

## **CHAPTER VII**

### **CONCLUSION AND FUTURE SCOPE OF WORK**

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Finally we may conclude the following .

The present investigation deals with the problem in a new light of model building to achieve a new way of establishing the form of W' deflection in the following aspect.

- 1) Single differential equation gives the behaviors of plates of any shape just changing 'u'.
- 2) Computation labor is minimum which is urgently needed to the present age.
- 3) The investigation is valid for movable as well as immovable edge conditions.
- 4) The present program developed gives directly the form of the deflection form which is in exact agreement with that known results as shown in figures.

An almost exact and computerized mathematical model simulation along with the solutions is developed. The results thus obtained have been compared with the well-known results available in the existing literature. So the program developed in chapter 1 gives sufficiently accurate results though it requires further verification for the solution of all sorts of differential equation specially the case studies in Chapter 5 and Chapter 6.

A novel computerized method is suggested in Chapter 2 and Chapter 3. The program in Matlab has been developed in chapter 2 and 3 .The present software verifies several interesting problems of which results are believed to be new . Some of the results are verified and some new problems are still to be verified.

The suggested automatic method tests several types of plate problems in chapter 4 and is justified.

The solution of the partial differential equation of the orthotropic symmetric laminated plates of great importance in engineering application, based on the finite difference with known boundary conditions gives directly the deflected shape and its maximum central deflection.

With the pattern and MATLAB, we can get very precise numerical solution automatically. It is especially suited to calculate the various boundary conditions problem without analysis solution.

Further, with the calculated deflection, it is possible to calculate interior forces and vibration

It may also be pointed out that the program developed for the assumption of deflection form along with the technique for solution using Finite difference need to be developed in a single generalized program for the solution of plate equation in future.