UNIFORM APPROXIMATION IN WEIGHTED SPACES USING SOME POSITIVE LINEAR OPERATORS

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We characterize the functions defined on a weighted space, which are uniformly approximated by the Post-Widder, Gamma, Weierstrass and Picard operators and we obtain the range of the weights which can be used for uniform approximation. We give, also, an estimation of the rate of the approximation in terms of the usual modulus of continuity. Some results from [1], [2] and [3] are obtained, as limit cases.

REFERENCES

[1] J. de la Cal, J. Cárcamo, *On uniform approximation by some classical Bernstein-type operators*, J. Math. Anal. Appl., 279 (2003), pp. 625–638.

[2] V. Totik, *Uniform approximation by positive operators on infinite intervals*, Anal. Math., 10 (1984), 163–182.

[3] V. Totik, *Uniform approximation by Exponential-Type Operators*, J. Math. Anal. Appl., 132 (1988), pp. 238–246.