

We study solutions convergence of ordinary differential second order equation $u''(t) + f(u'(t), t)u'(t) + |u|^\beta u = 0$, where β is a positive constant and f is a positive function. Physical meaning of this equation is one-dimensional damped oscillation with time variable environment resistance. We convert this studied function to the system of two equations of the first order. It enables us to proof the existence of some positively invariant sets, hence we derive trajectory behaviour of solutions of this system. Thanks to that we will be able to do speed estimates of energy decrease for non-oscillation solution. Then in many cases we will be able to establish when the system solution for each time will oscillate or on the contrary when the oscillations will stop.