Corollary 3. *For the existence of a unique positive solution of the problem* (15), (2_1) *it is necessary and sufficient that the real parts of the eigenvalues of the matrix* $(p_{ik})_{i,k=1}^n$ *be negative.*

Corollary 4. *For the existence of a unique positive solution of the problem* (16), (2_2) *it is necessary and sufficient that the matrix* $H = (h_{ik})_{i,k=1}^n$ *satisfy the inequality* (13).

Remark 2. In the conditions of Theorem 2 and its corollaries, the functions q_i $(i = 1, \dots, n)$ may have singularities of arbitrary order in the second argument. For example, in (14), (15) and (16) we may assume that

$$q_i(t, x) = q_{i1}(t)x^{-\mu_{i1}} + q_{i2}(t)\exp(x^{-\mu_{i2}}) \quad (i = 1, \dots, n),$$

where $\mu_{i1} > 0$, $\mu_{i2} > 0$ $(i = 1, \dots, n)$, and $q_{ik} : [a, b] \to \mathbb{R}_+$ $(i = 1, \dots, n;\ k = 1, 2)$ are continuous functions such that $q_{i1}(t) + q_{i2}(t) \not\equiv 0$ $(i = 1, \dots, n)$.

Acknowledgement. Supported by the Shota Rustaveli National Science Foundation (Project # FR/317/5–101/12).

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MIRONENKO REFLECTING FUNCTION AND EQUIVALENCE OF DIFFERENTIAL SYSTEMS

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Theorem. *Let* $F(t, x)$ *be Mironenko reflecting function* [1, 2] *of the differential system* $\dot{x} = X(t, x)$ *and* $\Delta(t, x)$ *be a solution of the system* $\Delta_t + \Delta_x X(t, x) - X_x(t, x)\Delta = \mu\Delta$, *where* $\mu(t, x)$ *is a scalar function, for which* $\mu(-t, F(t, x)) + \mu(t, x) \equiv 0$. *Then for every scalar odd function* $\alpha(t)$ *system* $\dot{x} = X(t, x) + \alpha(t)\Delta(t, x)$ *has the same reflecting function* $F(t, x)$.

This theorem generalizes the theorem of V. V. Mironenko [3].

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