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DEGREE OF APPROXIMATION OF FUNCTION OF CLASS $Z^w(\alpha, \gamma)$ BY $(N, p, q)C_1$ MEAN OF FOURIER SERIES

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Abstract: In this paper we have established a result on the degree of approximation of function belonging to the generalized Zygmund class $z^w(\alpha, \gamma)$ by $(N, p, q)C_1$ means of Fourier series.

Keywords and Phrases: Degree of approximation, Generalized Zygmund class, (N, p, q) mean, $(C, 1)$ mean, $(N, p, q)C_1$ mean.

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1. Introduction

The degree of approximation of function belonging to different classes like $Lip\,\alpha$, $Lip(\alpha, p)$, $Lip(\xi(t), p)$, $W(L^p, \xi(t))$ have been studied by many researchers like Shyamlal [8], Dhakal [1] using different summability methods. The error estimation of function in Lipschitz and Zygmund class, using different means of Fourier series and conjugate Fourier series have been great interest among the researchers.The generalized Zygmund class was introduced by Leindler [3], Moricz [4], Moricz and Nemeth [5] etc. Recently Singh et al. [7], Mishra et al. [6], Kim [2] find results in Zygmund class by using different summability means. In this paper we find the degree of approximation of function in the generalized Zygmund class $z^w(\alpha, \gamma)$ by $(N, p, q)C_1$ mean of Fourier series.