# **ANNAMACHARYA**

#### INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

# GREEN AUDIT REPORT 2020-2021



INTERNAL QUALITY ASSURANCE CELL (IQAC)

# Energy, Environmental & Green Audit Report

Of

# ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

2020-2021



#### Green Audit Assessment Team

#### Internal

S. No.	Name of the Faculty	Name of the Faculty Designation	
1	Dr. A. Sudhakara Reddy	Principal	Mechanical
2	Dr. K. N. Shashikumar	Associate Professor	Humanities & Sciences
3	Dr. S. Mohana	Assistant Professor	Humanities & Sciences
4	Mrs. K. Chandrakala	Assistant Professor	CIVIL
5	Mr. B. Rajasekhar Reddy	Assistant Professor	CIVIL
6	Mr. C. Harshavardan	Assistant Professor	EEE
7	Mrs. S. Rubiya Parveen	Assistant Professor	CSE
8	Mr. P. Anjaneya	Assistant Professor	ECE

#### External

S. No.	Name	Designation	Department
1	Mrs. G. Eswara Kavitha	Agriculture Officer	Dept. of Agriculture
2	Mr. RJV. Pavan Kumar	Architect	d_sign kiosk
			(Architects and interior designers)

#### CONTENTS

S. No.	Titles/Topics	Page No.
1	Introduction	4
2	Objectives	4-5
3	Methodology	5
4	About the college	5
5	Vision & Mission Statement	6
6	Green Auditing	6
7	Land use Analysis	7
8	Geographical Location with Campus Map in Scale	8-10
9	Tree Diversity of AITS	11-13
10	Faunal Diversity in AITS	14
11	Weather Data of AITS	15-16
12	Air Quality of AITS	16-17
13	Water Analysis report of AITS	17-18
14	Noise level n the surrounding of AITS	18-20
15	Waste Disposal at AITS	20-21
16	Transportation at AITS	21
17	Electrical Power Consumption at AITS	21-23
18	Expenditure on Green Initiatives During the last five years	23

#### 1. INTRODUCTION:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of the environmental diversity of the institute. It aims to analyze environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. The green audit is a valuable means for a college to determine how and where they are using those energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students a better understanding of Green's impact on campus. If self-inquiry is a natural and necessary outgrowth of quality education, it could also be stated that institutional self-inquiry's a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at the local, regional and global levels have led to several environmental and ecological crises. On this background, it becomes essential to adopt the system of the Green Campus for the institutes which will lead to sustaining able development and at the same time reduce a sizable amount of atmospheric CO<sub>2</sub> from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of the Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

#### 2. OBJECTIVES:

In recent times, the Green Audit of an institution has been becoming paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize the framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Auditor:

- To map the Geographical Location of the college
- To document the floral and faunal diversity of the college
- To record the meteorological parameter of Kadapa where college is situated
- To document the ambient environmental condition of weather, air, water and noise of the college.
- To document the waste disposal system.
- · To estimate the Energy requirements of the college.
- To report the expenditure on green initiatives during the last five years

#### 3. METHODOLOGY:

The purpose of the green audit of AITS Kadapa is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes the collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

#### 4. ABOUT THE COLLEGE:

Annamacharya Educational Trust was founded in the year 1997 by a group of highly educated and service-minded individuals with a noble intention of providing professional and higher education to the students coming from backward rural areas of Rayalaseema.

The motto of the trust is: "Vidvan Sarvatra Pujyathe". The Educational Trust was registered in the year 1997 with Regd. No. 135/IV/97 with its Head Quarters at Hyderabad. This Educational Trust, which is the promoting body, established the following colleges at Rajampet, Kadapa District, Piglipur, Ranga Reddy District and Tirupati, Chittoor District.

The mission of the promoting body, Annamacharya Educational Trust, is to provide quality education to the needy students of Rayalaseema region. As further expansion, the Trust proposes to establish some more technical and non-technical Institutions in Andhra Pradesh.

#### 5. VISION & MISSION STATEMENT

#### MISSION

- Our primary mission is to move frontiers of technological knowledge, enrich and elevate the
  rural education seekers, endow them with technical skills, ethics, innovative thinking and
  leadership qualities enabling them to utilize their competencies for the sustainable
  development of the nation and mankind.
- Emerge into premier institute by imparting quality technical education to enhance knowledge and employability skills.
- · Promote up gradation of teaching and research skills to cater to the societal needs.

#### VISION

To emerge into excellence meeting the changing needs of society by fostering on its traditions of knowledge, innovation, problem solving, professional and technological acumen, and discipline. Transforming individuals into highly enlightened professionals enriched with innovative technical skills entwined with intellectual, ethical and humane sensitivities.

#### 6. GREEN AUDITING:

The college has adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental footprints, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO<sub>2</sub> emission, energy and water use while creating an atmosphere where students can learn and be healthy.

#### 7. LAND USE ANALYSIS, AITS, Kadapa Andhra Pradesh (As on 24-11-2021):

#### GENERAL OVERVIEW OF THE CONCEPT OF LAND USE

Land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space is now very crucial in man's activities on natural resources. In situations of rapid changes in land use, observations of the Earth from space give information of human activities and utilization of the landscape.

Remote sensing and GIS techniques are now providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the synoptic analyses of the earth system, functions, patterning, and change in the local, regional as well as at global scales over time. Satellite imagery particularly is a valuable tool for generating land use maps.

#### METHODOLOGY ADOPTED FOR LAND USE MAPPING

Three types of data that are GPS points, field survey data and Google earth data for Geo referencing have been used in this study. The land use map of the study area has been prepared using the above three types of data with the help of ArcGIS Pro software.

#### DATA PROCESSING AND ANALYSIS

Land use map preparation is executed through the following steps:

Acquisition of data (Location: 14.4673° N, 78.8242° E), Geo-coding and Geo-referencing of satellite imageries by extracting the ground control points. Supervised classification was carried out with the aid of ground truth data collected during the field survey. Scanning and digitization of maps and editing of all the Geo-referenced maps were done using GIS. Data manipulation and analysis and linking the spatial data with the attribute data for the creation of topology were carried out using GIS software. Creation of GIS output in the form of a land use map showing various land use has been prepared.

Therefore, the attempt has been made in this study to map land use for AITS, Kadapa, Andhra Pradesh with a view to detecting the land consumption in the built-up land area using both remote sensing and GIS techniques.

ANNAMACHARYA INSTITUTE OF

TECHNOLOGY & SCIENCES C.K. Dinne (V&M), KADAPA - 516 003. (A.P.) 8

#### 8. GEOGRAPHICAL LOCATION WITH CAMPUS MAP IN SCALE

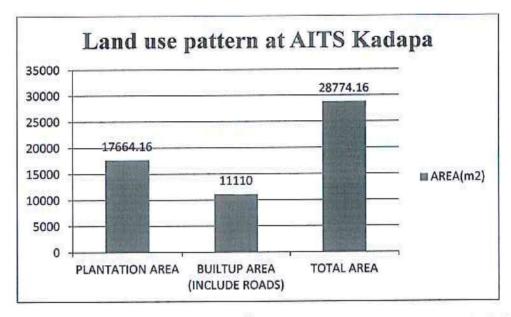
The college has a sprawling pollution-free campus spread over 16 acres of land in the Kadapa. Kadapa (alternatively spelled Cuddapah) is a city in the southern part of Andhra Pradesh, India. It is located in the Rayalaseema region, and is the district headquarters of YSR Kadapa district. The city is nicknamed "Gadapa" ('threshold') since it is the gateway from the west to the hills of Tirumala. The Airport is at Samudrampalli. Scaled image of college campus is shown in below photo.



Photo 1: Aerial View of College Campus Part 1 (Source: Google Earth)

#### LAND USE DATA OF AITS, KADAPA, ANDHRA PRADESH

CATEGORIES OF LAND USE	AREA(m <sup>2</sup> )		
PLANTATION AREA	17664.16		
BUILTUP AREA (INCLUDE ROADS)	11110		
TOTAL AREA	28774.16		



The total area of AITS, Kadapa is 28774.16 m<sup>2</sup> out of which the built up area (include Roads) is 73% (i.e. 11110 m<sup>2</sup>) and plantation area is 27% (i.e. 17664.16 m<sup>2</sup>).

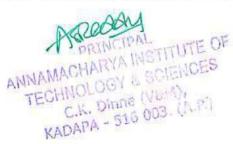
#### LAND USE (BUILT UP AREA) ANALYSIS:

The built-up area of 73% (i.e. 11110 m<sup>2</sup>) consists of the following regions as stated below for land consumption in built-up area of AITS Kadapa:

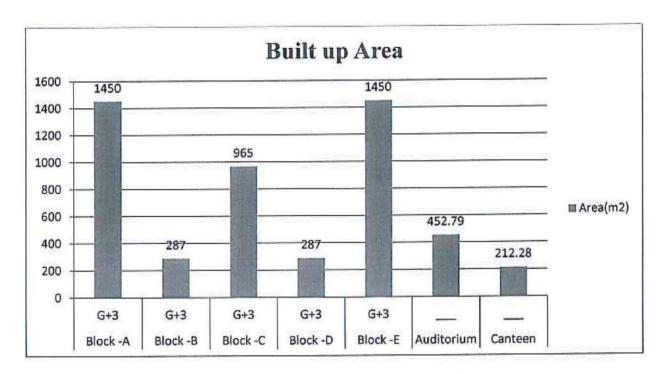
The west region of AITS Kadapa is densely built-up having Main Administrative Block: Administrative Blocks, Computer Science Engineering Block, Civil Engineering Block, Electrical Engineering, Electronics & Communications Engineering, Mechanical Engineering and auditorium. The east region comprises of Sports ground, canteens, and dispensary

Table: Area occupied by various buildings at AITS, Kadapa

S. No.	Name of Building	Number of Floors	Area(m²)
1.	Block -A	G+3	1450
2.	Block -B	G+3	287
3.	Block -C	G+3	965



4.	Block -D	G+3	287
5.	Block -E	G+3	1450
6.	Auditorium		452.79
7.	Canteen		212.28 Sq. M.



#### FINDINGS:

AITS, Kadapa which was established in the year 2010, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, preservation and maintenance. Its land use is such that about 73% of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

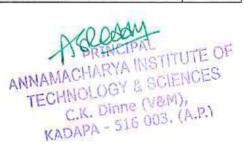
The Land-use analysis report is prepared by Mrs. K. Chandrakala and Mr. B. Rajasekhar Reddy, Civil Engineering Department, under the supervision of **Dr. P. Sri Chandana**, Professor and Head Department of Civil Engineering, AITS, Kadapa.

#### 9. TREE DIVERSITY OF AITS, Kadapa, ANDHRA PRADESH:

AITS Kadapa is within the geo-position between latitude 14.000001° N and longitude 75.000001° E Kadapa, Andhra Pradesh, India. It encompasses an area of about 16 Acres. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programs organized by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many spices of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favorite of birds and many insects. Leaf-covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, textures and vibrant colors. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees give them a monument-like quality. They also remind us of the glorious history of our institution in particular. We often make an emotional connection with these trees and sometimes become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college has been found to be bringing down the noise and cutting down dust and storms. Thus, the college has been playing a significant role in maintaining the environment of the entire Kadapa town in its surrounding areas. The following are the tree species with whom we are being attached-

Table: List of tree species of AITS, Kadapa, ANDHRA PRADESH

<b>Botanical Name</b>	Family	Common Name	Total
Kigeliaafricana	Bignonias	BalamKheera	2
Terminaliabellirica	Combretaceae	Bahera	32
DelonixRegia	Royal poinciana	Gulmohar	67
Mangiferaindica	Anacardiaceae	Mango	43
	Kigeliaafricana Terminaliabellirica DelonixRegia	Kigeliaafricana Bignonias  Terminaliabellirica Combretaceae  DelonixRegia Royal poinciana	Kigeliaafricana Bignonias BalamKheera  Terminaliabellirica Combretaceae Bahera  DelonixRegia Royal poinciana Gulmohar



5	AlstoniaScholaris	Apocynaceae	Alstonia	5
6	Tabernaemontana divaricata	Apocynaceae	Crape jasmine	38
7	Araucaria heterophylla	Araucariaceae	Christmas Tree	20
8	Tabernaemontana	Apocynaceae	Chandni	34
9	Avartani	Sterculiaceae	Marorphalli	16
10	Phyllanthusemblica	Phyllanthaceae	Amla	9

The list of tree varieties is as below:

- 1. Arjun Terminalia Arjuna
- 2. Baheda Terminaliabellerica
- 3. Simbal Bombaxceiba
- 4. Banyan/ bargad Ficus Benghalensis
- 5. Desibabool/ desikikar Acacianilotica
- 6. Desi Kadamb / desikadam Mitragyna Parviflora
- 7. Desi mango Magniferaindica
- 8. Dhak (Chichera)/ palash Buteamonosperma
- 9. Goolar Ficusracemosa
- 10. Harde / Harar Terminaliachebula

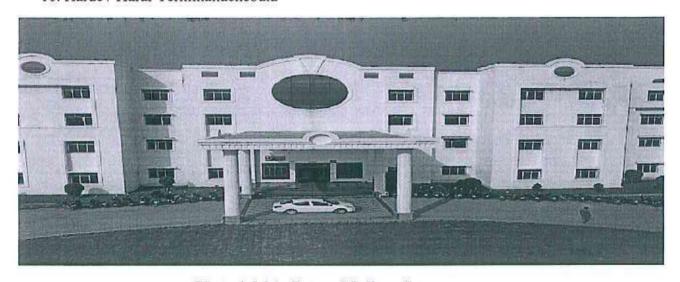


Photo 4: Main Entry of College Campus

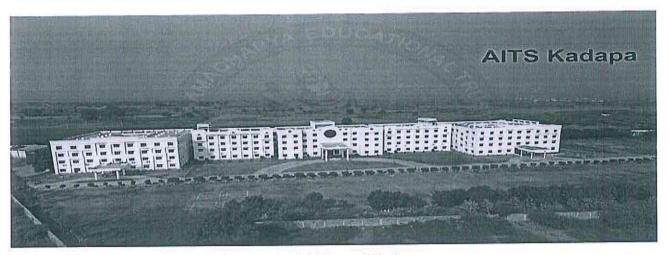


Photo 5: Aerial View of College

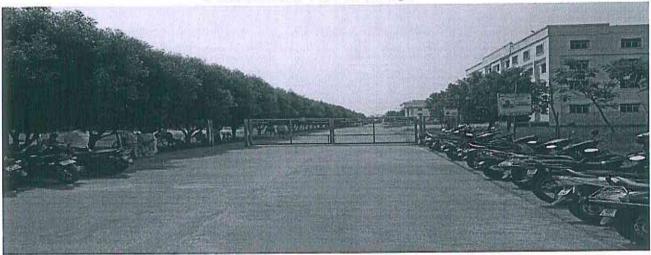


Photo 6: Main Gate Entry point of college

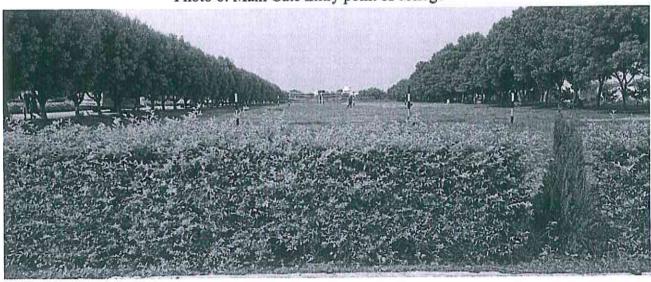


Photo 7: Green Campus

#### 10. FAUNAL DIVERSITY IN AITS KADAPA CAMPUS:

AITS is located in the Kadapa district of Andhra Pradesh. Kadapa is an industrial city known for Cement, Chemical, Oil Mills, Sugar manufacturing, RTPP, Mines and APMDC. It has got extreme climates. The highest temperature is recorded 46°C just prior to the onset of monsoon (around Mayearly June). Summer rain is normal and is principally caused from late July to August by the moisture-laden South-West Monsoon. The climatic condition of the Kadapa district as a whole and AITS, in particular, is very suitable for a wide variedly of flora and fauna to support its rich biodiversity. The faunal Diversity of the AITS campus has been studied and documented as below:

Table: Common and Scientific names of birds and animals

S. No.	Common Name	Scientific Name
1.	House Sparrow	Passer Domesticus
2.	House Crow	Corvus Splendens
3.	Cuckoo	Cuculidae
4.	Garden Tiger Moth	Arctia Caja
5.	Little Owl	Athene Brama
6.	Oleander Moth	Syntomeida Epilais
7.	Slender Skimmer	Orthetrum Sabina
8.	Common Myna	Acridotheres Tristis
9.	Bank Myna	Acridotheres Ginginianus
10.	Yellow Wasp	Ropalidia Marginata
11.	Butter Fly	Danaus Genutia
12.	Common Woods hike	Tephrodornis Pondicerianus
13.	Pied Myna	Gracupica Contra
14.	Red-Vented Bulbul	Pycnonotus Cafer
15.	Skylark	Aluda Gulgula

#### 11. WEATHER DATA OF Kadapa and AITS:

Station: Kadapa (INDIA (STATIONS NORTH OF LATITUDE 20~N)) Location: 14.4673° N, 78.8242° E

In Kadapa, the climate is warm and temperate. The summers are much rainier than the winters in Kadapa. The average annual temperature in Kadapa is 28.4 °C | 83.1 °F and precipitation here is about 606 mm

The driest month is generally February. There is 132 mm of precipitation in February. The greatest amount of precipitation occurs in November, with an average of 129 mm. With an average of 28.38°C, May is the warmest month. The lowest average temperatures in the year occur in December, when it is around 23.8 °C | 74.8 °F. The precipitation varies 129 mm between the driest month and the wettest month.

#### WEATHER DATA MONTH WISE KADAPA (Source: Google)

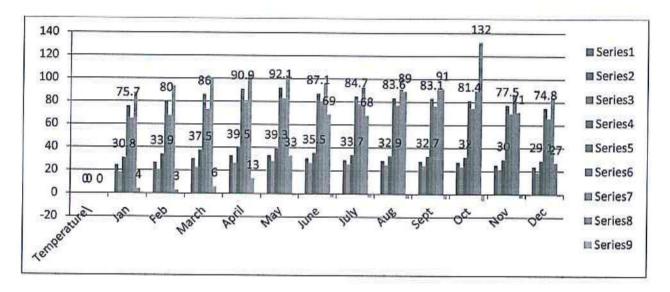
Temperature\ Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg. Temp.(°C)	24.3	26.7	30	32.7	33.4	30.6	2,9.3	28.7	28,4	27.4	25.3	23.8
Min. Temp(°C)	18.3	19.7	22.6	26.2	28.2	26.6	25.7	25.1	24.7	23.5	21,2	18.9
Max. Temp(°C)	30.8	33,9	37.5	39.5	39.3	35.5	33.7	32.9	32.7	32	30	29.1
Avg. Temp(°F)	75.7	80	86	90.9	92,1	87,1	84.7	83,6	83.1	81.4	77.5	74.8
Min. Temp(°F)	64.9	67.4	72.8	79.2	82.7	79.9	78.2	77.2	76.4	74.4	70.1	65.9
Max. Temp(°F)	87.4	93.1	99.5	103.1	102.	95.9	92,7	91.2	90.9	89.7	86	84.4
Precipitation /Rainfall(mm)	4 (0.2)	3 (0.1)	6 (0.2)	13 (0.5)	33 (1.3)	69 (2.7)	68 (2.7)	89 (3.5)	91 (3.6)	132	71 (2.8)	27 (1.1)

The likes of an alluvial plain are strong characteristics of the city of Kadapa and its surroundings. The city does have a Central location in the plan region. The geographical co-ordinate of Kadapa is 14.4673° N, 78.8242° E. The erstwhile land of Kadapa was very much feasible for Paddy, Groundnut, Red gram, Cotton, Bengal gram are the major agricultural crops. Mango, Citrus, Banana, Melons, Papaya are the fruit crops. Turmeric, KP Onion, Sunflower, Chillies, Coriander,

sugarcane, Vegetables and Chrysanthemum are other commercial crops grown in the district cultivation with fertile land. However, a lot of irrigation and environmental changes have made the land more viable for wheat cultivation.

The climatic conditions bear a strong resemblance with the other cities in the northern part of India. The summers are usually very hot and the winters are very cold. The summers are prevalent during the months of April to September with June, July and August till mid-September being the hottest months. The winter is prevalent from the month of November till the month of March. There is an onset of Monsoon in September and from mid of September till November one experiences the transitional weather.

#### CLIMATE GRAPH MONTH WISE KADAPA



## 12. AIR QUALITY IN KADAPA AND AITS:

The ambient air quality data for Kadapa and AITS for the last year shows that there are very less polluted particles in ambient air; AQI for SO2 & NOX parameters are within the range of Indian living standards, there are a number of factors responsible for this cleanliness, calmness and serenity in this area. Firstly, the population which is most responsible for all the problems and hurdles in smooth living is lowest here of all the districts of Andhra Pradesh. Secondly, in this area, more trees have been planted as compared to other cities. Furthermore, no air-polluting industry is established near here. Therefore, the ambient air quality of the Kadapa Area falls between moderate to rich quality state. The Andhra Pradesh Pollution Control Board is

pondering over the various possibilities to reduce air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PM10, SO2, NOx in the ambient air quality of Kadapa city.

#### AIR QUALITY DETERMINATION

Satisfactory air quality index (OVERALL=27) in Kadapa, Andhra Pradesh, India on dated 24-11-2021:

Parameter	Result (Range)
NO <sub>2</sub>	45.62 μg/m³, AQI 57 Satisfactory
O <sub>3</sub>	36.31 μg/m³, AQI 36 Good
PM2.5	53.6 μg/m³, AQI 73 Moderate
PM10	90.2 μg/m³, AQI 90 Satisfactory
CO	720.0 μg/m³, AQI 36 Severe
Humidity	58.0 %
Barometric Pressure	1009.0 hPa
Wind Speed	10.36 m/s
Wind Direction	100.0 degrees
Sun Rise	06:20 AM
Sun Set	05:43 PM
Moonrise	08:02 PM
Moonset	08:36 AM

#### 13. WATER ANALYSIS REPORT OF AITS:

Water quality testing is important because it identifies contaminants and prevents water-borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.

The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

#### Drinking water indicators:

The following is a list of indicators often measured by situational category:

- Alkalinity
- Color of water
- pH value
- Taste and odor (geosmin, 2-Methylisoborneol (MIB), etc.)
- Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium).
- · Microorganisms such as fecal coliform bacteria (Escherichia coli), Cryptosporidium, and Giardia lamblia; see Bacteriological water analysis
- Dissolved metals and metalloids (lead, mercury, arsenic, etc.)
- Dissolved organics: Colored Dissolved Organic Matter (CDOM) and Dissolved Organic Carbon (DOC)
- Heavy metals

#### 14. NOISE LEVEL IN THE SURROUNDING OF AITS:

The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound:

- Loudness and
- Frequency.

Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerate. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibration per second. It is denoted as Hertz (Hz).

> ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES C.K. Dinne (V&M), KADAPA - 516 003. (A.P.)

19

## MATERIALS, STUDY AREA & METHODS

Noise level meter or noise measuring app, Sound Meter App, was used to measure the noise level. Sound Meter App detects of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibels.

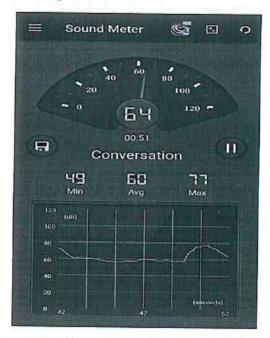


Figure: Noise Measurement by Sound Meter App

#### DESCRIPTION OF THE COLLEGE SITE

The site of the AITS Kadapa is bounded to the west by RTO Office, Agricultural land properties to the east and west, College road is connected with National Highway-40 with various bookstalls, shops, restaurants, sellers etc.,

#### MEASUREMENT PROCEDURE

The noise level was recorded at the different important locations of AITS, KADAPA. At each spot, the measurements were taken for 60 seconds during daytime (6 AM- 6 PM) and noted down the measurements. Screenshots of the measurements of noise were taken immediately on the app at the time of the 60<sup>th</sup> second of each measurement.

#### RESULTS

The results of the experiments at different places have been tabulated in the following table: Table 1: Measurements of Noise in and around AITS:

PLACE	MEASUREMENTS (Duration in Sec.)	MINIMUM (dBA)	Maximum (dBA)	AVERAGE (dBA)
Civil Department Area	60	67	79	69
Civil Department Office	60	63	78	69
Civil Lab	60	66	65	79
Canteen	60	64	79	73
Library	60	43	71	42
Mechanical Department Area	60	66	79	69
Mechanical Lab	60	61	76	60
CSE Department Area	60	65	75	66
CSE Lab	60	67	75	69
EEE Department Area	60	69	78	66
EEE Lab	60	71	71	58
ECE Department Area	60	66	75	64
ECE Lab	60	64	78	69
Principal Office	60	68	64	56
Auditorium	60	76	83	77

Source: Data collected by students of 5<sup>th</sup> Semester, Department of Electronics and Communication Engineering. After the study, the measurements of noise have been recorded in and outside of AITS area:

Inside the Campus: 37-86 dBA,

Outside the Campus: 53-94 dBA.

#### 15. WASTE DISPOSAL OF AITS:

Waste disposals are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

The waste from all around the college is separated daily as wet and dry waste in different bags which are disposed of separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable peds, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes an immense problem. The material was composted and evaluated as a fertilizing material. Disposal of this waste results in the production of good quality organic manure that can be used as soil amendments and a source of plant nutrients.

With smart initiatives like the "Think Green Campus Model", waste management is helping colleges and universities to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment, reducing landfills. We will also reduce our impact on the environment by minimizing the Carbone missions associated with both disposing of fold products and obtaining new ones. AITS adopt environment-friendly practices and takes necessary actions such as – energy conservation, waste recycling, carbon-neutral etc. The biological reusable waste is processed as organic manure for the plants available in the college campus and the other solid waste generated in the college campus is taken to the community bin of Kadapa municipality for recycling and disposal.

#### 16. TRANSPORTATION AT AITS:

Being the largest campus in the region and located centrally, AITS staff and students commute on their own. The college is dedicated to providing its students and staff with all the comfort and convenience to help them to achieve their targets. The students are encouraged to use cycles, two-wheelers rather than four-wheelers which lead to fuel-saving and also the contribution of pollutants to the atmosphere is less.

#### 17. ELECTRICAL POWER CONSUMPTION AT AITS:

AITS, being one of the largest colleges of Kadapa district, consumes on an average 3906 kW- hr. (units) of electricity which turns out to be 35160 kW-hr per year only to maintain its volumetric activities throughout the year. As a policy decision, the authority keeps on replacing the old filament bulbs, CFL bulbs and tube lights with low energy consuming LED bulbs and LED tubes

and bulky high-power consuming fans with energy-efficient fans in order to keep the electricity consumption of the college as low as possible.

In addition to making Environmental Studies a very vital subject in our syllabus, AITS, Kadapa has gone a step further by putting that theory into practice. The college has installed two sets of solar panels having a capacity of 100 kWp. The energy from this solar installation is helping offset the institute's daytime peak electricity demand from the grid. AITS with the installation of 100 kWp grid-connected solar rooftop plant under CAPEX mode was able to offset 100% of its energy usage from the state grid thus moving towards a more reliable and greener option and reducing its carbon foot print.

Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 100%

Annual power requirement met by the renewable energy sources (in kWh)

Response: 48388

Total annual power requirement (in kWh)

Response: 35160

Power Requirements met by renewable energy Sources	Total Power Requirements	Renewable energy Source	Renewable energy generated and used	Energy supplied to the grid
48388 kWh/Year	35160 kWh/Year	Solar	48388 kWh/Year	13228



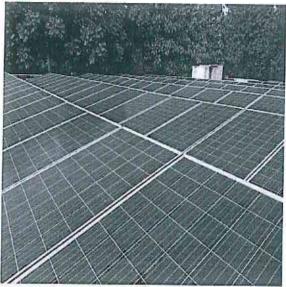


Fig: Grid connected Solar PV Plant on Administrative Block

Percentage of annual lighting power requirements met through LED bulbs

Response: 55%

Annual lighting power requirement met through LED bulbs (in kWh)

Response: 30640

Annual lighting power requirement (excluding LED) (in kWh)

Response: 24320

Total Annual Lighting Power Requirements = 54960 kWh/Year

Total Lighting Requirements	Percentage Lighting through LED Bulbs	Percentage Lighting through other sources
54960 kWh/Year	55%	45%

## 18. EXPENDITURE ON GREEN INITIATIVES DURING THE LAST FIVE YEARS:

Financial Year	Tree plantation (Amount in Rs)	Gardening & lawn Work (Tractor Running & Maintenance)	Purchase of LED's	Solar PV	Total (in Rupees)
2020-2021		126028	9240		135268
2019-2020	25810	148920			174730
2018-2019	- EUCE	153028	17320	1266667	1437015
2017-2018	32040	157030		1177666	1366736
2016-2017	50436	159028	19872	955667	1185003



# MNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.01.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
pH	6.9±0.2	6.5-8.5
Chloride (mg/L)	22	Max. 250
Free Residual Chlorine (mg/L)	0.22	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	12	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana Petad of the Department

Civil Engineering.

Dr. A. Sudhakara Reddy

PRINCIPAL ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Science TECHNOLOGY & SCIENCES

C.K. Dinne (V&IV),

Rukur (P), C.K. Dinne (V&M), Kadapa (Dt., KADAPA - 516 003. (A.P.)



# MANIACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.02.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.7	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
pH	6.8±0.1	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.28	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	123	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

G. Bhasath

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL

selvad of the Department Civil Engineering.

ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Science WOLOGY & SCIENCES

Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) C.K. Dinne (V&M),



# MINIAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 10.03.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.7	1-5 NTU
Total Dissolve Solids (mg/L)	154	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	14	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

PRINCIPA

Dr. A. Sudhakara Reddy

Civil Engineering

Utukur (P), C.K. Dinne (V&M), Kedapa (Dt.)

THE MANAGEMENT OF THE PROPERTY OF THE PROPERTY

College Code: HM

# HAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Geoproved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.04.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	. Nil	Agreeable
Turbidity (NTU)	1.9	1-5 NTU
Total Dissolve Solids (mg/L)	163	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.28	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL ANNAMACHARYA INSTITUTE OF

TECHNOLOGY & SCIENCES

C.K. Dinne (V&M),

KARADA & EL 103. (A.P.)



# MANACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 09.05.2020

Well 1:

Result	Standard, Limit as per (IS: 10500/2012)
2.5	<5
Nil	Agreeable
Nil	Agreeable
1.6	1-5 NTU
143	Max. 2000
6.8	6.5-8.5
25	Max. 250
0.26	(0.2-0.5)
	Max. 600
	0.03
	Max. 45
15	Max. 600
	2.5 Nil Nil 1.6 143 6.8 25 0.26 125 ND

Water Quality is Satisfactory

G. Bhasath.

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Civil Engineering.

Dr. A. Sudhakara Reddy PRINCIPAL

ANNAMACHARYA INSTITUTE OF

annamacharya Institute of Technology & Science ECHNOLOGY & SCIENCES

Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)

C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



## MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.06.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.65	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.27	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	128	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

G-Blosath TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Sevad of the Department Civil Engineering. Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF

Utuker (P), C.K. Dinne (V&M), Kadaos (Dt.) C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



## HINAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Concreted by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.07.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.65	I-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.27	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

G. Bhasath.

TESTING EXPERT

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCI

PRINCIPAL

Civil Engineering. MAMACHARYA INSTITUTE OF ennamacharya Institute of Technology & Sole Utuker (P), C.K. Dinne (V&M). Kedaba (DI, FCHNOLOGY & SCIENCES

C.K. Dinne (V&M), KADAPA - 516 003. (A.P.)



# MNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.08.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.64	I-5 NTU
Total Dissolve Solids (mg/L)	147	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.26	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

G. Bhasadh

LESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Fivad of the Department

Civil Engineering.

PRINCIPAL ANNAMACHARYA INSTITUTE OF

"nnamacharya Institute of Technology & Science ECHNOLOGY & SCIENCES

Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)

C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# MACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.09.2020

Well I:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.64	1-5 NTU
Total Dissolve Solids (mg/L)	147	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.26	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Sebad of the Department

Hukur (P), C.K. Dinne (V&M), Kadapa (Dt.)

Civil Engineering. hnamacharya Institute of Technology & Sciences

Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES

> C.K. Dinne (V&M), KADAPA - 516 003. (A.P.)



# INAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 08.10.2020

· Well 1·

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.62	I-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.5	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.27	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

-wad of the Department Civil Engineering.

ANNAMACHARYA INSTITUTE OF

nnamacharya Institute of Technology & Sciences CHNOLOGY & SCIENCES Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)

C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# WANACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.11.2020

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.62	1-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.55	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.22	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	129	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

**TESTING EXPERT** 

G-Bhasadh

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

mead of the Department

Civil Engineering. TECHNOL nnamacharya Institute or rechnolog, word (Dr.), C.K. Dinne (V&M), Utukur (P), C.K. Dinne (V&M), Kapapa - 516 003. (A.P.) annamacharya Institute of Technology & Sci



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.12.2020

Well 1:

Parameter Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.64	1-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.6	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

G. Bhasath

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Field of the Department Civil Engineering. Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF

annamacharya Institute of Technology & Scientis CHNOLOGY & SCIENCES
Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.01.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.58	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	I-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	22	Max. 250
Free Residual Chlorine (mg/L)	0.24	. (0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

G-Bhogath. TESTING EXPERT

CONSULTANCY INCHARGE

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Civil Engineering.

PRINCIPAL ANNAMACHARYA INSTITUTE OF

ennamacharya Institute of Technology & Science CHNOLOGY & SCIENCES Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) ECHNOLOGY & SCIENCES



## MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.02.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	I-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	22	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	. 18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

G. BLOSOLL. TESTING EXPERT

ILSTING LAI LINI

CONSULTANCY INCHARGE

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL

ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Science CHNOLOGY & SCIENCES

1) tukur (P), C.K. Dinne (V&M), Kadapa (Dt.F.

KADGA W B HGZ. (A.R.)



# AND ACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.f.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.03.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Mr. Bharath Bushan Raju wad of the Department

PRINCIPAL ANNAMACHARYA INSTITUTE OF

Civil Engineering. :nnamacharya institute of Technology & Science CHNOLOGY & SCIENCES

Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 01.04.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	I-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.24	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

G-Bhasadh

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Swad of the Department

Civil Engineering.

ANNAMACHARA MARIANTE OF Innamacharya Institute of Technology & Science ECHNOLOGY & SCIENCES

Hiukur (P), C.K. Dinne (V&M), Kadapa (Di.)



# MACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

respreyed by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.05.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	I-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	128	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	14	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Spad of the Department

Dr. A. Sudhakara Reddy

PRINCIPAL

ANNAMACHARYA INSTITUTE OF

Civil Engineering. unnamacharya Institute of Technology & ScienceTECHNOLOGY & SCIENCES Utukur (P), C.K. Dinne (V&M), Kadana (Dt.)



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.06.2020

. Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	. Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	12	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Civil Engineering.

annamacharya Institute of Technology & Science Thukur (P), C.K. Dinne (V&M), Kadapa (Dt.) PRINCIPAL

Dr. A. Sudhakara Reddy

KARAPA ELGARA



## INIAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.07.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.65	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
pH	6.6	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.24	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

G. Bhagash.

TESTING EXPERT

Mr. Bharath Bushan Raju Dr. P. Sri Chandana

Shad of the Department

CONSULTANCY INCHARGE

Dr. A. Sudhakara Reddy

PRINCIPAL

Civil Engineering. ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Sciences Utukur (P), C.K. Dinne (V&M), Kedapa (Dt.)



# THAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 01.08.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	. 1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.24	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandanant

udhakara Reddy

unnamacharya Institute of Technology & Schange ANNAMACHARYA INSTITUTE OF

Hukur (P), C.K. Dinne (V&M), Kadapa (DITCHNOLOGY & SCIENCES C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# MINAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.09.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.48	1-5 NTU
Total Dissolve Solids (mg/L)	154	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.26	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	128	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

G-Bhagad

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana Salad of the Department Civil Engineering.

Dr. A. Sudhakara Reddy PRINCIPAL

ANNAMACHARYA INSTITUTE OF Ultukur (P), C.K. Dinne (V&M), Kadapa (Dt.)



# HEAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.10.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	128	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

G-Bhasadl TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana, - wad of the Departm

Civil Engineering.

Dr. A. Sudhakara Reddy

Annamacharya Institute of Technology & Sclepp Utukur (P), C.K. Dinne (V&M), Kadapa (DISCHNOLOGY & SCIENCES

KADAPA - 516 003. (A.P.)



# MANACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.11.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	28	Max. 250
Free Residual Chlorine (mg/L)	0.28	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	123	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	14	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Pad of the Department

Civil Engineering.

Dr. A. Sudhakara Reddy

PRINCIPAL

Annamacharya Institute of Technology & Science INAMACHARYA INSTITUTE OF Ultukur (P), C.K. Dinne (V&M), Kadapa (Dt.) TECHNOLOGY & SCIENCES

# AMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

LApproved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.12.2020

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	26	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	14	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana Civil Engineering.

Dr. A. Sudhakara Reddy PRINCIPAL

A.

ANNAMACHARYA INSTITUTE OF ennamacharya Institute of Technology & Science TECHNOLOGY & SCIENCES

Utukur (P), C.K. Olnne (V&M), Kadapa (Dt.)



## ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.01.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
	2.5	
Odor	Nil	<5
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	Agreeable
Total Dissolve Solids (mg/L)		I-5 NTU
pH (mg/b)	151	Max. 2000
Chloride (mg/L)	6,9	6.5-8.5
Free Residual Chlorine (mg/L)	24	Max. 250
Hardness (mg/L of CaCO <sub>3</sub> )	0.25	(0.2-0.5)
ron (mg/L)	125	Max. 600
Vitrate (mg/L)	ND	0.03
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	19	Max. 45
(mg/L of CaCO <sub>3</sub> )	. 15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL

Civil Engineering. Annamacharya Institute of Technology & Scie ANNAMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadapa (Dt. ITECHNOLOGY & SCIENCES



# ANNAWACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approve GONS LIC TAN ONE WEDERST ENTITIES TO LEES THE PARTITION OF CALL LINE ENGINEERING

## **TESTING REPORT**

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.02.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	
Odor	Nil	<5
Taste		Agreeable
Turbidity (NTU)	Nil	Agreeable
	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	149	Max. 2000
pH	6.7	6.5-8.5
Chloride (mg/L)	25	
Free Residual Chlorine (mg/L)		Max. 250
Hardness (mg/L of CaCO <sub>3</sub> )	0.24	(0.2-0.5)
Iron (mg/L)	128	Max. 600
	ND	0,03
Nitrate (mg/L)	16	The state of the s
Total Alkalinity (mg/L of CaCO <sub>3</sub> )		Max. 45
7	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Civil Engineering. Sinamacharya Institute of Technology & Sciences Utukur (P), C.K. Dinne (V&M), Kadape (Di.) Dr. A. Sudhakara Reddy



# ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.03.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	
Taste	Nil	Agreeable
Turbidity (NTU)	ALXO DE	Agreeable
Total Dissolve Solids (mg/L)	1.45	I-5 NTU
pH	150	Max. 2000
• ************************************	6.9	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.24	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	
Iron (mg/L)		Max. 600
Nitrate (mg/L)	ND	0.03
	17	Max. 45
Total Alkalinity (mg/L of CaCO3)	16	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

P. Sri Chandana

Civil Engineering.

Annamacharya Institute of Technology & Sciences Human (B) C.K. Dinne (V.S.M. Kadan) Di.I

Dr. A. Sudhakara Reddy

PRINCIPAL

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES



## ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.04.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.65	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	152	Max. 2000
pН	6.5	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	126	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

G. Bhaladh.

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr?P.SrPChandanatent Civil Engineering. Dr. A. Sudhakara Reddy
PRINCIPAL

Annamacharya Institute of Technology & SciANNAMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadapa (DITECHNOLOGY & SCIENCES



## ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 08.05.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	155	Max. 2000
рН	6.5	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.22	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	127	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

G-Bhogath. TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

iambania = 500 003. (A.B.)

Annamacharya Institute of Technology & Sciences
Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)



# WINAWACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approveonsultanchew Pesithoffilaget to clawaharlal Nehru Technological University Anantapur)

## **TESTING REPORT**

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.06.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	
Odor	Nil	<5
Taste	Nil	Agreeable
Turbidity (NTU)		Agreeable
Total Dissolve Solids (mg/L)	1.5	1-5 NTU
pH	150	Max. 2000
•	6.9	6.5-8,5
Chloride (mg/L)	22	Max. 250
Free Residual Chlorine (mg/L)	0.25	24/50/2005/2007/2007/2007
Hardness (mg/L of CaCO <sub>3</sub> )	119	(0.2-0.5)
Iron (mg/L)	27/27/84	Max. 600
Nitrate (mg/L)	ND	0.03
	17	Max. 45
Fotal Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

. TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. Pash Chandana ment Civil Engineering.

Dr. A. Sudhakara Reddy

Annamacharya institute of Technology & Science
Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) MAMACHARYA INSTITUTE OF
TEGHNOLOGY & SCIENCES



# MANUACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

LApproved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.07.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	150	10.7% TO 70.7% TO 70.7% TO 70.7%
рН	6.9	Max. 2000
Chloride (mg/L)	22	6.5-8.5
Free Residual Chlorine (mg/L)	0.24	Max. 250
Hardness (mg/L of CaCO <sub>3</sub> )	10000	(0.2-0.5)
Iron (mg/L)	120	Max. 600
Nitrate (mg/L)	ND	0.03
	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. B. Sri Chandananent

Dr. A. Sudhakara Reddy

PRINCIPAL

Civil Engineering. annamacharya Institute of Technology & SAMMAMACHARYA INSTITUTE OF Hukur (P), C.K. Dinne (VAM), Kadana (STECHNOLOGY & SCIENCES



# MANUACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.08.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.55	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	123	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana anment Civil Engineering. Dr. A. Sudhakara Reddy

PRINCIPAL

Annamacharya Institute of Technology & SAMNAMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadaba (FECHNOLOGY & SCIENCES)



# MANUACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Appreved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.09.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.22	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	124	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

· Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr.P. Stil Chandanament

Civil Engineering.

Dr. A. Sudhakara Reddy

Annamacharya Institute of Technology & Science ANNAMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) TECHNOLOGY & SCIENCES



# MMAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 09.10.2021

Well I:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

G. Bhagas TESTING EXPERT

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana iont

Dr. A. Sudhakara Reddy

Civil Engineering PRINCIPAL

Annamacharya Institute of Technology & Scians (DITECHNOLOGY INSTITUTE OF Hlukin (P), C.K. Dinne (VAN), Kadapa (Di TECHNOLOGY & SCIENCES



## HINAMIACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.11.2021

Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.65	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	148	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	. 120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr.P. Sri Chandana

Civil Engineering.

Annamacharya Institute of Technology & Science ANNAMACHARYA INSTITUTE OF

Dr. A. Sudhakara Reddy

TECHNOLOGY & SCIENCES



# WAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.12.2021

' Well 1:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	154	Max. 2000
рН	6.9	6.5-8.5
Chloride (mg/L)	27	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Sead of the Department Civil Engineering.

Dr. A. Sudhakara Reddy PRINCIPAL

ANNAMACHARYA INSTITUTE OF

ennamacharya Institute of Technology & Science: TECHNOLOGY & SCIENCES Utukur (P), C.K. Dinne (V&M), Kedapa (Dt.)

C.K. Dinne (V及用).

KADARS BEESER (A.P.)



# INAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.01.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	150	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	22	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. A. Sudhakara Reddy PRINCIPAL

Dr. P. Sri Chandana labad of the Department

ANNAMACHARYA INSTITUTE OF

Civil Engineering. Brinamacharya Institute of Technology & Sciences
Utukur (P), C.K. Dinne (V&M), Karlone (D.K. Dinne (V&M), Utukur (P), C.K. Dinne (V&M), Kadapa (Dt. KADAPA - 516 003. (A.P.)



# MANACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.02.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	149	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	125	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

· Water Quality is Satisfactory

TESTING EXPERT

G. Bhagadl

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana toked of the Department

Civil Engineering. Annamacharya Institute of Technology & Sciences TECHNOLOGY & SCIENCES Utukur (P), C.K. Dinne (V&M), Kedape (Dt.)

Dr. A. Sudhakara Reddy PRINCIPAL

ANNAMACHARYA INSTITUTE OF



# MMAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### **TESTING REPORT**

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.03.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.5	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.3	1-5 NTU
Total Dissolve Solids (mg/L)	145	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	123	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

G. Bhagad

' Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL

Havad of the Department Civil Engineering.

ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Sciences NOLOGY & SCIENCES

Hukur (P), C.K. Dinne (V&M), Kadana (Dt.) C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# MACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 01.04.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	160	Max. 2000
pH	6.9	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.28	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	18	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	18	Max. 600

. Water Quality is Satisfactory

G. Bhasath.

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Civil Engineering. PRINCIPAL

Annamacharya Institute of Technology & Science AMACHARYA INSTITUTE OF Utilukur (P), C.K. Dinne (V&M). Kadapa (DtTECHNOLOGY & SCIENCES



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.05.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	I-5 NTU
Total Dissolve Solids (mg/L)	158	Max. 2000
рН	6.8	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.27	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Civil Engineering.

ANNAMACHARYA INSTITUTE OF ennamacharya institute of Technology & Science ECHNOLOGY & SCIENCES
Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 08.06.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	161	Max. 2000
рН	6.7	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	121	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	17	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

mead of the the ment

Dr. A. Sudhakara Reddy

PRINCIPAL

Civil Engmanding. conamacharya Institute of Technology & Science, ANNAMACHARYA INSTITUTE Or Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.)

TECHNOLOGY & SCIENCES



# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

# CONSULTANCY TEISING SER OF CASE DEPARTMENT OF CVIL ENGINEERING

## **TESTING REPORT**

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.07.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.48	1-5 NTU
Total Dissolve Solids (mg/L)	158	Max. 2000
pH	6.5	6.5-8.5
Chloride (mg/L)	25	Max. 250
Free Residual Chlorine (mg/L)	0.22	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	118	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	16	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

PRINCIPAL

Civil Engineering. Annamacharya Institute of Technology & Scientel MACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadapa (DtrECHNOLOGY & SCIENCES

# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.08.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	1-5 NTU
Total Dissolve Solids (mg/L)	160	Max. 2000
рН	6.6	6.5-8.5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.27	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	120	Max. 600
Iron (mg/L)	ND ND	The state of the s
Nitrate (mg/L)	16	0.03
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 45 Max. 600

Water Quality is Satisfactory

G. Bhosagh. TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Civil Engineering.

Annamacharya institute of Technology & Sciences Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) Dr. A. Sudhakara Reddy

MALADA SIG GOS TA PO



# IN AMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.09.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.6	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.5	I-5 NTU
Total Dissolve Solids (mg/L)	158	Max. 2000
рН	6.5	6.5-8,5
Chloride (mg/L)	24	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	122	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Spad of the Department Civil Engineerings

Dr. A. Sudhakara Reddy PRINCIPAL

ANNAMACHARYA INSTITUTE OF

ennamecharya Institute of Technology & Science ECHNOLOGY & SCIENCES Helbertov C.K. Dinne (VWM) Kadana (Dt.) C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



# INAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.10.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.65	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.45	I-5 NTU
Total Dissolve Solids (mg/L)	158	Max. 2000
pH	6.7	6.5-8.5
Chloride (mg/L)	26	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	124	Max. 600
lron (mg/L)	ND	0.03
Nitrate (mg/L)	17	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	16	Max. 600

Water Quality is Satisfactory

TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

around of the Department Civil Engineering.

Dr. A. Sudhakara Reddy

PRINCIPAL

ANNAMACHARYA INSTITUTE OF annamacharya Institute of Technology & Science CHNOLOGY & SCIENCES Umlar (P), C.K. Dinne (V&M), Kadapa (Dt.)



## INAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

## TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.11.2021

Well 2:

Parameter	Result	Standard, Limit as per (IS: 10500/2012)
Color	2.7	<5
Odor	Nil	Agreeable
Taste	Nil	Agreeable
Turbidity (NTU)	1.52	1-5 NTU
Total Dissolve Solids (mg/L)	159	Max. 2000
pH	6.8	6.5-8.5
Chloride (mg/L)	26	Max. 250
Free Residual Chlorine (mg/L)	0.25	(0.2-0.5)
Hardness (mg/L of CaCO <sub>3</sub> )	124	Max. 600
Iron (mg/L)	ND	0.03
Nitrate (mg/L)	15	Max. 45
Total Alkalinity (mg/L of CaCO <sub>3</sub> )	15	Max. 600

Water Quality is Satisfactory

G. Bhasath TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

Dr. A. Sudhakara Reddy

Civil Enginearing.

connamacharya Institute of Technology & Scient NAMACHARYA INSTITUTE OF

Ultukur (P), C.K. Dinne (V&M), Kadapa (Dt.) TECHNOLOGY & SCIENCES



## MACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Suproved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Monthly Report of Water Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.12.2021

Well 2:

Parameter Color	Result	Standard, Limit as per
Odor	2.6	(IS: 10500/2012)
Taste	Nil	<5
Turbidity (NTU)	Nil	Agreeable
Total Dissolve Solids (mg/L)	1.42	Agreeable I-5 NTU
pH sonds (mg/L)	156	Max. 2000
Chloride (mg/L)	6.8	6.5-8.5
Free Residual Chlorine (mg/L)	24	Max. 250
Hardness (mg/L of CaCO <sub>3</sub> )	0.22	(0.2-0.5)
ron (mg/L)	122	(0.2-0.3) Max. 600
Vitrate (mg/L)	ND	
otal Alkalinity (mg/L of CaCO <sub>3</sub> )	18	0.03
(ing/L of CaCO <sub>3</sub> )	15	Max. 45 Max. 600

Water Quality is Satisfactory

G. Bhasadh TESTING EXPERT

Mr. Bharath Bushan Raju

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

hivad of the Department

Dr. A. Sudhakara Reddy

Civil Engineering. PRINCIPAL \*nnamacharya Institute of Technology & Science MANACHARYA INSTITUTE OF Histor (P), C.K. Dinne (V&M). Kadana 'Dt. TECHNOLOGY & SCIENCES

### MANAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### **TESTING REPORT**

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

. Sampling Date: 04.03.2020

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	65	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	47	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (µg/m <sup>3</sup> )	49	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

3. Veerayounila. TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. P. Sri Chandana

read of the Department

Civil Engineering.

Annamacharya Institute of Technology & Sciences

Utukiy (P), C.K. Dinne (V&M), Kadapa (Dt.)

Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES



### MANUACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

responsed by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### . CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 08.06.2020

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (μg/m <sup>3</sup> )	68	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	52	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (μg/m <sup>3</sup> )	54	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

B. Ueenayoumila. TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. P. Sri Chandanapartment Civil Engineering. Dr. A. Sudhakara Reddy

ennamacharya Institute of Technology & Science Allehold ACHARYA INSTITUTE OF



### AMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Quarterly Report of Air Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

**Sampling Date: 02.09.2020** 

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	67	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	46	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (µg/m <sup>3</sup> )	49	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

J. Veesto Howillow TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. P. Sri Chandana Civil Engineering. Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF Chinamacharya Institute of Technology & Science TECHNOLOGY & SCIENCES

I Rukur (P), C.K. Dinne (V&M), Kadapa (Dt.)



### MINIAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### **TESTING REPORT**

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.12.2020

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	68	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (μg/m <sup>3</sup> )	48	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (µg/m <sup>3</sup> )	51	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

B. Veesayowilla. TESTING EXPERT

· Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. Pasri Chandana pariment Civil Engineering

Dr. A. Sudhakara Reddy

PRINCIPAL

Annamacharya Institute of Technology & SCHAMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V.S.M. 1822). TECHNOLOGY & SCIENCES



### MNAWACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

#### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Quarterly Report of Air Quality Monitoring
Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 03.03.2021

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	63	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (μg/m³)	55	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (µg/m <sup>3</sup> )	61	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

B. Veego Mourilco, TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. Pastir Chandana tment Civil Engineering. Dr. A. Sudhakara Reddy

PRINCIPAL

Innamacharya Institute of Technology & Scient CHARYA INSTITUTE OF



### MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### ' CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### **TESTING REPORT**

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.06.2021

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (μg/m <sup>3</sup> )	62	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	55	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (μg/m <sup>3</sup> )	54	41-80 (24 Hours)

· Air Quality Index (AQI): \*\* Satisfactory Air Quality

K. Verslandouvilla.

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr.PaScirChandana mont

Dr. A. Sudhakara Reddy

Civil Engineering.

ennamacharya Institute of Technology & Science AMACHARYA INSTITUTE OF TURKUR (P), C.K. Dinne (V&M), Kadapa (DLTECHNOLOGY)

TECHNOLOGY & SCIENCES
C.K. Dinne (V&M),
KADAPA - 516 003. (A.P.)



### MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING TESTING REPORT

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 08.09.2021

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	64	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	52	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (μg/m <sup>3</sup> )	50	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Dr. P. Sri Chandana ont

Dr. A. Sudhakara Reddy

Civil Engineering.

STATE OF CAPTOR OF THE STATE OF

College Code: HM

### MINAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Quarterly Report of Air Quality Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.12.2021

Air Pollutants	Values	Permissible Limits (As per NAAQS)
Particle Matter PM <sub>10</sub> (µg/m <sup>3</sup> )	66	51-100 (24 Hours)
Sulphur dioxide SO <sub>2</sub> (µg/m <sup>3</sup> )	61	41-80 (24 Hours)
Nitrogen Dioxide as NO <sub>2</sub> (µg/m <sup>3</sup> )	59	41-80 (24 Hours)

Air Quality Index (AQI): \*\* Satisfactory Air Quality

H. Velgia Gouile, TESTING EXPERT

Mrs. B. V. Mounika

CONSULTANCY INCHARGE

Civil Engineering.

Annamacharya Institute of Technology & Sciences

Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES



### HIMAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

# CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.03.2020

Noise limits for the institute are given blow:	
Night :41	
Day :28	
Permissible Mimits as per standards given below:	
Night: 50 dB (A)	
 Day: 40 dB (A)	

### Summary

The campus is having noise standards under permissible limits it is coming under Silence Zone.

AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Spad Dr. the Spi Chandana Civil Engineering.

Annamacharya Institute of Technology & Sciences

1 (Inter-70), C.K. Dinne (V. 15)

Dr. A. Sudhakara Reddy

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES



### MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### **TESTING REPORT**

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.06.2020

Noise limits for the institute are given blow:
Night: 47
Day: 31
Permissible Mimits as per standards given below:
Night: 50 dB (A)
Day: 40 dB (A)

### Summary

The campus is having noise standards under permissible limits it is coming under Silence Zone.

AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Civil Engineering.

Annamacharya Institute of Technology & Solence: (Rustus (P), C.K. Dinne (V&M), Kadapa (Dt.) Dr. A. Sudhakara Reddy



### MANAGHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 06.09.2020

Noise limits for the institute are given blow:
Night : 48
Day : 30
Permissible Mimits as per standards given below:
Night : 50 dB (A)
Day: 40 dB (A)

### Summary

 The campus is having noise standards under permissible limits it is coming under Silence Zone. AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

Dr. P. Sei Chandana Civil Engineering.

ennamacharya institute of Technology & Science ANNAMACHARYA INSTITUTE Or

Dr. A. Sudhakara Reddy

TECHNOLOGY & SCIENCES C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)



### MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### **TESTING REPORT**

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.12.2020

Noise limits for the institute are given blow:
Night: 45
Day: 28
Permissible Mimits as per standards given below:
Night : 50 dB (A)
Day: 40 dB (A)
THE RESERVE THE PROPERTY OF TH

### Summary

The campus is having noise standards under permissible limits it is coming under *Silence Zone*.

AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Civil Engineering.

ennamacharya Institute of Technology & Sciences, Utukur (P), C.K. Dinne (V&M), Kadapa (Dt.) Dr. A. Sudhakara Badd

Dr. A. Sudhakara Reddy



### MANACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 05.03.2021

Noise limits for the institute are given blow:	
 Night: 42	NEC PE
Day: 30	
Permissible Mimits as per standards given below:	
Night : 50 dB (A)	
Day: 40 dB (A)	

#### Summary

'The campus is having noise standards under permissible limits it is coming under Silence Zone. AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Dr. Po Sri Chandana Civil Engineering.

Dr. A. Sudhakara Reddy

Annamacharya Institute of Technology & Sciences ANNAMACHARYA INSTITUTE OF Mutar (P), C.K. Dinne (V&M), Kadapa IDI, N KADAPA - 516 003. (A.P.)



### INAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 02.06.2021

Noise limits for the institute are given blow:	
Night: 47	
Day: 34	
Permissible Mimits as per standards given below:	
Night: 50 dB (A)	
Day: 40 dB (A)	

#### Summary

The campus is having noise standards under permissible limits it is coming under *Silence Zone*. AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Draft.csmchandanarent

Dr. A. Sudhakara Reddy

Civil Engineering.

Annamacharya Institute of Technology & Scianty AMACHARYA INSTITUTE OF Utukur (P), C.K. Dinne (V&M), Kadasa (DITECHNOLOGY & SCIENCES



### MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

### CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

#### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 04.09.2021

Noise limits for the institute are given blow:
Night: 44
Day: 32
Permissible Mimits as per standards given below:
Night : 50 dB (A)
Day: 40 dB (A)

#### Summary

The campus is having noise standards under permissible limits it is coming under *Silence Zone*. AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

TESTING EXPERT

Mrs. K. Chandrakala

CONSULTANCY INCHARGE

Dr.P. Sri Ghandanaront

Civil Engineering.

Dr. A. Sudhakara Reddy

PRINCIPAL

annamacharya Institute of Technology & Science

NAMACHARYA INSTITUTE OF FEGHNOLOGY & SCIENCES CIK Chan (18 4)

# MAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES: KADAPA

(Approved by A.I.C.T.E., New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur)

## . CONSULTANCY & TESTING SERVICES: DEPARTMENT OF CVIL ENGINEERING

### TESTING REPORT

Quarterly Report of Noise Monitoring Analysis carried out by Department of CIVIL Engineering, AITS Kadapa

Sampling Date: 07.12.2021

Noise limits for th	ne institute are given blow:
	Night: 46
	Day: 33
Permissible Mimits a	as per standards given below:
Nigh	t:50 dB (A)
Day	: 40 dB (A)

#### Summary

The campus is having noise standards under permissible limits it is coming under Silence Zone. AITS Kadapa campus is located in away from nearby city Kadapa and so noise is very less.

Mrs. K. Chandrakala

Dr. A. Sudhakara Reddy

Unnamediarya Institute of Technology & Sciences PRINCIPAL HUKE TOL C.K. Dinne IVSM). Kadans IMMNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES

### ENERGY AUDIT REPORT OF

# ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES(AITK)



Submitted to

The Principal,

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES (AITK)

Utukur(V & M), C.K. Dinne(M), Kadapa(Dt.), Kadapa.

Andhra Pradesh - 516003

By

Y. NAGARAJA

Assistant Professor

Department of EEE

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES (AITK)



#### Preface

An energy audit is a study of a plant, building or facility to determine how much energy is used and to identify methods for energy savings. Proper balancing in use of new technologies and already existing technology provide the most hopeful prospects for the future. The opportunities lie in the use of existing renewable energy technologies, enhancing the energy efficiency and the distribution of these technologies.

Data collection for energy audit of the Annamacharya Institute of Technology & Sciences campus was accepted by team for the period of Jan 2019 to Dec 2021. This audit was over sighted to inquire about the convenience to develop the energy competence of the campus. This audit is essential to identify the energy proficient appliances/instruments. The energy audit survey was assisted by two B. Tech-IV year students of EEE department. All data collected from each classroom, laboratory, every room. The work is completed by considering, how much tubes, fan, A.Cs, electronic instruments, water purifier, printer, Xerox machine, pump, projector etc., in each room.

This report is just the first step, a mere mile maker towards our destination of achieving energy efficiency and we would like to emphasize that an energy audit is a continuous process. We have compiled a list of potential actions to save and efficiency utilizes our limited resources and identified their savings potential. The next step would be to prioritize their execution. We look forward with optimism that the institute authorities, staff and students shall ensure the maximum execution of the recommendations and the success of this work.

### Acknowledgement

We express our heartiest thanks and profound gratitude to Sn A. Sudhakara Reddy, Principal, AITS, Kadapa for identifying us and believing on our potential for this work and we would like to thank C. Brahmananda Babu, Assistant Professor Dept. of EEE and all the faculty members of EEE dept. technical assistants of all the Departments, for their extended support in all aspects.

### Highlights

- Maximum connected load as per the present energy audit is 403 KVA as per the energy audit performed in Dec 2021.
- > The maximum demand of the campus should be increase from 120 KVA as per the latest audit. It may be increased to 160 KVA for safe load conditions.
- ➤ After installation of the PV Plant the energy consumption of the campus has been decreased by 70 % in year 2020.
- ➤ It is suggested to install 100 KW<sub>p</sub> roof top plants in E-block of AITS-K campus to support the existing and future additional demand.
- ➤ LED bulbs may be utilized to save more electricity and also luminary distributions in rooms need to be improved.
- > AC energy saver can be used to reduce the energy consumption of AC. Moreover, automatic operated doors may be employed in AC rooms.
- > Our college should go for demand side management system.
- > Street lights may be replaced with 7W lithium battery based solar street for solar mass lights.
- > Solar off-grid system can be used to supply backup power.

### Content

S. No.	Title	Page No.
1	Preface	ii
2	Acknowledgement	iii
3	Highlights	iv
4	Introduction	1
5	Survey and data collection	3
6	Results and Discussion	12
7	Recommendation	15
8	Conclusions	16

#### Introduction

An energy audit is an inspection, Survey and analysis of energy flows in building process or system to understand the energy dynamics of the system. The objective of energy audit in an occupied building is reduction of energy consumption without compromising the human comfort, health and safety. Energy audit is not only for the identification of the sources of energy use. It is to prioritize the energy use according to the greatest to least cost effective opportunities for energy saving.

Energy audit will indicate the energy consumption, energy efficiency measures of the building. The energy manager can compare and analysis the trend in energy consumption against past and future levels for a proper energy management. The main part of the energy audit report is energy savings proposals comprising of technical and economic analysis of project. Looking at the final output, an energy audit can also be defined as systematic search for energy conservation opportunities. This information can be transformed into energy savings project. It will facilitate the energy manager to draw up an action plan listing the projects in order of priority. Adopting this activity as a routine or part of the organization culture gives life to energy management. Controlling the energy used by energy audit is known as Energy Management by facts

Sustainable development of any nation is possible through the interminable energy management. In our campus the scarcity of electricity during college hour is a common fact. So institutional management has already installed 100 KW<sub>p</sub> solar PV roof top plants on A-block of the college. The solar PV plant is producing of electricity since Oct 2019 and saving electricity with socio economic environment impact.

India's industrial demand accounted for 44 % of electrical power requirement, transport 17%, and domestic house hold 14%, agriculture 7%, public lightning and other miscellaneous applications accounted for the rest. Coal, oil and gas reserves of India are estimated to last just 100 years, 17.5 years and 40.2 years respectively at the current reserve to production (R/P) ratio. So this is the peak time to reduce energy consumption and efficiently use same. Energy conservation means reduction in energy consumption without making any sacrifice of quantity or quality. A successful energy management program begins with energy conservation; it will lead to adequate rating of equipment's, using high efficiency equipment and change of habits which causes enormous wastages of energy. By observing all these study, lack of electricity and huge electricity demands it is necessary to plan to being self-sufficient in electricity requirement.

In the present study, college electricity audit has been done. In this study Considered practical laboratory, instrument, fans, air conditioners, computers, printers, Xerox machines, pump, lift etc., are considered. Total and month wise economic investment of college on the electricity bill, energy consumption, and maximum measured demand by the electricity board since 2019 have been analyzed to understand the energy dynamics of the campus. Total electricity generation from the solar roof top PV plant since Oct 2019 has been studied to understand how it is reducing the electricity bill and maximum demand of the campus. Also, it is studied that exact contribution of bulb, fans, computer, instruments etc., in the total requirement of electricity. All the calculations have done by the collecting data from the survey on the basis of rating or user of the particular instrument for how often/long they use that and all other required detail.

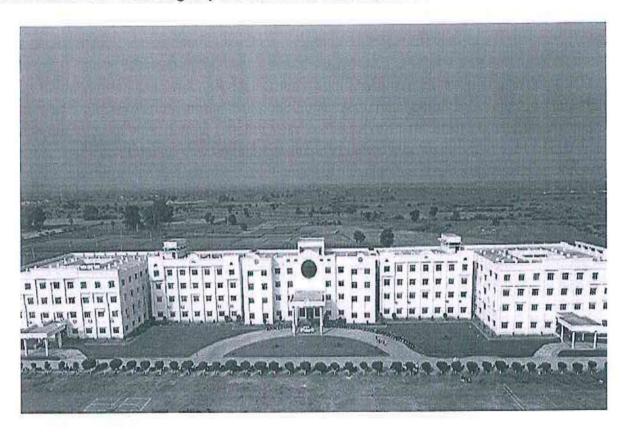


Fig. AITS-K Campus

### SURVEY & DATA COLLECTION

Data like number of fans, lights, ACs, printers and other loads is collected by IV B. Tech., and II M. Tech., EEE Students in our guidance and data has been also verified by us. We have also did walk-through survey in laboratories and major load locations and talked with the in-charges for cross verification. According to survey the following data has been collected for connected load.

#### Maximum connected load Block wise:

-		A-	BLOCK		
Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)
LIGHTS	40w	210	8400	8.4	6.72
	9w	22	198	0.198	0.158
FANS	60w	151	9060	9.06	7.248
A/C	1.7K	11	18700	18.7	14.96
PROJECTORS	350	2 .	700	0.7	0.56
WATER COOLERS	2.2K	1	2200	2.2	1.76
PRINTERS	250w	5	1250	1.25	1
COMPUTERS	200	153	30600	30.6	24.48
LABORATORY	10K		10000	10	8
	TOTAL LOAD	X	81108	81.108	64.8

Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)
LIGHTS	40	184	7360	7.36	5.88
	9	14	126	0.126	0.1
FANS	60	104	6240	6.24	4.99
PROJECTORS	250	2	500	0.5	0.4
PRINTERS	250	2	500	0.5	0.4
COMPUTERS	200	141	28200	28.2	22.56
A/C	1.7K	6	10200	10.2	8.16
LABORATORY	46K		46000	46	36.8
MOTOR LOAD	13K	2	26000	26	20.8
	TOTAL LOAD		125126	125.126	100.1

		C-I	BLOCK	our State of the s	
Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)
LIGHTS	40	168	6720	6.72	5.37
	9	15	135	0.135	0.10
	32	27	864	0.864	0.7
FANS	60	136	8160	8.16	6.53
A/C	2K	8	16000	16	12.8
EXHAUST FAN	90	3	270	0.27	0.22
PROJECTORS	250	2	500	0.5	0.4
PRINTERS	100W	6	600	0.6	0.48
COMPUTERS	200	85	17000	17	13.6
XEROX	1K	4	4000	4	3.2
GEYSER	2K	1	2000	2	1.6
	TOTAL LOAD	72	56249	56.249	45

D-BLOCK							
Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)		
LIGHTS	40	83	3320	3.32	2.66		
	9	12	108	0.108	0.09		
	32	16	512	0.512	0.41		
FANS	60	95	5700	5.7	4.56		
A/C	2K	6	12000	12	9.6		
PROJECTORS	250	2	500	0.5	0.4		
WATERCOOLERS	2.2K	1	2200	2.2	1.76		
PRINTERS	100	2	200	0.2	0.16		
COMPUTERS	200	106	21200	21.2	16.96		
LABORATORY	41.7K		41700	41.7	33.36		
7	TOTAL LOAD		87440	87.44	70		

E-BLOCK							
Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)		
LIGHTS	25	108	2700	2.7	2.30		
	32	18	576	0.576	0.49		
	9	18	162	0.162	0.138		
FANS	60	58	3480	3.48	2.96		
A/C	22K	4	88000	88	74.8		
PROJECTORS	320	5	1600	1.6	1.36		
COMPUTERS	180	130	23400	23.4	19.89		
	TOTAL LOAD		119918	119.918	101.9		

GENERAL						
Description	Power(Watts)	No's	Total power(W)	Total power (KW)	Total power (KVA)	
STREET LIGHTS	90	3	270	0.27	0.22	
	20	6	120	0.12	0.096	
PUMPS	13K	2	26000	26	20.8	
	300	3	900	0.9	0.72	
LIFT	3.75K	1	3750	3.75	3	
CCTV CAMERA	15	51	765	0.765	0.612	
CANTEEN	2.25K		2250	2.25	1.8	
	TOTAL LOAD		34055	34.055	27.24	

### TOTAL LOAD:

Description	Total power(W)	Total power (KW)	Total power (KVA)		
A- BLOCK	81108	81.1	64.8		
B- BLOCK	125126	125.126	100.1		
C- BLOCK	56249	56.249	45		
D- BLOCK	87440	87.44	70		
E- BLOCK	119918	119.918	101.9		
GENERAL	34055	34.055	27.24		
TOTAL LOAD	503896	503.896	403.11		

IOTA	L ENERGY C	CONSUMPT			O DEC.202		s) PAID BY	COLLEG	E LKOM
					YEAR				
	2019			2020			2021		
Month	Energy consumed (KVAh)	Maximu m demand (KVA)	Bill paid (Rs)	Energy consum ed (KVAh)	Maximu m demand (KVA)	Bill paid (Rs)	Energy consume d (KVAh)	Maxim um demand (KVA)	Bill paid (Rs)
JAN	11587	99.1	136735	4256	55.9	66968	5115	58.7	66700
FEB	12703	100.4	149901	4735	49.8	66789	5313	48.1	66805
MAR	11822	99.3	139509	5109	31.5	66546	5831	54.6	67249
APR	15460	124.7	183861				2932	35	66413
MAY	21228	162.3	272434	2369	23.5	52781	3174	54.6	54062
JUNE	16090	127.8	191445	4168	57.3	66629	2026	13	66050
JULY	17559	116.8	193671	5687	26.7	67330	1952	16.9	65958
AUG	11940	99.4	142356	4943	27.8	67197	4022	59.3	66024
SEP	8745	21.4	115899	4062	40.2	66629	8392	66.5	110556
OCT	5065	642	72020	9104	67.40	00542	0140	20.1	00050

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES

NOV	6071	86.9	154442	3378	47.2	66107	3887	41.8	66122
DEC	4012	96.2	77029	5439	60.1	66244	4966	51.2	67968
Total	143082	1198.5	183010 2	52340	67.49	752762	55750	528.8	862957
Maxim um	21228	162.3	272434	8194	23.5	99542	8392	66.5	110556
Minim um	4012	21.4	72820	2369		52781	2026	13	54062

 $100~\mathrm{KW}$  SOLAR PV PLANT GENERATION, ENERGY CONSUPTION FROM GRID AND GRID FED FROM PV PLANT

					YEAR				ity fed to the
MONTH		2019			2020	2021			
	PV genera tion (KVA h)	Electricity consumption from grid(KVAh)	Electricity fed to the grid(KVAh)	PV generation (KVAh)	Electricity consumptio n from grid(KVAh	Electricity fed to the grid(KVAh )	PV generation (KVAh)	Electricity consumptio n from grid(KVAh	grid(K
JAN				6003	4256	1747	4486	5115	0
FEB				7639	4735	2904	3938	5313	0
MARCH	- 1			5912	5109	803	3495	5831	0
APRL				9089	5558	3531	6608	2932	3676
MAY	(1)			9099	2369	6699	5864	3174	2690
JUNE				8196	4168	4028	8680	2026	6280
JULY				4962	5687	0	7191	1952	5239
AUG				6490	4943	1547	3576	4022	0
SEP				4823	4062	761	1398	8392	0
OCT	4371	5865	0	3095	7151	0	2455	8140	0
NOV	5113	6071	0	4575	3378	1197	5561	3887	1674
DEC	5880	4012	1868	3551	5439	0	2344	4966	0
TOTAL	1536 4	15948	1868	73434	56855	23217	55593	55753	19561

**BUILDING ROOFTOP AREA:** 

A & E BLOCKS: 16150 SqFeet. Each

B & D BLOCKS: 7678 SqFeet. Each

C-BLOCK: 11600 SqFeet.

#### Results and Discussions

As far concerning the energy audit, electricity audit is main concern regarding educational institution. We have collected data by considering the tube light, fan, computer, printer, A.C and instruments.

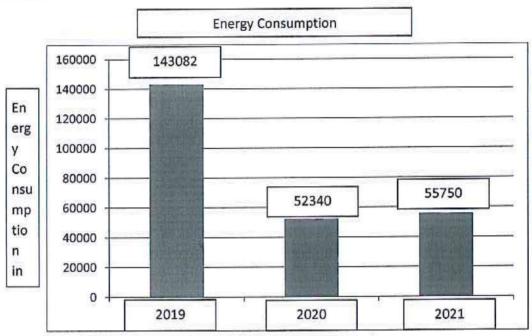


Fig. 1: yearly energy consumption

Maximum Measured connected load

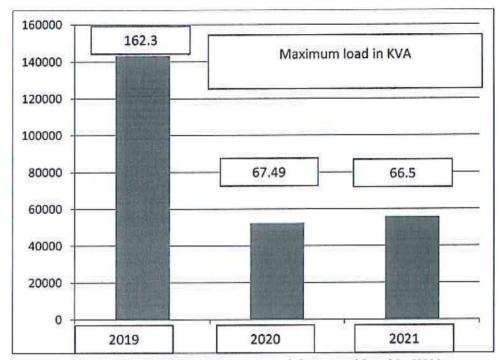


FIG. 2 Year wise Maximum measured Connected Load In KVA

YEAR	2019	2020	2021
AVERAGE LOAD KVA	99.87	40.62	44.06
MAXIMUM MEASURED KVA	162.3	67.49	66.5
MINIMUM MEASURED KVA	21.4	23.5	13
MAXIMUM CONTRACT DEMAND KVA	120	120	120

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES

#### **ELCTRICITY BILL PAID**

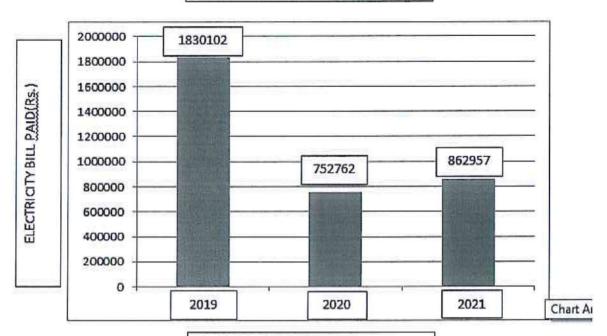


FIG. 3 YEARLY ELECTRICITY BILL PAID

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES

#### Recommendations

Maximum load may be increase from existing 120KVA to 160KVA. After analyzing the
maximum connected load and measured maximum demand trend from Jan 2019 to Dec 2021. It
may be noticed that by addition of solar PV plant maximum demand trend of the campus that
was on rise from 2019, started becoming stabilized in 2020 and same followed till now.

This year (2021) maximum demand of campus was 66.5KVA in the month of September. Now if our college opts for 200KVA load means every month our college have to pay fixed charges for 160KVA (i.e., Rs.475/KVA). It is expected that the peak maximum demand period for this year is already over as per the trend seen found during analysis. In case, if maximum demand in next 4 months comes as 160KVA then only in these upcoming four months college may have to pay extra Rs.114000. thus, suddenly going for 280KVA maximum demand from 120KVA is uneconomical and undesirable as per the analysis.

- 2. Roof top area available in B,C,D,E block can be utilized to install the PV plant of 100KW<sub>p</sub>. as per roof top solar PV plant installation policy maximum installation of rooftop PV plant can be 80% of maximum demand. So 80% of 200KVA is 160KVA. Already installed PV plant size is 100KW, so we can install another 60KW.it is suggested to install 100KW roof top plant in E block to support the existing and future additional demand
- LED bulbs can be used to save more electricity and also luminary distributions in rooms need to be improved.
- 4. AC energy saver can be used to reduce the energy consumption of ACs by 35%-40%.
- For future constructions consideration should be given to utilize maximum day light for illumination in buildings. That will reduce the capital investment in luminary and AC units, and also reduces electricity consumption.

6. Street lights should be replaced with 7W lithium battery based solar street lights.

PRINCIPAL
ANNAMACHARYA INSTITUTE OF
TECHNOLOGY & SCIENCES
C.K. Dinne (V&M),

KADAPA - 516 003. (A.P.)

A ROLLOWING SIZE 523

#### Conclusion

After completion of the Energy Performance Index (EPI) calculation for AITS campus, it turns out to be a 5 star building according to "BEE star rating of office buildings". In conclusion, data generated in energy audit are useful for understanding the energy distribution, utilization and energy dynamics of the college. Maximum connected load as per the present energy audit is 403 KVA. The maximum demand of the campus is increased from 120KVA to 160KVA. 100KW<sub>p</sub> solar PV plant is installed on the rooftop of the A block. After the installation of the PV plant the energy consumption of the campus has been decreased by 70% in the year 2020. Total saving in energy consumption in 2020 and 2021 due to solar power plant is 23217KWh and 19561KWh respectively. Roof top area available from B block to E bock can be utilized to install the PV plant of 100KW.

This report is just the first step, a mere mile-marker towards our destination of achieving energy efficiency and we would like to emphasize that an energy audit is a continuous process. We have compiled a list of potential actions to save and efficiently utilize our limited resources and identified their savings potential. The next step would be to prioritize their execution. We look forward with optimism that the institute authorities, staff and students shall ensure the maximum execution of the recommendations and the success of this work.

