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CERTIFICATE

This is to certify that the thesis entitled “Studies on up-conversion luminescence of $\text{Er}^{3+}/\text{Yb}^{3+}$ codoped lead bismuth borate glasses mixed with some IIIA group sesquioxides” is an authentic record of research work carried out by Mr. Y. Raja Rao under my supervision during the period of his stay. Further, I declare that the work presented in this thesis has not been formed the basis for the award of any Degree, Diploma, Associateship, Fellowship or other similar title earlier. It is also certified that Mr. Y. Raja Rao has fulfilled the course requirement and passed the qualifying examination for the Ph.D. Degree of the University.

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