BasicSalary <tab> Address <tab>  
PhoneNumber

Provided EmployeeID is int, BasicSalary is double, EmployeeName, Address and PhoneNumber are String type.

Which of the following options gives the correct combination of Input-Output Stream classes that can be used to manipulate the 'employees.txt' file?

- Answer: ☐ a. FilterInputStream and FilterOutputStream
- ☐ b. FileReader, BufferedReader, FileWriter and BufferedWriter
- ☒ c. ObjectInputStream, ObjectOutputStream
- ☐ d. InputStream, OuputStream

20 In an Object Oriented system, if class A inherits its properties from class B, class A and B are known as \_\_\_\_\_ and \_\_\_\_\_ class, respectively.

- Answer: ☐ a. parent, base
- ☒ b. derived, base
- ☐ c. base, derived
- ☐ d. super, base

21 Which of the following are true about Annotations?(Choose 3)

- Answer: ☐ a. Annotations cannot have user-defined types as members.
- ☒ b. Annotations improve the program performance.
- ☒ c. Annotations can be declared without members.
- ☒ d. Annotations reduces the memory usage.
- ☒ e. Annotation members can have default values.

22 Consider the following code snippet:



```
import java.util.*;

public class TestCol4 {
    public static void main(String[] args) {
        Set h = new HashSet();
        h.add("One");
        h.add("Two");
        h.add("Three");
        h.add("Four");
        h.add("One");
        h.add("Four");

        List l = new ArrayList();

        l.add("One");
        l.add("Two");
        l.add("Three");

        h.retainAll(l);

        System.out.println("Size:" + l.size() + h.size());
    }
}
```

What will be the output of the above code snippet?

- Answer: ☒ a. Size: 33
- ☐ b. Size: 36
- ☐ c. Size: 63
- ☐ d. Size: 66
- ☐ e. Compilation error

23

Which of the following interfaces is used to get the number of columns, names of columns and its types in a table?

Answer: ☐ a. DBMetaData

☐ b. MetaData

☐ c. DatabaseMetaData

☒ d. ResultSetMetaData

☐ e. SchemaMetaData

24

Consider the following listing of the Widget class:

```
1. class Widget extends Thingee {  
2. static private int widgetCount = 0;  
3. public String wName;  
4. int wNumber;  
5.  
6. private static synchronized int addWidget(){  
7. return ++widgetCount;  
8. }  
9. public Widget(){  
10. wNumber = addWidget();  
11. }  
12. }
```

What happens when the class is compiled and use multiple Widget objects in a program that uses multiple Threads to create Widget objects?

Answer: ☒ a. The class compiles, and each Widget will get a unique wNumber reflecting the order in which the Widgets were created.

☐ b. The class compiles and each Widget will get a wNumber, but we cannot guarantee that the number will be unique.

☐ c. The compiler objects to the addWidget call of a static method in line 10.

- ☐ d. A runtime error occurs in the addWidget method.

25 Which of the following statements are True about polymorphism? (Choose 2)

- Answer: ☐ a. Static methods are extremely polymorphic
- ☐ b. Use of final keyword is a way to achieve polymorphism
- ☒ c. The reference variable type determines which methods to be called
- ☒ d. Polymorphic method invocations apply only to overridden instance methods
- ☒ e. Only member methods can be polymorphic not attributes

26 Consider the following code:

```
public class Code5 {  
    private int second = getFirst();  
    private int first = 6000;  
  
    private int getFirst() {  
        return first;  
    }  
  
    public static void main(String args[]) {  
        System.out.println(new Code5().second);  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Compiler complains about private members is not accessible from main() method

- ☐ b. Throws a Runtime error 'Illegal forward reference'
- ☒ c. 6000
- ☐ d. Compiler complains about forward referencing of member variables first and second

27

Which of the following code and their comments are true? (Choose 2)

- Answer: ☐ a. `private void main(String a[]) { }`  
// Compiles successfully and on running displays the message 'Main method not public'
- ☒ b. `public static void main(String a[]) { }`  
// Compiles and runs successfully
- ☐ c. `static void main(String a[]) { }`  
// Compiles and runs successfully
- ☐ d. `public static void Main(String args[]) { }`  
// Compiles and runs successfully
- ☒ e. `public void main(String a[]) { }`  
// Compiles successfully and on running displays the message 'Main method not static'

28

Consider the following code snippet:

```
class GC7 {  
    public static void main(String args[]) {  
        ArrayList a = new ArrayList();  
        HashSet h = new HashSet();  
  
        a.add(new String("One"));  
        a.add(new String("Two"));  
        a.add(new String("Three"));  
        a.add(new String("Four"));  
    }  
}
```

```
h.add(new String("Four"));
h.add(new String("Five"));
h.add(new String("Six"));
h.add(new String("Seven"));
```

```
h.addAll(a);
```

```
a = null;
}
}
```

How many objects are eligible for Garbage Collection?

- Answer: ☐ a. two
- ☐ b. no objects are eligible
- ☐ c. four
- ☒ d. one
- ☐ e. three

29

Consider the following code:

```
public class Trial {
    public static void main(String argc[]) {
        Trial tr = new Trial();
        tr.amethod(tr);
    }
}
```

```
public void amethod(Trial tr) {
    int i=99;
    multi(tr);
    System.out.println(i);
}
```

```
public void multi(Trial tr) {  
    tr.i = tr.i*2;  
}  
}
```

Which of the following gives the valid output for the above given code?

- Answer: ☐ a. Prints 198
- ☐ b. Runtime Error
- ☐ c. Prints 99
- ☒ d. Compilation Error 'tr.i is not a valid field'.

30

Which of the following are interfaces in JDBC API?(choose 3)

- Answer: ☒ a. DriverManager
- ☒ b. CallableStatement
- ☒ c. Connection
- ☐ d. Statement
- ☐ e. SQLWarning

31

Which of the following statements are valid 3 dimensional character array creations?(Choose 2)

- Answer: ☒ a. `char[][][] charArray = new char[2][2][];`
- ☐ b. `char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e', 'f'}};`
- ☐ c. `char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e'}};`

- ☒ d. `char[][][] charArray = {{{'a', 'b'}, {'c', 'd'}, {'e', 'f'}}};`
- ☐ e. `char[2][2][] charArray = {'a', 'b'};`

32

Consider the following scenario:

A company keeps a record of all its employees. Every month, an employee will be chosen at random from these records to receive a free gift.

Which of the following core interfaces is best-suited for implementing the above scenario?

Answer: ☐ a. Queue

☒ b. Map

☐ c. List

☐ d. Set

33

Which of the following options define an entrySet in the Map interface?(Choose 2)

Answer: ☒ a. the Set of key-value pairs contained in the Map

☐ b. The Collection of values contained in the Map

☐ c. It is an inner interface inside Map interface

☒ d. the Set of keys contained in the Map

34

Consider the following scenario:

In a text editor application written in Java, two threads t1 and t2 are running to perform a particular task as follows:

Thread t1 - for reading the text from keyboard and filling it in a character array, and

Thread t2 - for saving the text to a file by reading it from the same array.

The array object is synchronized among these two threads t1 and t2.

Which of the following options gives the correct combination of stream classes and the corresponding threads that uses them?

- Answer: ☐ a. t1 uses CharArrayReader, t2 uses CharArrayWriter and FileReader
- ☒ b. t1 uses Reader, t2 uses Writer and Reader
- ☐ c. t1 uses ArrayReader, t2 uses ArrayWriter and FileReader
- ☐ d. t1 uses CharArrayWriter, t2 uses CharArrayReader and FileWriter
- ☐ e. Threads cannot be used for reading and writing arrays

35

Which of the following options gives the relationship between a Pilot class and Plane class?

- Answer: ☐ a. Polymorphism
- ☒ b. Association
- ☐ c. Persistence
- ☐ d. Inheritance
- ☐ e. Aggregation



36

Which of the following statements are True about instantiating an inner class?  
(Choose 2)

Answer: ☒

a. A non-static inner class should be instantiated, using the instance of the outer class

☐

b. A static inner class can be instantiated without instantiating the outer class

☐

c. On instantiating an outer class will instantiate its inner class also

☒

d. A class defined inside a method can be instantiated anywhere from the class

☐

e. An inner class defined as a member of a class cannot be instantiated within the same class

37

Consider the following code:

```
import java.util.*;

class Student implements // Code 1
{
    String studentName;
    Student() { }
    Student(String studentName) {
        this.studentName = studentName;
    }

    public String toString() {
        return this.studentName;
    }

    // Code 2
}

public class TestCol7 {
    public static void main(String args[]){
        ArrayList students = new ArrayList();
        students.add(new Student("Olive"));
```

```

students.add(new Student("Veni"));
students.add(new Student("Krishna"));
students.add(new Student("Daniel"));
students.add(new Student("Elavarasan"));
students.add(new Student("Praveen"));

Collections.sort(students); // Line 1

System.out.println(students);
}
}


```


Running the above code, throws Runtime exception at // Line 1


Which one of the following code snippets when substituted to the above code at the comment lines  
 (//Code 1 and //Code 2) will make the code run properly and print the names in alphabetical order?

Answer: 

a. Code 1: implements Comparable  
 Code 2: public int compareTo(Object o) {  
 Student s = (Student) o;  
 return  
 this.studentName.compareTo(s.studentName);  
 }

 b. Code 1: implements Comparator  
 Code 2: public int compareTo(Object o) {  
 Student s = (Student) o;  
 return this.studentName.compareTo(s.studentName);  
 }

 c. Code 1: implements Comparator  
 Code 2: public int compare(Object o1, Object o2) {  
 Student s1 = (Student) o1;  
 Student s2 = (Student) o2;  
 return s1.studentName.compareTo(s2.studentName);  
 }

 d. Code 1: implements Comparable  
 Code 2: public boolean equals(Object o) {  
 Student s = (Student) o;  
 return

```
this.studentName.equals(s.studentName);  
}
```

38 For which of the following scenarios, the enhanced for-each can be used?  
(Choose 2)

- Answer: ☒ a. Traversing collection class implementations
- ☐ b. Traversing SQL ResultSets
- ☐ c. Incrementing or decrementing counter variable of a for loop
- ☐ d. Traverse through all the variables declared inside a method
- ☒ e. Traversing array objects

39 Which of the following statements is true about NavigableMap interface?

- Answer: ☐ a. a new class implementation of Set which can navigate the ResultSet object
- ☐ b. a SortedMap extended with navigation methods for Lists.
- ☒ c. a SortedMap extended with navigation methods reporting closest matches for given search targets.
- ☐ d. a SortedMap extended with navigation methods for Sets.

40 Which of the following are features of SDE?(Choose 3)

- Answer: ☒ a. tools to convert the project to native executables
- ☒ b. integrated Debugging tools

- ☒ c. effective memory management through Garbage Collection
- ☒ d. automatic compilation and Build
- ☐ e. automatic Code Generation

41 The purpose of Weak Reference Type object is \_\_\_\_\_.

- Answer: ☐ a. to keep objects alive only while they are in use (reachable) by clients
- ☐ b. to allow clean up after finalization but before the space is reclaimed
- ☒ c. to delete objects from a container if the clients are no longer referencing them and memory is tight
- ☐ d. to keep objects alive provided there is enough memory

42 Consider the following program:

```
import java.io.*;

public class SteppedTryCatch {
    public static void main(String[] args) {
        try {
            try {
                try {
                    // Line 1
                } catch (Exception e3) {
                    System.out.println("Exception 1");
                }
                // Line 2
            } catch (IOException e2) {
                System.out.println("Exception 2");
            }
            // Line 3
        }
    }
}
```

```
} catch(FileNotFoundException e1) {  
System.out.println("Exception 3");  
}  
}  
}
```

You need to make the above program to print the output as  
Exception 1  
Exception 2  
Exception 3

Which of the following when substituted in place of commented lines (// Line 1, Line 2 and Line 3) produce the desired output?

- Answer: ☐ a. Line 1 : throw new FileNotFoundException();  
Line 2 : throw new IOException();  
Line 3 : throw new Exception();
- ☐ b. Line 1 : throw new Exception();  
Line 2 : throw new IOException();  
Line 3 : throw new FileNotFoundException();
- ☒ c. The code is wrong. Exceptions should be caught in reversed hierarchy order.
- ☐ d. Line 1 : throw new IOException();  
Line 2 : throw new IOException();  
Line 3 : throw new IOException();
- ☐ e. Line 1 : throw new IOException();  
Line 2 : throw new FileNotFoundException();  
Line 3 : throw new Exception();

43

Consider the following program:

```
class A extends Thread {  
public void run() {System.out.print("A");}  
}  
  
class B {
```

```
public static void main (String[] args) {  
    A a = new A();  
    a.start();  
    try {  
        a.join();  
    } catch (InterruptedException ie) {  
        ie.printStackTrace();  
    }  
    a.start();  
}
```

What will be the output of the above program?

- Answer: ☒ a. An `IllegalThreadStateException` is thrown at run-time
- ☐ b. The program compiles and runs without error
- ☐ c. None of the listed options
- ☐ d. Compile-time error

44

Consider the following code:

```
class ArrayTest {  
    public static void main(String[] args) {  
        int[][] a1 = {{1,2,3},{4,5,6},{7,8,9,10}};  
        System.out.print(a1[0][2]+","+a1[1][0]+","+a1[2][1]);  
    }  
}
```

Which of the following gives the output of the above code?

- Answer: ☒ a. Prints: 3, 4, 8
- ☐ b. Prints: 7, 2, 6
- ☐ c. None of the listed options

- ☐ d. Run-time error
- ☐ e. Compile-time error

45

Consider the following program:

```
public class TestStart implements Runnable {  
    boolean stoper = true;  
    public void run() {  
        System.out.println ("Run method Executed");  
    }  
  
    public static void main (String[] argv) {  
        TestStart objInt = new TestStart();  
        Thread threadX = new Thread(objInt);  
        threadX.start();  
        threadX.start();  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Compiles and executes successfully  
Prints "Run method executed"
- ☐ b. Compilation Error
- ☒ c. Compiles and on execution  
Prints "Run method executed" then  
throws Runtime exception
- ☐ d. Compiles and on execution  
Prints "Run method executed"

1

Consider the following program:

```
public class ExceptionType {
    public static void main(String args[]) {
        String s = null;
        try {
            System.out.println(s.length());
        }
        catch(Exception e) {
            System.out.println("Exception 1");
        }
        finally {
            try {
                generateException();
            }
            catch(Exception e) {
                System.out.println("Exception 2");
            }
        }
    }

    static void generateException() throws IllegalArgumentException {
        throw new IllegalArgumentException();
    }
}
```

Which of the following statements are true regarding the above given program?  
(Choose 3)

- Answer: ☒ a. The output "Exception 2" is because of the exception thrown programmatically
- ☐ b. The output "Exception 1" is because of the Exception thrown programmatically
- ☒ c. The output "Exception 1" is because of the Exception thrown by JVM
- ☒ d. The Exception thrown by generateException() method is an Unchecked Exception



- ☐ e. The output "Exception 2" is because of the Exception thrown by JVM

2

Consider the following code:

```
public class Except {  
    private void method1() throws Exception {  
        throw new RuntimeException();  
    }  
  
    public void method2() {  
        try {  
            method1();  
        } catch (RuntimeException e) {  
            System.out.println("Caught Exception");  
        } catch (Exception e) {  
            System.out.println("Caught Runtime Exception");  
        }  
    }  
  
    public static void main(String args[]) {  
        Except e = new Except();  
        e.method2();  
    }  
}
```

Which of the following gives the correct output for the above code?

- Answer: ☐ a. No output
- ☐ b. Compile time error
- ☐ c. Prints: Caught Runtime Exception
- ☒ d. Prints: Caught Exception

3

Which of the following statements are true about String Arrays? (Choose 2)

- Answer: ☐ a. Array index can be a long value
- ☐ b. Array index can be a negative value
- ☒ c. `String[][] s = new String[5][];`
- ☒ d. `String[][] s;`
- ☐ e. Array declaration: `String[6] strarray;`

4

Consider the following scenario:

The GenericFruit class defines the following method to return a float value:

```
public float calories( float serving ) {  
    // code goes here  
}
```

A junior programmer writing the Apple class, which extends GenericFruit, proposes to define the following overriding method:

```
public double calories( double serving ) {  
    // code goes here  
}
```

Which of the following statement is True regarding the above scenario?

- Answer: ☐ a. It will not compile because of the different return type.
- ☐ b. It will not compile because of the different input type in the parameter list.
- ☐ c. The double version overrides the float version.
- ☒ d. It will compile but will not override the GenericFruit method because of the different parameter list.

5

Consider the following program:

```
public class TestStart implements Runnable {  
    boolean stoper = true;  
    public void run() {  
        System.out.println ("Run method Executed");  
    }  
  
    public static void main (String[] argv) {  
        TestStart objInt = new TestStart();  
        Thread threadX = new Thread(objInt);  
        threadX.start();  
        threadX.start();  
    }  
}
```

What will be the output of the above program?

- Answer: ☐ a. Compiles and executes successfully  
Prints "Run method executed"
- ☒ b. Compiles and on execution  
Prints "Run method executed" then  
throws Runtime exception
- ☐ c. Compilation Error
- ☐ d. Compiles and on execution  
Prints "Run method executed"

6

Consider the following program:

```
class A extends Thread {  
    private int i;  
    public void run() {i = 1;}  
    public static void main(String[] args) {  
        A a = new A();  
        a.start();  
        System.out.print(a.i);  
    }  
}
```

```
}  
}
```

What will be the output of the above program?

- Answer: ☒ a. Prints 0
- ☐ b. Prints: 01
- ☐ c. Prints: 10
- ☐ d. Prints 1
- ☐ e. Compile-time error

7

Consider the following code:

```
import java.util.*;  
  
public class Code10 {  
    {  
        final Vector v;  
        v=new Vector();  
    }  
  
    public Code10() { }  
  
    public void codeMethod() {  
        System.out.println(v.isEmpty());  
    }  
  
    public static void main(String args[]) {  
        new Code10().codeMethod();  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. Runtime error: NullPointerException

- ☐ b. Prints: false
- ☒ c. Compilation error: cannot find the symbol
- ☐ d. Prints: true
- ☐ e. Compilation error: v is not initialised inside the constructor

8

Consider the following code:

In the following code methodA has an inner class

```
1. public class Base {  
2.   private static final int ID = 3;  
3.   public String name;  
4.   public void methodA( int nn ){  
5.     final int serialN = 11;  
6.     class inner {  
7.       void showResult(){  
8.         System.out.println( "Rslt= " + XX );  
9.       }  
10.    } // end class inner  
11.    new inner().showResult();  
12.  } // end methodA  
13. }
```

Which of the following variables would the statement in line 8 be able to use in place of XX? (Choose 3)

- Answer: ☒ a. The String variable 'name' declared in line 3
- ☐ b. Invoking methodA() defined in line 4
- ☐ c. The int variable 'nn' declared in line 4
- ☒ d. The int variable 'serialN' declared in line 5
- ☒ e. The int variable 'ID' declared in line 2

9

Consider the following scenario:

A Java application needs to stream a video from a movie file.

Which of the following options gives the correct combination of stream classes that can be used to implement the above requirement?

- Answer: ☐ a. InputStreamReader and FileInputStream
- ☐ b. FileInputStream and FilterInputStream
- ☐ c. LineInputStream and BufferedInputStream
- ☐ d. FileReader and BufferedReader
- ☒ e. FileInputStream and BufferedInputStream

10

Which of the following options are true about abstract implementations in Collections?(choose 3)

- Answer: ☒ a. It provides static factory class
- ☐ b. All major implementations like Hashtable, Vectors are supported
- ☒ c. They provide hooks for custom implementations
- ☒ d. All major interfaces are supported
- ☐ e. Map is not supported

11

Consider the following code:

```
class AT1 {  
    public static void main (String[] args) {  
        byte[] a = new byte[1]; long[] b = new long[1];  
    }  
}
```

```
float[] c = new float[1]; Object[] d = new Object[1];
System.out.print(a[0]+", "+b[0]+", "+c[0]+", "+d[0]);
}
}
```

Which of the following will be the output of the above code?

- Answer: ☐ a. Prints: 0,0,0,null
- ☐ b. None of the listed options
- ☐ c. Run-time error
- ☒ d. Prints: 0,0,0.0,null
- ☐ e. Compile-time error

12

Consider the following code snippet:

```
interface i1 {
    int i = 0;
}

interface i2 {
    int i = 0;
}

class inter implements i1, i2 {
    public static void main(String[] a) {
        System.out.println(i);
    }
}
```

Which of the following options will be the output of the above code snippet?

- Answer: ☐ a. Runtime Error

- ☒ b. Prints: 0
- ☐ c. No output
- ☐ d. Compilation Error

13

The following class definitions are in separate files. Note that the Widget and BigWidget classes are in different packages:

```
1. package conglomerato;  
2. public class Widget extends Object{  
3. private int myWidth;  
4. XXXXXX void setWidth( int n ) {  
5. myWidth = n;  
6. }  
7. }
```

// the following is in a separate file and in separate package

```
8. package conglomerato.widgets;  
9. import conglomerato.Widget ;  
10. public class BigWidget extends Widget {  
11. BigWidget() {  
12. setWidth( 204 );  
13. }  
14. }
```

Which of the following modifiers, used in line 4 instead of XXXXXX, would allow the BigWidget class to access the setWidth method (as in line 12)? (Choose 2)

- Answer: ☐ a. final
- ☐ b. default (blank), that is, the method declaration would read void setWidth( int n )
- ☒ c. protected
- ☐ d. private



☒ e. public

14 Which of the following statements are true regarding toString() method?(Choose 3)

Answer: ☒ a. Declared in the Object class

☒ b. It is polymorphic

☐ c. Essential for inheriting a class

☐ d. Defined in the Object class

☒ e. Gives the String representation of an Object

5 It is possible to create a table using JDBC API. State True or False.

Answer:

☒ True

☐ False

16 Consider the following code snippet:

```
import java.util.*;

public class TestCol8{
    public static void main(String argv[]){
        TestCol8 junk = new TestCol8();
        junk.sampleMap();
    }

    public void sampleMap(){
        TreeMap tm = new TreeMap();
        tm.put("a","Hello");
        tm.put("b","Java");
    }
}
```

```
tm.put("c", "World");
Iterator it = tm.keySet().iterator();
while(it.hasNext()){
    System.out.print(it.next());
}
}
}
```

What will be the output of the above code snippet?

- Answer: ☐ a. abc
- ☐ b. Runtime error
- ☐ c. HWJ
- ☒ d. HelloJavaWorld
- ☐ e. Compile error

17

Consider the following program:

```
public class Exp4 {
    static String s = "smile!..";
    public static void main(String[] args) {
        new Exp4().s1();
        System.out.println(s);
    }

    void s1() {
        try {
            s2();
        }
        catch (Exception e) {
            s += "morning";
        }
    }
}
```

```
void s2() throws Exception {  
    s3();  
    s += "evening";  
    s3();  
    s += "good";  
}
```

```
void s3() throws Exception {  
    throw new Exception();  
}  
}
```

What will be the output of the above program?

- Answer: ☐ a. smile!..morningevening
- ☒ b. smile!..morning
- ☐ c. smile!..
- ☐ d. smile!..eveningmorning
- ☐ e. smile!..morningeveninggood

18

Consider the following code snippet:

```
import java.io.*;
```

```
class Test {  
    int a = 10;  
}
```

```
class Test2 extends Test implements Serializable {  
    int b;
```

```
    public String toString() {  
        return "a = " + a + ", " + "b = " + b;  
    }  
}
```

```

}

public class IOCode5 {
    public static void main(String args[]) throws FileNotFoundException,
        IOException, ClassNotFoundException {
        ObjectOutputStream out = new ObjectOutputStream(new
            FileOutputStream("C:/ObjectData"));
        Test2 t1 = new Test2();
        t1.a = 20;
        t1.b = 30;
        out.writeObject(t1);
        out.close();

        ObjectInputStream in = new ObjectInputStream(new
            FileInputStream("C:/ObjectData"));
        Test2 t2 = (Test2) in.readObject(); // Line 1
        System.out.println(t2);
    }
}

```

What will be the output of the above code snippet?

- Answer: ☒ a. a = 10, b = 30
- ☐ b. a = 0, b = 30
- ☐ c. a = 20, b = 30
- ☐ d. a = 10, b = 0
- ☐ e. throws TransientException at the commented line (// Line 1)

19

Which of the following are main packages for Annotations?(Choose 2)

Answer: ☐ a. java.io

☐ b. java.util

- ☒ c. java.lang
- ☒ d. java.lang.annotation
- ☐ e. java.sql

20

Consider the following code:

```
public class LabeledBreak2 {  
    public static void main(String args[]) {  
        loop:  
        for(int j=0; j<2; j++) {  
            for(int i=0; i<10; i++) {  
                if(i == 5) break loop;  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Which of the following will be the output for the above code?

- Answer: ☐ a. 0 1 2 3 4 0 1 2 3 4
- ☐ b. 0 1 2 3 4 5
- ☒ c. 0 1 2 3 4
- ☐ d. 1 2 3 4 5
- ☐ e. Indefinite Loop

21

Consider the following code snippet:

```
abstract class Director {  
    protected String name;
```

```
Director(String name) {  
    this.name = name;  
}  
abstract void occupation();  
}  
  
class FilmDirector extends Director {  
    FilmDirector(String name) {  
        super(name);  
    }  
  
    void occupation() {  
        System.out.println("Director " + name + " directs films");  
    }  
}  
  
public class TestDirector {  
    public static void main(String[] args) {  
        FilmDirector fd = new FilmDirector("Manirathnam");  
        fd.occupation();  
        new Director("Manirathnam") {  
            void occupation() {  
                System.out.println("Director " + name + " also produces films");  
            }  
        }.occupation();  
    }  
}
```

Which of the following will be the output of the above code snippet?

- Answer: ☐ a. Compilation fails at TestDirector class
- ☐ b. Prints: Director Manirathnam also produces films
- ☒ c. Prints: Director Manirathnam directs films  
Director Manirathnam also produces films
- ☐ d. Prints: Director Manirathnam directs films

☐ e. Runtime Error

22 Delimiters themselves be considered as tokens. State True or False.

Answer: ☒ True ☐ False

23 Consider the following scenario:

A company decides that it only wants to use the most popular names for its products. You have to give the number of employees against each unique first name.

Which of the following four core interfaces is best-suited for implementing the above scenario?

Answer: ☒ a. Map  
☐ b. Set  
☐ c. Queue  
☐ d. List

24 Which of the following modifier cannot be applied to the declaration of a field (member of a class)?

Answer: ☐ a. protected  
☐ b. private  
☐ c. final

- ☐ d. public
- ☒ e. abstract

25

Which of the following class in java.sql package maps the SQL data types to Java datatypes?

Answer: ☐ a. JDBCTypes

☐ b. JDBCSQLTypes

☐ c. No explicit data type mapping. Automatically mapped on Query Call.

☒ d. Types

☐ e. SQLTypes

26

Which of the following codes will compile and run properly?

Answer: ☐ a. 

```
public class Test1 {  
    public static void main() {  
        System.out.println("Test1");  
    }  
}
```

☒ b. 

```
public class Test2 {  
    static public void main(String[] in) {  
        System.out.println("Test2");  
    }  
}
```

☐ c. 

```
public class Test3 {  
    public static void main(String args) {  
        System.out.println("Test3");  
    }  
}
```



}

- ☐ d. public class Test4 {  
static int main(String args[]) {  
System.out.println("Test4");  
}  
}
- ☐ e. public class Test5 {  
static void main(String[] data) {  
System.out.println("Test5");  
}  
}

27

Consider the following code:

```
public class WrapIt {  
public static void main(String[] args) {  
new WrapIt().testC('a');  
}  
  
public void testC(char ch) {  
Integer ss = new Integer(ch);  
Character cc = new Character(ch);  
if(ss.equals(cc)) System.out.print("equals ");  
if(ss.intValue()==cc.charValue()) {  
System.out.println("EQ");  
}  
}  
}
```

Which of the following gives the valid output for the above code?

- Answer: ☐ a. Prints: equals
- ☐ b. Compile-time error: Integer wrapper cannot accept char type
- ☒ c. Prints: EQ

- ☐ d. Compile-time error: Wrapper types cannot be compared using equals
- ☐ e. Prints: equals EQ

28

Which of the following statements are valid 3 dimensional character array creations?(Choose 2)

Answer: ☐ a. `char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e', 'f'}};`

☒ b. `char[][][] charArray = {{{'a', 'b'}, {'c', 'd'}, {'e', 'f'}}};`

☐ c. `char[][][] charArray = {{'a', 'b'}, {'c', 'd'}, {'e'}};`

☒ d. `char[][][] charArray = new char[2][2][];`

☐ e. `char[2][2][] charArray = {'a', 'b'};`

29

Consider the following class definition:

```
class InOut{
String s= new String("Between");
public void amethod(final int iArgs){
int iam;
class Bicycle{
public void sayHello(){
...Line 1
}
} //End of bicycle class
} //End of amethod

public void another(){
int iOther;
}
}
```

Which of the following statements would be correct to be coded at ...Line 1?  
(Choose 2)

- Answer: ☒ a. `System.out.println(iArgs);`  
☐ b. `System.out.println(iam);`  
☐ c. `System.out.println(iOther);`  
☒ d. `System.out.println(s);`

30

Consider s1 and s2 are sets.

Which of the following options gives the exact meaning of the method call  
`s1.retainAll(s2)`?

- Answer: ☐ a. transforms s1 into the union of s1 and s2  
☒ b. transforms s1 into the intersection of s1 and s2.  
☐ c. transforms s1 into the (asymmetric) set difference of s1 and s2  
☐ d. copies elements from s2 to s1  
☐ e. returns true if s2 is a subset of s1

31

Which of the following annotations are defined in `java.lang` package? (Choose 3)

- Answer: ☒ a. `@SuppressWarnings`  
☐ b. `@Target`  
☐ c. `@Retention`



d. @Override



e. @Deprecated

32

Consider the following code:

```
class Test {  
    Test(int i) {  
        System.out.println("Test(" + i + ")");  
    }  
}  
  
public class Question{  
    static Test t1 = new Test(1);  
    Test t2 = new Test(2);  
    static Test t3 = new Test(3);  
    public static void main(String[] args){  
        Question Q = new Question();  
    }  
}
```

Which of the following options gives the correct order of initialization?

Answer: ☐ a. Test(3)  
Test(2)  
Test(1)

☐ b. Test(2)  
Test(1)  
Test(3)

☐ c. Test(1)  
Test(2)  
Test(3)

☒ d. Test(1)  
Test(3)  
Test(2)

33

Which of the following methods is used to check whether ResultSet object contains records?

- Answer: ☒ a. first()
- ☐ b. hasRecords()
- ☒ c. next()
- ☐ d. last()
- ☐ e. previous()

34

Which of the following options are true about Associations?(choose 2)

- Answer: ☐ a. In Associations, cardinality refers to the number of related objects
- ☐ b. Association refers to binding of related data and behaviours into a single entity
- ☒ c. Associations are bi-directional
- ☐ d. Association refers to a class reuses the properties and methods of another class
- ☒ e. Association refers to an object composed of set of other objects

35

Consider the following code snippet:

```
class TestString4 {  
    public static void main(String args[]) {  
        String s1 = "Its Great";  
        String s2 = "Its Tricky";  
  
        System.out.print(s1.concat(s2).length() + " ");  
    }  
}
```

```
System.out.print(s1.concat(s2.substring(1, s1.length())).length());  
}  
}
```

What will be the output of the following code snippet?

Answer: ☐ a. 18 20

☐ b. 17 19

☐ c. 20 18

☐ d. 17 17

☒ e. 19 17

36

Consider the following code:

```
class Planet { }  
  
class Earth extends Planet { }  
  
public class WelcomePlanet {  
    public static void welcomePlanet(Planet planet) {  
        if (planet instanceof Earth) {  
            System.out.println("Welcome!");  
        } else if (planet instanceof Planet) {  
            System.out.println("Planet!");  
        } else {  
            System.exit(0);  
        }  
    }  
}  
  
public static void main(String args[]) {  
    WelcomePlanet wp = new WelcomePlanet();  
    Planet planet = new Earth();  
    welcomePlanet(planet);  
}
```

Which of the following will be the output of the above program?

- Answer: ☐ a. An exception is thrown at runtime
- ☐ b. The code runs with no output
- ☒ c. Welcome!
- ☐ d. Planet!
- ☐ e. Compilation fails

37

What methods does the java.lang.Runtime class provide related to memory management?(Choose 3)

- Answer: ☒ a. to invoke Garbage collector
- ☐ b. to create new memory locations
- ☒ c. to query the total memory and free memory
- ☐ d. to dump the objects to storage device
- ☒ e. to run finalize methods explicitly

38

Which of the following statement is true?

- Answer: ☒ a. To call the wait() method, a thread must own the lock of the object on which the call is to be made.
- ☐ b. To call the yield() method, a thread must own the lock of the object on which the call is to be made.
- ☐ c. To call the sleep() method, a thread must own the lock of the object which the call is to be made.

- ☐ d. To call the wait() method, a thread must own the lock of the current thread.
- ☐ e. To call the join() method, a thread must own the lock of the object on which the call is to be made

39

Which of the following statements are true? (Choose 2)

Answer: ☐ a. All exceptions are thrown by JVM

☐ b. All RuntimeException are thrown by JVM

☒ c. JVM cannot throw user-defined exceptions

☐ d. All exceptions are thrown programmatically from the code or API

☒ e. JVM thrown exceptions can be thrown programmatically

40

Consider the following code:

```
public class UnwiseThreads implements Runnable {
    public void run() {
        while(true) { }
    }

    public static void main(String args[]) {
        UnwiseThreads ut1 = new UnwiseThreads();
        UnwiseThreads ut2 = new UnwiseThreads();
        UnwiseThreads ut3 = new UnwiseThreads();
        ut1.run();
        ut2.run();
        ut3.run();
    }
}
```

Which of the following is correct for the above given program?



- Answer: ☐ a. The code compiles and runs 3 non ending non daemon threads
- ☒ b. The code compiles but runs only 1 non ending, non daemon thread
- ☐ c. Runtime Error "IllegalThreadStateException"
- ☐ d. Compilation error "ut2.run() is never reached"

41 Which of the following options is true about multi-level inheritance?

- Answer: ☐ a. Inheriting from two super classes
- ☒ b. Inheriting from a class which is already in an inheritance hierarchy
- ☐ c. Inheriting from more than one super class
- ☐ d. Inheriting from a single class

42 Anonymous class can have their own members.  
State True or False.

Answer: ☒ True ☐ False

43 Consider the following partial code:

```
interface A { public int getValue(); }

class B implements A {
    public int getValue() { return 1; }
}
```

```
class C extends B {  
    // insert code here  
}
```

Which of the following code fragments, when inserted individually at the commented line (// insert code here), makes use of polymorphism? (Choose 3)

- Answer: ☒ a. `public void add(A a) { a.getValue(); }`
- ☒ b. `public void add(B b) { b.getValue(); }`
- ☐ c. `public void add(C c1, C c2) { c1.getValue(); }`
- ☐ d. `public void add(C c) { c.getValue(); }`
- ☒ e. `public void add(A a, B b) { a.getValue(); }`

44

From JDK 1.6, which of the following interfaces is also implemented by `java.util.TreeMap` class?

- Answer: ☒ a. `NavigableMap`
- ☐ b. `NavigableSet`
- ☐ c. `NavigableList`
- ☐ d. `Deque`

45

Consider the following code snippet:

```
class Node {  
    Node node;  
}
```

```
class NodeChain {  
    public static void main(String a[]) {
```

```
Node node1 = new Node(); // Line 1
node1.node = node1;
// Code here
}
}
```

Which of the following code snippets when replaced at the comment line (// Code Here) in the above code will make the object created at Line 1, eligible for garbage collection? (Choose 2)

- Answer: ☐ a. node1.node = null;
- ☐ b. node1 = node1.node;
- ☐ c. node1.node = new Node();
- ☒ d. node1 = null;
- ☒ e. node1 = new Node();