A Major Project Report

on

ANALYSIS OF THE WATER QUALITY MONITORING SYSTEM

Submitted in partial fulfillment of the requirements

For the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS & COMMUNICATION ENGINEERING

By

Mr. CH K CHAITANYA	**(HT.NO: 17831A0414)**
Mr. K RAJA	**(HT.NO: 17831A0435)**
Mr. K SAITEJA	**(HT.NO: 17831A0436)**

Under the guidance of

Mr. S Sivaiah

Assistant Professor

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

GURU NANAK INSTITUTE OF TECHNOLOGY

(Approved by All India Council for Technical Education, New Delhi, NBA Accredited, NAAC A+, & Affiliated to JNTU Hyderabad)

Campus: Ibrahimpatnam, R.R. District

2020-2021

C E R T I F I C A T E

This is to certify that the Project report entitled "***ANALYSIS OF THE WATER QUALITY MONITORING SYSTEM***" is being submitted by ***CH K CHAITANYA (HT.NO: 17831A0414),K RAJA (HT.NO: 17831A0435), K SAITEJA (HT.NO: 17831A0436)*** in partial fulfillment for the award of the Degree of Bachelor of Technology in ***ELECTRONICS AND COMMUNICATION ENGINEERING*** of Jawaharlal Nehru Technological University during the year March 2021- June 2021 .The Project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for Bachelor Degree.

Internal Guide

Mr. S.Sivaiah
Asst. Professor
Department of ECE

Project coordinator

Mrs. S. Vasanti
Asst. Professor
Department of ECE

Head of the Department

Dr. S. P. Yadav
Department of ECE

Principal

Dr. S. Sreenatha Reddy
GNIT

External Examiner

DECLARATION

We, hereby certify that the work which is being presented in the thesis entitled "***ANALYSIS OF THE WATER QUALITY MONITORING SYSTEM***" by ***CH K CHAITANYA (HT.NO: 17831A0414),K RAJA (HT.NO: 17831A0435), K SAITEJA (HT.NO: 17831A0436)*** in partial fulfillment of requirements for the award of degree of ***B.Tech. (ELECTRONICS AND COMMUNICATION ENGINEERING)*** submitted in the ***Department of ECE*** is an authentic record of our own work carried out during a period from ***March 2021 to June 2021***. The matter presented in this thesis has not been submitted by us in any other University/ Institute for the award of any degree.

Signature of the Students

CH K CHAITANYA **K RAJA** **K SAITEJA**

This is certifying that the above statement made by the candidates is correct to the best of my knowledge.

Signature of the internal guide

The B.Tech Viva-Voce Examination of ***Mr. CH K CHAITANYA, Mr. K RAJA,Mr. K SAITEJA*** has been held on _____ and it is accepted.

Signature of HOD **Signature of External Examiner**

ACKNOWLEDGEMENT

The project entitled "***ANALYSIS OF THE WATER QUALITY MONITORING SYSTEM***" has seen the light of the day because the success of this project is attributed to the intensity, drive and technical competence of many individuals who contributed to make this project a reality despite all odds. So, we express heartfelt pleasure for the people who helped us in this project and gave a never-ending support right from the stage the idea was conceived.

We deeply express our sincere thanks to internal guide **Mr. S. Sivaiah** whose initiation to bring up this project.

We express our sincere thanks to **Mrs. S. Vasanti,** Project Coordinator and our entire faculty, without their constant encouragement and everlasting support this work would not have been possible.

We are very much thankful to **Dr. S. P. Yadav,** Head of ECE Department for his excellent guidance and constant encouragement throughout the project work. His timely advices and endless debates ensured the completion of project report in time.

We cordially thanks to **Dr. Anmol Goyal, Professor, ECE** for his valuable guidance.

We would like to express my profound sense of gratitude to **Dr. S. Sreenatha Reddy,** Principal for his constant and valuable guidance.

We are deeply indebted to Honorable **Dr. H. S. Saini,** Managing Director of Guru Nanak Institutions, for constant Cooperation during the course of work.

Last but not least, we would like to thank our parents for their support and also, we would like to thank God for all good deeds.

In All Sincerity,

Mr. CH K CHAITANYA (HT.NO: 17831A0414)
Mr. K RAJA (HT.NO: 17831A0435)
Mr. K SAITEJA (HT.NO:17831A0436)

VISION AND MISSION OF INSTITUTE

Vision:

To be a World-class Educational and Research Institution in the service of humanity by promoting high quality Engineering and Management education.

Mission:

M1: Imbibe soft skills and technical skills.

M2: Develop the faculty to reach international standards.

M3: Maintain high academic standards and teaching quality that promote analytical thinking and Independent judgement.

M4: Promote research, innovation and product development in collaboration with reputable Foreign Universities.

M5: Offer collaborative industry program in the emerging areas and spirit of enterprise.

QUALITY POLICY

GNIT is committed to provide quality education through dedicated and talented faculty, world class infrastructure, labs and advanced research center to the students.

VISION AND MISSION OF THE DEPARTMENT

The Vision of the Electronics and Communication Engineering department is:

To be recognized as a leading Electronics & Communication Engineering department in the region by students and employers and be known for leadership and commitment to foster quality teaching, learning, research and

innovation.

The Mission of the Electronics and Communication Engineering department is:

1. Nurture young individuals into knowledgeable, skillful and ethical professionals in their pursuit of Electronics and Communication Engineering.
2. Nurture the faculty to expose them to world-class infrastructure.
3. Sustain high performance by excellence in teaching, research and innovations.
4. Extensive partnerships and collaborations with foreign universities for technology up gradation.
5. Develop Industry-Interaction for innovation and product development.

PROGRAM EDUCATIONAL OBJECTIVES (PEO's):

- **PEO-1**: Graduates shall have the ability to apply knowledge and technical skills in emerging areas of Electronics and Communication Engineering for higher studies, research, employability, product development and handle realistic problems.

- **PEO-2**: Graduates shall possess managerial skills, maintain ethical conduct, sense of responsibility to serve the society and protect the environment.

- **PEO-3:** Graduates shall possess academic excellence with innovative insight, soft skills, leadership qualities, knowledge of contemporary issues for successful professional career.

PROGRAM OUTCOMES (PO's):

1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

A. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics natural science, and engineering sciences.

B. **Design / development of solutions:** Design solutions for complex engineering problems and design system components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, society and environmental consideration.

C. **Conduct Investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

D. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

E. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

F. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

G. **Ethics:** Apply ethics principles and commit to professional ethics and responsibilities and norms of the engineering practice.

H. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

I. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

J. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

K. **Life-long learning:** Recognize the need for, and have the preparation.

Course Name related	**Activity in the project**	**Mapped to PO**	**Page NO. in the report**
MPMC	ARDUINO MC	B,C,I,J,K,E	10, 14
ESD	Embedded Systems	B,D,E,G,K	62,65
DC & AC	Communication Systems	B,D,G,H,K	18,20
EMI	Sensors	A,B,D,E	23,33,44
PEE	MOTORS	D,G,J,K	25,40