## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING SCHOOL OF STUDIES IN

ENGINEERING AND TECHNOLOGY GURU GHASIDAS VISHWAVIDYALAYA,

BILASPUR (C.G.) (A Central University)



This is to certify that the thesis entitled, "Study & Simulation of Parameter Optimization in Microstrip Patch Antenna using EBG Structures" submitted by RAYAPATI AKASH (16106111) & PAKALA SHIVA RAMA KRISHNA (16106110), in partial fulfillment of the requirement for the award

of Bachelor of Technology degree in Electronics and Communication Engineering at Department of Electronics and Communication Engineering, School of Studies in Engineering and Technology Guru Ghasidas Vishwavidayala Central University Bilaspur Chhattisgarh is an authentic work carried out by them during a period from December 2020 to May 2021 (VIII semester) under the supervision and guidance of Mr.CHANDAN TAMRAKAR (Assistant Professor), Electronics and Communication Engineering. To

Mr.CHANDAN TAMRAKAR (Assistant Professor), Electronics and Communication Engineering. 10 the best of my knowledge, the matter embodied in the thesis has not been submitted to any other University/Institute for the award of any Degree or Diploma.

(Examination of Project is conducted by online mode due to COVID 19 pandemic.)

Date 27-07-2021

Signature of Supervisor

Mr.CHANDAN TAMRAKAR (Assistant Professor)

Head of Department Mrs Anita Channa Electronics and Communication Engineering Department

nstitute of Technology गु. घा. वि., बिलासपुर (छ.ग.) G. G. V. Bilaspur (C.G.)