

**EXTENSION OF CANTOR SET AND ITS APPLICATIONS TO
CONSTRUCT EXAMPLES OF LEBESGUE INTEGRABLE
FUNCTIONS WHICH ARE NOT RIEMANN INTEGRABLE**

B. B. DIVATE

Department of Mathematics,
H.P.T.Arts and R.Y.K. Science College,
Nasik-422005, India

Abstract

The aim of this paper is to construct a uncountable nowhere dense subsets of zero measure as well as of nonzero measures of any closed and bounded interval. As an application of Cantor like set we construct examples of Lebesgue integrable functions which are not Riemann integrable.

Key Words : *Cantor set, Smith- Voltera set, Uncountable set, Riemann integral, Lebesgue integral.*