1. Explain what the RandomAccessFile seek method does.

Takes a long as an argument and sets the file-pointer offset, measured from the beginning of the file in bytes to where the next read or write will occur.

2. In ObjectRandomAccessFile , the read and write methods, which are invoked in readObject and writeObject, respectively, are not explicitly qualified by an object name. For example, they are simply used as

read(byteArray, 0, objectSize); and

write(byteArray, 0, objectSize);

To what object do read and write belong?

3. What data source is being “read” in read(byteArray, 0, objectSize);?

Reads bytes of data from the input stream

4. What is the destination to which data is copied in read(byteArray, 0, objectSize);?

Data is copied into the byteArray

5. Why do the read and write methods invoked by readObject and writeObject in ObjectRandomAccessFile operate on byte arrays, not objects?

6. In the statement read(byteArray, 0, 16), what does the 0 represent?

The number of bytes that the read method should start reading at from the beginning.

7. In the statement read(byteArray, 0, 16), what does the 16 represent?

The number of bytes that are read into the byteArray

8. ObjectRandomAccessFile does not define the read and write methods. How is it able to use them, or put another way, where do they come from?

They come from the RandomAccessFile class

9. What does the writeObject method of ObjectOutputStream do? Say more than it writes objects.

An object is serialized, then the class of the object, the signature of the class, and the values of the non-transient and non-static fields of the class and all of its supertypes are written to the ObjectOutputStream.

10. What does the readObject method of ObjectInputStream do? Say more than it reads objects.

An object is deserialized, and then the class of the object, the signature of the class, and the values of the non-transient and non-static fields of the class and all of its supertypes are read to the ObjectInputStream.

11. Why do we need to derive ObjectRandomAccessFile from RandomAccessFile? Why not just use RandomAccessFile?

12. What effect does marking some of the data members in Student as “transient” have?

13. The Serializble interface does not require classes which implement it to define any methods. So what purpose does it serve?

14. Explain what it means to serialize an object?

15. Given the statement: Map <String, Book> isbnKeyedMap = new HashMap();

String is the class to which the \_\_\_\_\_\_\_\_\_\_\_\_ belongs, and Book is the class to which the \_\_\_\_\_\_\_\_\_\_\_\_ belongs.

16. What does a Map.Entry represent?

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17. What method would you use to retrieve the key object from a record in a Map.Entry object?

18. What method would you use to retrieve the value object from a record in a Map.Entry object?

19. What does the entrySet method do?

20. What method would you use to insert a record into a Map?

21. When a program reads a file, what condition causes the EOFException to be thrown?

22. What method would you use to convert a ByteArrayOutputStream object to a byte array?

23. The loadMaps method in Driver.java does explicitly return any Map objects to the method that called it. How does the calling method receive the Map objects that loadMaps processes?

24. Write an “if” statement to test the condition empObj is an instance of the Employee class.

25. Why can’t we store primitive data types – char, int, long, double, etc. – in Java collection strucatures like ArrayLists and Maps?