

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**SCHOOL OF STUDIES IN ENGINEERING AND TECHNOLOGY**

**GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)**

(A Central University established by the Central University Act 2009 No. 25 of 2009)



**CERTIFICATE**

It is certified that the major project entitled **“Design of a 2.4 GHZ substrate integrated waveguide COUPLER,CROSSOVER , PHASESHIFTER and BUTLER MATRIX”** submitted by **N Bala Murali Krishna, Nishant Kumar and Parul Sharma** in partial fulfilment of the requirements of the award of degree of Bachelor of Technology in Electronics and communication Engineering, School of studies in Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur, is carried out by them in the Department of Electronics and communication Engineering during session 2021-22 under supervision and guidance of **Shrawan Kumar Patel**, Assistant professor, Department of Electronics & Communication Engineering, School of Studies in Engineering & Technology, Guru Ghasidas Vishwavidyalaya, Bilaspur CG.

A handwritten signature in black ink, appearing to read "Soma Das", is written over a horizontal line.

**Dr . Soma Das**

Head of Department

Department of Electronics & Communication Engineering

School of Studies in Engineering & Technology

Guru Ghasidas Vishwavidyalaya, Bilaspur CG