South East Asian J. of Mathematics and Mathematical Sciences
Vol. 16, No. 1 (2020), pp. 143-148

ISSN (Online): 2582-0850

ISSN (Print): 0972-7752

PROPERTIES OF THE WRONSKIAN FOR THE SOLUTION OF A MATRIX DIFFERENTIAL EQUATION

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(**Received:** *Oct. 11, 2019* **Accepted:** *Mar. 06, 2020* **Published:** *Apr. 30, 2020)*

Abstract: In this research paper, an eigenvalue problem related to a matrix differential operator is considered. Problems, existence theorems are also discussed in this research paper. In this article the properties of Wronskian for the solution of a Matrix Differential Equation are proved which are useful in finding further results with the expansion of eigenvalue related to the problem.

Keywords and Phrases: Eigen value, Matrix Differential Equation, Matrix Differential Operator, Boundary value problem, Wronskian properties.

2010 Mathematics Subject Classification: 35802.

1. Introduction

In this paper firstly we consider some differential equations then we check that it is a boundary value problem or not. If the problem is boundary value problem, then we check for existence and uniqueness theorem. Firstly, N.K. Chakravarty considered a pair of differential equations.

$$\frac{d^2v}{dx^2} + pu + qv - u = 0 \tag{1.1}$$