Q.2　　a. Explain any four java language features.

Answer:

Simple, Secure, Portable, Object-Oriented, Robust, Multithreaded, Architecture-neutral, Interpreted, High Performance, Distributed, Dynamic

　　b. Explain different data types of java programming language.

Answer:

b.

Type	Storage Requirement	Range (inclusive)
int	4 bytes	-2,147,483,648 to 2,147,483, 647 (just over 2 billion)
short	2 bytes	-32,768 to 32,767
long	8 bytes	-9,223,372,036,854,775,808L to 9,223,372,036,854,775,807L
byte	1 byte	-128 to 127

Q.3　　a. Write a program to create a class Employee and initialize three employee status.

Answer:

```
Q3 a.
1. import java.util.*;
2.
3. public class EmployeeTest
4. {
5. public static void main(String[] args)
6. {
7. // fill the staff array with three Employee objects
8. Employee[] staff = new Employee[3];
9.
10. staff[0] = new Employee("Carl Cracker", 75000,
11. 1987, 12, 15);
12. staff[1] = new Employee("Harry Hacker", 50000,
13. 1989, 10, 1);
14. staff[2] = new Employee("Tony Tester", 40000,
15. 1990, 3, 15);
16.
17. // raise everyone's salary by 5%
18. for (int i = 0; i < staff.length; i++)
19. staff[i].raiseSalary(5);
20.
21. // print out information about all Employee objects
22. for (int i = 0; i < staff.length; i++)
23. {
24. Employee e = staff[i];
25. System.out.println("name=" + e.getName()
26. + ",salary=" + e.getSalary()


27. + ",hireDay=" + e.getHireDay());
28. }
29. }
30. }
```

　　b. Explain the access specifiers of java language with examples.

Answer:
    Public, Private, Protected, Default

Q.4   a. What is synchronization?
Answer: Page Number 238 of Text Book

    b. What is exception handling? Explain how exception handling is managed
        by five keywords.
Answer: Page Number 205 of Text Book

    c. Explain nested try statement with example.
Answer: Page Number 211 of Text Book

Q.5   a. Write two ways in which character can be extracted from a string object.
Answer: Page Number 365 of Text Book

    b. Write two constructors of StringBuffer.
Answer: Page Number 377 of Text Book

    c. Explain the read and writer stream hierarchy.
Answer:
    Input-byte array, files, pipes, filter, sequence, string buffer
    Output-byte, file, filter, pipe, object

Q.6   a. Write a program to create a frame with width 300 and height 200 using
        swings.
Answer:

```
Q6. a.

1.  import javax.swing.*;
2.
3.  public class SimpleFrameTest
4.  {
5.  public static void main(String[] args)
6.  {
7.  SimpleFrame frame = new SimpleFrame();
8.  frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
9.  frame.show();
10. }
11. }
12.

13. class SimpleFrame extends JFrame
14. {
15. public SimpleFrame()
16. {
17. setSize(WIDTH, HEIGHT);
18. }
19.
20. public static final int WIDTH = 300;
21. public static final int HEIGHT = 200;
22. }
```

    b. Explain briefly any four layout managers in Java.
Answer: Page Number 723 of Text Book

Q.7 a. Explain any five common HTML coding errors.
Answer:

i. Missing or extra end tags|If you use a regular editor, insert and delete the begin and end tags of each element at the same time. This way open and close tags always come and go in pairs.
ii. Missing / for elements without end tags|Always use the three-character \ />" to close elements. without end tags.
iii. Overlapping tags|For example, <p> ... </p> is overlapping and incorrect. If you insert begin and end tags together, you can largely avoid tag overlapping as well.
iv. Missing quotation marks for attributes|For example, width=50 or width="50 is in-correct. Remember to always use quote marks for attribute values. Insert both beginand end quote marks at the same time to avoid missing quote marks.
v. Upper-case tag and attribute names|XHTML requires all tag and attribute names to be in lowercase.
vi. Incorrect Element placement|Placing an inline element where only block elements are allowed, or visa versa, is largely tolerated by browsers but not allowed in XHTML. For example br or img can't be placed as a direct child of body and a list can't be a direct child of another list.

Q.8 a. Create a table of five attributes in XHTML.
Answer: Page Number 76 of Text Book

b. Write pros and cos of frames.
Answer: Page Number 96 of Text Book

c. Explain website architecture.
Answer: Page Number 138 of Text Book

Q.9 a. Explain CGI and its Dataflow. Give example of CGI.
Answer: Page Number 294 of Text Book

b. What is Javascript? Write a program in Javascript 'conversion calculator' that convert inches into respective centimeters.
Answer: Page Number 312 of Text Book

Text Books

1. The Complete Reference Java, Herbert Schildt, TMH, Seventh Edition, 2007.

2. An Introduction to Web Design + Programming, Paul S. Wang and Sanda S. Katila, Thomson Course Technology, India Edition, 2008.