

MANDELBROT SET, THE MESMERIZING FRACTAL WITH INTEGER DIMENSION

ARUN MAHANTA¹, HEMANTA KR. SARMAH² & GAUTAM CHOUDHURY³

¹Department of Mathematics, Kaliabor College, Nagaon, Assam, India

²Departments of Mathematics, Gauhati University, Guwahati, Assam, India

³Mathematical Science Divisions, Institute of Advance Study in Science and Technology, Boragaon,
Guwahati, Assam, India

ABSTRACT

In this paper we have given a brief review of the Mandelbrot set, one of the best known icons of fractals which arises from the iteration of the complex polynomial of the form $z^2 + c$. We have discussed about the role of critical points in such a study with the help of Schwarzian derivative.

KEYWORDS: Critical Orbit, Fixed Point, Iteration of a Map, Julia Set, Mandelbrot Set, Periodic Point, Schwarzian Derivative