

CSCI 212 Exam 2 Sample Questions

1. Which regular expression should be used to recognize 3-6 digits followed by one or more word characters followed by 2-4 digits?
 - A) `\d{3,6}\w+\d{2,4}`
 - B) `\d{3,6}\w*\d{2,4}`
 - C) `\d*\w+\d*`
 - D) `\w{3,6}\d+\w{2,4}`
2. Which regular expression should be used to recognize one upper-case letter followed by one digit followed by one lower-case letter?
 - A) `[A-Z]+\d[a-z]+`
 - B) `[A-Z]*\d[a-z]*`
 - C) `[A-Z]\d[a-z]`
 - D) `[A-Z]?\d[a-z]?`
3. What will be the output of the following:

```
String myString = "AB,CD,EF";
Pattern p = Pattern.compile("[,]+");
String[] result = p.split(myString);
for (int i=0; i<result.length; i++)
    System.out.print(result[i]);
```

 - A) ACE
 - B) ABCDEF
 - C) AB,CD,EF
 - D) A,B,C,D,E,F
4. What will be the output of the following:

```
String myString = "123 plus 43 equals 166";
Pattern p = Pattern.compile("[0-9]+");
Matcher m = p.matcher(myString);
while (m.find()) {
    System.out.print(m.group()+"");
}
```

 - A) 123;43;166
 - B) plus equals
 - C) plus; equals
 - D) 12343166
5. What will be the output of the following:

```
String myString = "123 43 166";
Pattern p = Pattern.compile("(\\d+)\\s+");
Matcher m = p.matcher(myString);
if (m.find()) {
    System.out.print(m.group(2));
}
```

 - A) 166
 - B) 123 43 166
 - C) 123

D) 43

6. A HashMap with a perfect hash function can search for an item in time

- A) $O(n^2)$
- B) $O(n)$
- C) $O(\log n)$
- D) $O(c)$

7. If hm is declared as:

```
HashMap hm = new HashMap();
```

the statement

```
hm.put("1234",new Integer(1234));
```

- A) associates the String "1234" as a key with an Integer object having a value of 1234.
- B) associates the Integer 1234 as a key with an Integer object having a value of 1234.
- C) associates the String "1234" as a value with an Integer object having a value of 1234.
- D) associates the Integer 1234 as a value with an String object having a value of "1234".

8. If the following values are put into a HashMap as follows:

```
french.put("cat","chat");  
french.put("water","eau");  
french.put("moon","lune");
```

the keys will come out in the order:

- A) cat, water, moon
- B) cat, moon, water
- C) water, moon, cat
- D) the order is unknown

9. If the following values are put into a TreeMap as follows:

```
french.put("cat","chat");  
french.put("water","eau");  
french.put("moon","lune");
```

the keys will come out in the order:

- A) cat, water, moon
- B) cat, moon, water
- C) water, moon, cat
- D) the order is unknown