DIPL Assignment – 4

1. Explain how the gcd of 2 numbers calculated using resolution and unification method.
2. Rewrite the following procedure in functional form

```
double power(double a, int b){
int i;
double temp = 1.0;
for (i = 1; i <= b; i++) temp *= a;
return temp;
}
```

3. Explain SIMD and MIMD architectures with diagram.
4. Explain how the factorial of a number is calculated using resolution and unification method.
5. Explain the Horn Clause with an example.

DIPL Assignment – 5

1. List and explain different formal semantic methods.
2. Write producer consumer problem.
3. Write a Java program to multiply two matrices. Create one thread for computation of each element in the resulting matrix.
4. Draw the box and pointer diagram for the following Scheme lists
    a. (1 (2 (3 4))(5))
    b. ((a ( ))((c) (d) b) e)
5. Consider the following statement:
   for all x, if x is a vehicle then x has two or three or four wheels.
   Translate the above statement into predicate calculus. Also write the Horn clause equivalent statements.