CSC 18B Final Exam – Spring 2016 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Highlight your answers, only one selection for multiple choice. Multiple choice questions are worth 10 points, unless grouped with True/False questions ( the true/false questions are worth 2 points each )

1a: Which of the following is not a GUI component (control or widget)? (4pts)

a. String.

b. Button.

c. Menu.

d. Combo box.

1b: Which component contains menus? (4pts)

a. Menu button.

b. Title bar.

c. Menu bar.

d. Combo box.

1c: True or False: Together, the appearance and the way in which the user interacts with the application are known as that application’s look-and-feel.

2a. Which of the following properly create and initialize a Font object? (5 points)

A. Font f = new Font();

B. Font f = new Font("Serif", Font.Bold + Font.Italic, 19);

C. Font f = new Font(Font.Bold, 20, "SansSerif");

D. Font f = new Font(20, Font.Bold, "Monospaced");

2b: Method getFont of class Graphics returns \_\_\_\_\_\_\_\_. ( 5 points)

a. the current font name as a string

b. the font size in points

c. a Graphics object representing the current font

d. a Font object representing the current font

3a: Consider the examples below:

I. a string.

II. 'a string'.

III. "a string".

IV. "1234".

V. integer.

Which could be the value of a Java variable of type String? ( 4 points )

a. I and II.

b. II and V.

c. II and III.

d. III and IV.

3b: StringBuilder objects can be used in place of String objects if \_\_\_\_\_\_\_\_. ( 4 points )

a. the string data is not constant

b. the string data size may grow

c. the programs frequently perform string concatenation

d. All of the above.

3c: True or False: A regular expression can be used for pattern matching.

4a: True or False: A parallel path starts from the directory in which the application began executing.

4b: True or False: The Path class method ***getFileName*** returns the String name of a file or directory without any location information.

4c: What does the following statement do? ( 6 points )

Scanner scanner = new Scanner(Paths.get("test.txt"));

a. Opens a binary file for input.

b. Opens a binary file for output.

c. Opens a text file for input.

d. Opens a text file for output.

5a: JSliders generate what type of event? ( 4 points )

a. ActionEvents.

b. ChangeEvents.

c. WindowEvents.

d. MouseEvents.

5b: True or False: JFrame is a lightweight component.

5c: True or False: A JFrame window will look like all other windows displayed on that platform.

5d: True or False: JSliders generate ***ChangeEvent*** type of events.

6a: It’s recommended that you do not explicitly create and use Thread objects to implement concurrency, but rather use the \_\_\_\_\_\_\_\_ interface. ( 5 points )

a. ExecutorService

b. Runnable

c. Concurrent

d. Executor

6b: The preferred means of creating multithreaded Java applications is by implementing the \_\_\_\_\_\_\_\_ interface. An object of a class that implements this interface represents a task to perform. ( 5 points )

a. Thread

b. Runner

c. Runnable

d. None of the above.

7a: True or False: When a synchronized method or block is running on an object, the object is locked so no other such method can run on that object at the same time.

7b: True or False: The preferred means of creating multithreaded Java applications is by implementing the ***Runnable*** interface. An object of a class that implements this interface represents a task to perform.

7c: True or False: Thread priorities guarantee the order in which threads execute.

7d: True or False: A runnable thread enters the terminated state (sometimes called the dead state) when it successfully completes its task or otherwise terminates (perhaps due to an error).

7e: True or False: A new thread begins its life cycle by transitioning to the runnable state.

8a: The default sort order in a sorted query is \_\_\_\_\_\_\_\_\_.

a. ascending

b. descending

c. natural

d. None of the above

8b: True or False: Selection criteria can be added to a SQL query using the WHERE keyword.

8c: True or False: The relationship between a primary key and its corresponding foreign keys is called the ***one-to-many*** relationship.

8d: True or False: A foreign key is a column (or set of columns) which have a unique value that cannot be duplicated in other rows.

9a: Which symbol indicates that all columns should be retrieved? (5 points)

a. ?

b. \*

c. +

d. /

9b: Which symbol in a JDBC prepareStatement indicates query parameters? (5 points)

1. ?
2. \*
3. +
4. /

10. Suppose we have a database for a veterinarian clinic. Assuming we have a table named Pets, with the fields: PetName, PetType ( with values of “Cat”, “Dog”, “Iguana” ), PetAge, and NewPatient ( with values of True or False ), write a database query that will query for all Cats that are not new patients, with PetName sorted in ascending order. (10 points)