Ad Soyad: ....   Numara: ....

1) Explain what the threads are and why they are used and also how they are created in Java. (10p)

2) Define multi-threading, multi-tasking and multi-processing? (10p)

3) Write the output of the code below. Assume that after each thread sleep, J/M switches to an other thread. (15p)

```java
class A extends Thread {
private int x = 0;
public void run() {
  x++;
  System.out.println("A : x : " + (x+1));}}
class B implements Runnable {
private int x = 0;
Thread t1;
  B() {
    t1 = new Thread(this,"Child Thread");
    System.out.println("Constr of Child thread: " + t1.getName());
    System.out.println("Before Child thread start");
    t1.start();
    System.out.println("After Child thread start");}
public void run() {
  x++;
  System.out.println("B : x : " + x);}}
public class Test {
public static void main(String args[]) throws Exception {
  B imprun = new B();
  Thread.sleep(1000);
  Thread t2 = new Thread(imprun);
  t2.start();
  Thread.sleep(1000);
  for(int i = 2; i > 0; i--) {
  System.out.println("Before sleep: " + i);
  Thread.sleep(1000);
  System.out.println("After sleep");}
  A t3 = new A();
  t3.start();
  Thread.sleep(1000);
  A t4 = new A();
  t4.start();
  Thread.sleep(1000); }}
```

4) Write an alternative SQL statement that produces the same resultset with the statement of

" select * from Employee where city in ('A','B','C') ". (10p)

5) When the button is clicked the selected checkboxes are listed in the same page. Write the JSF code of this application. (15p)

☐ Java ☐ C# ☐ PHP ☐ ASP

[Send] → 'Send' Button

6) UserData user =

(UserData) FacesContext.getCurrentInstance().getExternalContext().getSessionMap().get("userData");

What does the code above do? (10p)

7) When the button is clicked, the information about "Bilgisayar" in URUN table will be displayed in the form below. Write the JSF code of this application. Assume that the datasource and connection objects are already defined and not null.(30p)

→ 'Bul'
Button

Ürün İsmi: [   ]

Fiyat: [   ]

Stokta ▾ → Combo
(Stok İn)
Tükendi

⦿ İndirimli
◯ İndirimsiz

URUN → Table

İsim	İndirim	Stok	Fiyat
TV	İndirimli	Tükendi	4000
Bilgisayar	İndirimsiz	Stokta	5000