

# **A DUAL BAND TEXTILE BASED WEARABLE ANTENNA**



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## **CERTIFICATE OF CORRECTNESS AND APPROVAL**

It is hereby confirmed that data in this report “A Dual Band Textile Based Antenna” is completed by 1) Sgt Osama Malik 2) Sgt Abdul Qadeer 3) GC Azib Raza 4) GC Saifullah under the course of Lec Maryam Rasool in completion of our degree of Bachelor in Telecommunication Engineering is correct as well as approved. Percentage of plagiarism turns out to be \_\_\_\_\_ when checked on Turnitin on LMS.

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## **DECLARATION**

No portion of the work presented in this dissertation has been submitted in support of another award or qualification either at this institute or elsewhere.

## **ABSTRACT**

This project introduces a textile based wearable antenna. Textile based antennas include fabric as a substrate having many different wireless applications. A wearable system can be implemented using textile-based substrates due to its various properties including flexibility, camouflage hiding, prone to radiations and low profile. The implemented antenna will operate on two different bands that will make it suitable for various applications used in medical, security and on-body applications.

The work done will be able to make flexible and textile antennas that have taken a lot of attention recently due to their application in wearable systems. Wearable antennas need to be integrated within everyday clothing, be low profile, and be hidden as much as possible. A micro-strip antenna with a textile material as a substrate is flexible, low profile, lightweight and small size, therefore this type of antenna is more suitable for design and fabricates to be worn or carried on one's body. This gives us new ideas to be explored for body area networks (BAN) and their implementations. It also features a multiband design that can be used for various applications as of those bands.

## **DEDICATION**

We dedicate this project to our parents who encouraged us all the way and whose countless efforts and encouragement has made sure that we give it all it takes to finish that which we started. Our prayers and love for them can never be quantified.

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