

**MANONMANIAM**



**SUNDARANAR**

**UNIVERSITY**

**Dr. S. Shailajha, M.Sc., Ph.D.**  
**Assistant Professor**  
**Department of Physics**  
**Manonmaniam Sundaranar University**  
**Tirunelveli – 627 012.**

---

## **CERTIFICATE**

This is to certify that the thesis entitled, “**Structural, optical, mechanical and thermodynamical properties of Cu doped borophosphate glasses and some organic liquid mixtures**” is a bonafide record of research work submitted by **Ms. K. GEETHA** to Manonmaniam Sundaranar University for the award of Degree of Doctor of Philosophy in Physics is based on the results of studies carried out by her under my guidance. This thesis or any part thereof has not been submitted to elsewhere for any other degree, diploma, associateship, fellowship of any University / Institution.

Place: Tirunelveli

**Dr. S. SHAILAJHA**

Date :

Research Guide