

CERTIFICATE

It is certified that the work contained in the thesis titled "**DEVELOPMENT AND ELECTRICAL CHARACTERIZATION OF HYDROXYAPATITE BASED PIEZOBIOCOMPOSITE AS WELL AS FUNCTIONALLY GRADED MATERIALS**" by "**ABHINAV SAXENA**" has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive Examination, Candidacy and SOTA for the award of Ph.D. Degree.

Dr. Ashutosh Kumar Dubey

(Supervisor)

Department of Ceramic Engineering,

IIT (BHU) Varanasi