CHAPTER 4

CONCLUSION

The goal of this work is to study the fourth order boundary value problem in the form

$$u^{(4)}(x) = f(x, u(x), u''(x)), \quad x \in (0, 1).$$

$$u(0) = u(1) = u''(0) = u''(1) = 0$$

we will give assumption (H1)-(H2) and conditions (3.16)-(3.18) to guarantees the existence of a solutions for fourth order boundary value problem. It appears that, if we can find the upper and lower solutions and parameters a, b satisfy the assumption and conditions then Theorem 3.2.3 guarantee the existence of solutions of problem (1.5) and (1.3) or (1.2)-(1.3).