On stability and oscillation of solutions of ordinary differentiail equation

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In this thesis, we discuss the oscillatory behavior of solutions of the second order neutral delay differential equation of the formr m(r(t)z’(t)) + q .(t)f (x(o- .(t))). , t t0i =1whereand the ?to,J =1whereli n .z(t) = x(t) + E p i(t)x(r i(0), 0 5_ p i(t) 5 J . po second order nonlinear neutral differential equations with deviating arguments of the form:(r(t)lz”(tr 0)1 ± f j (t ,x(c (t)))=0, t tJ =1wherez(t) = x(t) + E p i(t)x((t)) and a ? O.i=1Moreover, we investigate the oscillation of the second order nonlinearneutral differential equations of the form:I r 11(r(t)tif (x(t))(x(t) + p(t)x(o-(t)))) +q (t) f (x(t),x(r (t)))=0, t r°.j =1Finally, we discuss the stability character of the second order nonlinear differential equation of the form:x”+ h(t , x’) + x + g(t,x)=0, t E R.The obtained