## CERTIFICATE

This is to certify that **SUDHA KAHAR** had carried out the project on the topic "**Brief review on photoluminescence of zinc oxide nanoparticles**" in the department of PURE AND APPLIED PHYSICS, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G. under my supervision.

She has been working diligently, meticulously and methodically and collected the literature very sincerely and carefully. I hope this would be significant for academic purpose as well as prove informative to all readers.

Here through I declare that this project is an original work of student and all the borrowed texts and ideas have been duly acknowledged.

I wish her all the success in her carrier and life.

SUPERVISED BY Dr. Mrs. SHALINTA TIGGA ASSISTANT PROFESSOR Dept. Of pure and applied physics GGV, Bilaspur, C.G.

विभागाध्यक्षं/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.)