

OSCILLATION OF NONLINEAR NEUTRAL DIFFERENTIAL EQUATIONS OF FOURTH ORDER WITH SEVERAL DELAYS*

Saroj Panigrahi[†]

Rakhee Basu[‡]

Abstract

In this paper, oscillatory and asymptotic behaviour of solutions of a class of nonlinear fourth order neutral differential equations with several delay of the form

$$(r(t)(y(t) + p(t)y(t - \tau)))'''' + \sum_{i=1}^m q_i(t)G(y(t - \alpha_i)) = 0$$

and

$$(E) \quad (r(t)(y(t) + p(t)y(t - \tau)))'''' + \sum_{i=1}^m q_i(t)G(y(t - \alpha_i)) = f(t)$$

are studied under the assumption

$$\int_0^{\infty} \frac{t}{r(t)} dt = \infty$$

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[†]Corresponding author : panigrahi2008@gmail.com, spsm@uohyd.ernet.in, Department of Mathematics, University of Tennessee, Chattanooga TN 37403-2598 USA; Indo-US fellow 2011 in Mathematical and Computational Sciences. Research supported by Indo-US Science and Technology Forum (IUSSTF), Fullbright House, New Delhi, India

[‡]rakheebasu1983@gmail.com, Department of Mathematics and Statistics, University of Hyderabad, Hyderabad-500 046 INDIA; Research supported by Department of Science and Technology, New Delhi, through the letter no. SR/S4/MS : 541/08, dated September 30, 2008.