Consider the following program extract from a server application:

```java
ServerSocket ss = new ServerSocket(2311);
while(true) {
    Socket s = ss.accept();
    ObjectOutputStream oos =
        new ObjectOutputStream(s.getOutputStream());
    oos.writeObject(new Date());
    s.close();
}
```

(a) Describe the difference between `Socket` and `ServerSocket`, including the operation of the `accept()` method. [3 marks]

(b) Write a client program which connects to the server, receives an object, and prints the result of the object’s `toString()` method. The three checked exceptions should be handled individually and an appropriate message printed. Ignore unchecked exceptions such as `OutOfMemoryError`. [5 marks]

(c) Does the execution of the `toString()` method in Part (b) pose a security risk to the client? Explain your reasoning. [2 marks]

(d) Rewrite the server to support multiple simultaneous client connections. Every second, the server should send a new `Date` object followed by an `Integer` object to all clients. The `Integer` object should contain the number of connected clients. [10 marks]