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**CERTIFICATE**

This is to certify that the thesis entitled “**EXPERIMENTAL STUDIES ON CROSS LAYER DESIGN TECHNIQUES IN WIRELESS NETWORKS WITH RESPECT TO NETWORK LAYER**” which is being submitted by **Ms. SHOBHA RANI A** for the award of Degree of **DOCTOR OF PHILOSOPHY** in **ELECTRONICS AND COMMUNICATION ENGINEERING** to **KUVEMPU UNIVERSITY**, Jnana Sahyadri, Shankaraghatta, Shimoga, is a record of a bonafide research work carried out by her. The content of this Thesis in full or in parts have not been submitted to any other Institute or University for the award of any Degree.

  
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