CERTIFICATE

This is to certify that the project entitled "Brief Review on Photoluminescence

and Persistent Luminescence of Rare Earth Activated Sr₄Al₁₄O₂₅ Phosphor"

submitted by KALYAN SAGAR SAHU in the partial fulfilment for the requirements

for the requirements for the award of Master of Science Degree in

Physics at Department of Pure and Applied Physics, Guru Ghasidas

Vishwavidyalaya, Bilaspur (C.G.) 495009, India is an authentic work carried out by

under my supervision and guidance.

To the best of my knowledge, the matter embodies in the thesis has not been

submitted to any other University/Institute for the award of Degree or Diploma.

Dr. ALKA SINGH

ASSISTANT PROFESSOR

Department of Pure & Applied Physics GGV, Bilaspur (C. G.)

विभागाध्यक्ष/H.O.D.

शुद्ध एवं अनुप्रयुक्त भौतिकी विभाग Dept. of Pure & Applied Physics गुरु घासीदास विश्वविद्यालय

Guru Ghasidas Vishwavidyalaya बिलासपुर (छ.ग.)/Bilaspur (C.G.)