KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA, TELANGANA STATE – 506001

(Affiliated to Kakatiya University, Warangal)

(e-mail:warangal.jkc@gmail.com, website: https://gdcts.cgg.gov.in/hanamkonda.edu)

Criterion -I

Metric: 1.3.2

Number of students undertaking Project Work / Field Work / Internships

PROJECT WORK / FIELD WORK

2017 – 2018

STUDENT STUDY PROJECT

TOPIC:

Role of Technology in Learning English Language

2017-2018

STUDENT RESEARCHERS

1. Gouthami
2. L .Manisha
3. A. Naveen
4. B. Anil
5. K. Chanikya
6. M. Madhu
7. B. Sandeep
8. B. Yakub
9. G. Jallaja
10. A. Rajesh

RESEARCH SUPERVISOR

Dr. E. Srinivas Rao

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC:

A Study on Contemporary Indian English Women Writers

2017-2018

STUDENT RESEARCHERS

1. S.Pavan Kalyan
2. SK.Ameen Pasha
3. D.Mahender
4. G.Aruna
5. A.Rainikanth
6. M.Lakshminarayna
7. K.Raju
8. I.Srishailem
9. B.Jallander
10. J.Sravani

RESEARCH SUPERVISOR

Dr. E. Srinivas Rao

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC:

"Use of Audio Visual Aids in English Classroom" A Study

2017-2018

STUDENT RESEARCHERS

1. M.Sravanthi
2. K.Supriya
3. B.Shailaja
4. I.Sribanth
5. K.Pooja
6. K.Renuka
7. M.Naveen
8. A.Praveen
9. M.Raju
10. V.Geetha

RESEARCH SUPERVISOR

T.S. Praveen Kumar

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC:

Difficulties in Using Prepositions Among Second Language Learners

2017-2018

STUDENT RESEARCHERS

1. B.Indhu
2. Sumakindhu
3. P.Raniith
4. S.Radhika
5. S.Sribanth
6. P.Umashi
7. M.Shalini
8. N.Raghu
9. M.Devaraju
10. J.Harish

RESEARCH SUPERVISOR

T.S.Praveen Kumar

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC:

Importance of English Literature – A Study

2017-2018

STUDENT RESEARCHERS

1. D.Sujith Reddy
2. MD.Shahabaaz Mohiuddin
3. G.Raju
4. I.Ashok
5. A.Ganesh
6. V.Mahesh
7. N.Ihasna
8. S.Srilatha
9. T.Ramya
10. V.Narsimha Rao

RESEARCH SUPERVISOR

Dr.C.Govardhan

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC:

A Study on Biography of William Shakespeare

2017-2018

STUDENT RESEARCHERS

1. A.Swapna
2. E.Chamanthi
3. B.Prakash
4. B.Shailendra
5. Ch.Raju
6. B.Soujanya
7. D.Krishna Vamshi
8. I.Praveen
9. A.Ranaprathap
10. I.Sai Ram reddy

RESEARCH SUPERVISOR

Dr.E.Rambhaskar Raju

SUBMITTED TO

THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

STUDENT STUDY PROJECT

TOPIC: Sources of Learning English Language-A Study

2017-2018

STUDENT RESEARCHERS

1. G.Venu
2. C.Bharath kumar
3. B.Kaveri
4. B.Rakesh
5. G.Jaanu
6. G.saikumar
7. E.Naveen
8. B.Pavankalyan
9. D.Kumar
10. D.Rajulu

RESEARCH SUPERVISOR

Dr.C.Govardhan

SUBMITTED TO

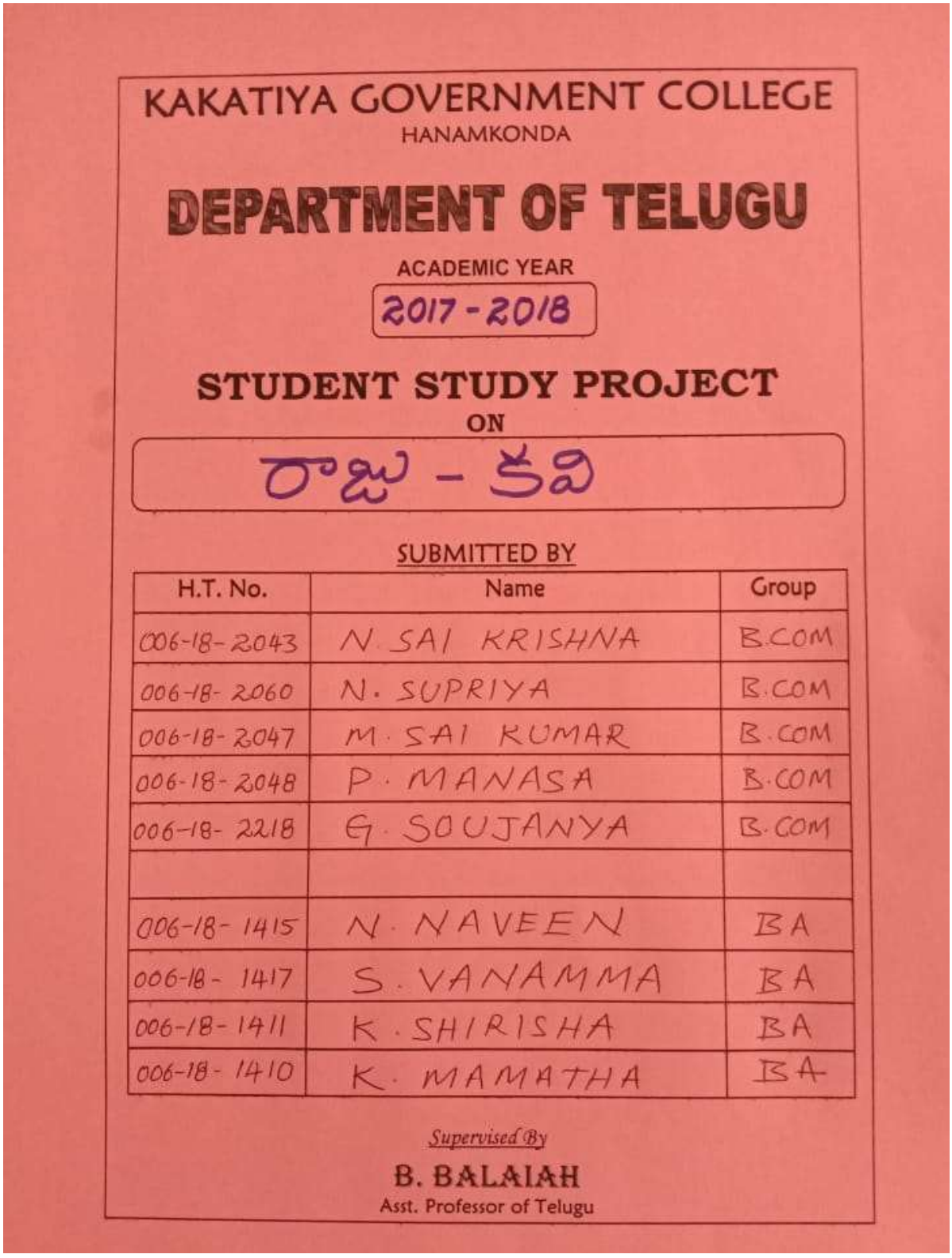
THE DEPARTMENT OF ENGLISH,

KAKATIYA GOVERNMENT COLLEGE

HANUMAKONDA

.

DEPARTMENT OF TELUGU



KAKATIYA GOVERNMENT COLLEGE
HANAMKONDA

DEPARTMENT OF TELUGU

ACADEMIC YEAR
2017 - 2018

STUDENT STUDY PROJECT
ON
రాజు - కవి

SUBMITTED BY

H.T. No.	Name	Group
006-18-2043	N. SAI KRISHNA	B.COM
006-18-2060	N. SUPRIYA	B.COM
006-18-2047	M. SAI KUMAR	B.COM
006-18-2048	P. MANASA	B.COM
006-18-2218	G. SOUJANYA	B.COM
006-18-1415	N. NAVEEN	BA
006-18-1417	S. VANAMMA	BA
006-18-1411	K. SHIRISHA	BA
006-18-1410	K. MAMATHA	BA

Supervised By
B. BALAIAH
Asst. Professor of Telugu

KAKATIYA GOVERNMENT COLLEGE

HANAMKONDA

DEPARTMENT OF TELUGU

ACADEMIC YEAR

2017 - 2018

STUDENT STUDY PROJECT

ON

హనుమత్ సందేశము

SUBMITTED BY

H.T. No.	Name	Group
006-18 - 2006	B. SAMBAIAH	B.Com
006-18 - 2036	K. MANASA	B.Com
006-18 - 2039	M. KIRAN KUMAR	B.Com
006-18 - 2026	K. RAJU	B.Com
006-18 - 2222	G. RAKESH	B.Com
006-18 - 1417	S. VANAMMA	BA
006-18 - 1405	B. ANIL	BA
006-18 - 1407	G. NAGA RAJU	BA
006-18 - 1410	K. MAMATHA	BA
006-18 - 1414	M. KRANTHI KUMAR	BA

Supervised By

B. BALAIAH

Asst. Professor of Telugu

కాకతీయ ప్రభుత్వ కళాశాల, హనుమకొండ

తెలుగు విభాగము

Student project

2017- 2018

అంశం: సత్యభామా సాంత్వనము - నండి ఆమంచి

1) ఆకోటి సుమలత B.A HEML 00617 1401 - Iyear
2) భూక్యా ఉషిత B.A HEML 00617 1403 - Iyear
3) గుగులోత్ నరేష్ B.A HEML 00617 1412 - Iyear
4) పెండెలి సుమన్ B.A HEML 00617 1419 - Iyear
5) సింగారపు చందు B.A HEML 00617 1423 - Iyear
6) తిరుపతి వెంకటేష్ B.A HEML 00617 1426 - Iyear

పర్యవేక్షకులు

డా॥ B. రాములు (అసిస్టెంట్ ప్రొఫెసర్)

కాకతీయ ప్రభుత్వ కళాశాల - హనుమకొండ

తెలుగు విభాగము

Student project

2017 - 2018

అంశం: శ్రీనాథ సాహిత్యం - ఆర్థిక సాంఘిక భూమిక

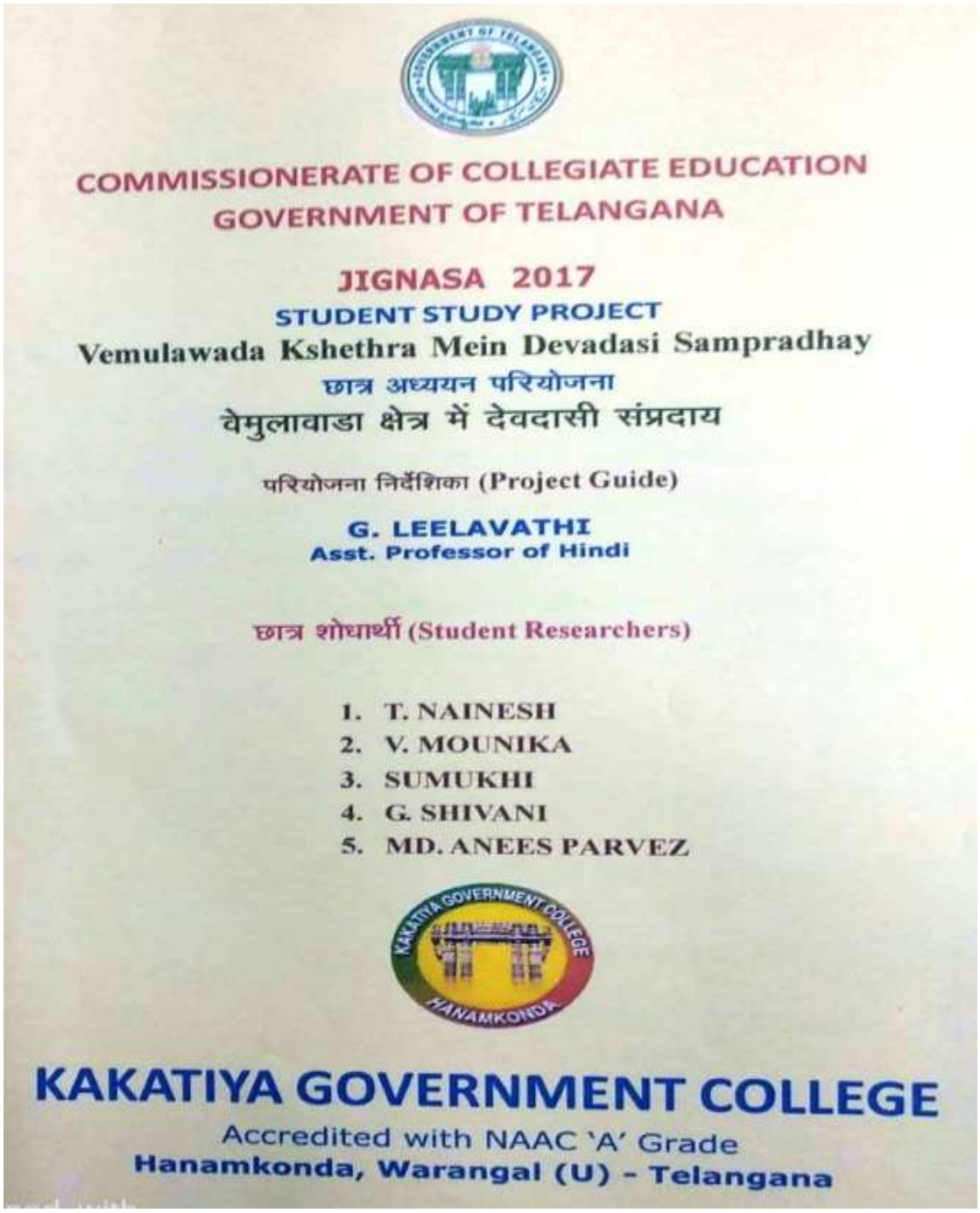
1) ఆకుల కార్తీక్ B.COM(G) IIyear 00617 2001
2) చాపర్తి మానస B.com(G) IIyear 006172009
3) దుప్పాల దుర్గా B.com(G) IIyear 00617 2021
4) నక్క కళ్యాణి B.com(G) IIyear 00617239
5) రాచర్ల గణేష్ B.com(G) IIyear 00617246

పర్యవేక్షకులు

డా॥ జి. రాములు

అసిస్టెంట్ ప్రొఫెసర్

DEPARTMENT OF HINDI



DEPARTMENT OF MATHEMATICS

Kakatiya Government College, Hanamkonda.

(Accredited with NAAC 'A' Grade)

Student Study project on

Applications of Differential Equations to Real world systems

M.Shivani III MPC E/M

M.Pranitha III MPC E/M

J.Nibarika III MPC E/M

M.Naveen III MPC T/M

Laxmiraju III MPC E/M

Supervised by

Sri T. Ramesh & Dr.B.Prabhakar

Department of Mathematics

JIGNASA- STUDENT STUDY PROJECTS STATELEVEL PRESENTATION 2017-

COMMISSIONERATE OF COLLEGIATE EDUCATION
Jignasa- State Level Presentation and Selection of Student Study Projects

Attendance Certificate

This is to certify that T. Ramesh Lecturer/Assistant Professor in Mathematics Kakatiya Govt College attended **Jignasa- State Level Presentation and Selection of Student Study Projects held at** Auditorium, JNAFAU and Sanskritika Vidya Bhavan, Hyderabad on 20 & 21 January, 2018 from 10 to 5 pm organized by Academic Cell, Commissionerate of Collegiate Education, Telangana.

For Commissioner of Collegiate Education

Hyderabad
21.1.18

Students' Study Project

On

"Modular Arithmetic and Dihedral Groups: An Application to Check Digits".

Participants

1.	B.Saritha	B.Sc MPCs II yr
2.	A.Raju	B.Sc MPCs II yr
3.	G.Akhila	B.Sc MPCs II yr
4.	E.Sumatha	B.Sc MPCs II yr
5.	K.Ankith	B.Sc MPCs II yr
6.	M.Latha	B.Sc MPCs II yr
7.	M.Mohan	B.Sc MPCs II yr
8.	J.Ajay Kumar	B.Sc MPCs II yr
9.	S.Sneha	B.Sc MPCs II yr
10.	K.Suresh	B.Sc MPCs II yr

Supervisor

Dr.B.Prabhakar

Incharge

Department of Mathematics
Kakatiya Government College
Hanumakonda - T.S.

Principal

PRINCIPAL
KAKATIYA GOVT COLLEGE
Hanamkonda

DEPARTMENT OF PHYSICS

Commissionerate of Collegiate Education

Government of Telangana

JIGNASA 2017-18

Student Study Project on

"A study on Waste Electrical and Electronic Equipment (WEEE) Disposal And Management"

Submitted by

Ch.Raju B.Sc. (MPC) II[nd] Year

M.Navya B.Sc. (MPCs) II[nd] Year

B.Bharath B.Sc. (MPC) II[nd] Year

K.Ankith B.Sc. (MPCs) II[nd] Year

A.Santhosh B.Sc. (MPCs) II[nd] Year

Under The Supervision of

Smt. K.Rajanilatha

Sri. Y.Devads

Sri. T.Jeevankumar

Sri. B.Satyanarayana

Incharge
Department of Physics
Kakatiya Government College
HANAMKONDA

DEPARTMENT OF PHYSICS

KAKATIYA GOVERNMENT COLLEGE, HANMKONDA

PRINCIPAL
KAKATIYA GOVT COLLEGE
Hanamkonda

STUDENT's PRSENTATION

PRINCIPAL
KAKATIYA GOVT COLLEGE
Hanamkonda.

Kakatiya Government College, Hanamkonda.
(Accredited with NAAC 'A' Grade)

Student Study project on
A Study on electromagnetic principles

M.UPENDER REDDY III MPCS E/M
T.NAGA LAKSHMI III MPCS E/M
S.USHA SREE III MPC E/M
P.ANJALI III MPCS T/M
B. ANUSHA III MPCS E/M.

Supervised by
Y. Devadas
K. Rajini Latha
B. Sathyanaryana
T. Jeevan Kumar
Department of Physics

Incharge
Department of Physics
Kakatiya Government College
HANAMKONDA

PRINCIPAL
KAKATIYA GOVT COLLEGE
Hanamkonda.

Index

(10) Results and conclusions:-

I. If is demonstrated how a current carrying conductor or a current carrying coil behaves in a magnetic field.

II. The above result deals to principle of dc motor.

III. We make student understand the phenomena perfectly well, then there is very possibility that they think how best they can put it to societal use for common man.

IV. With the understanding of electromagnetic principles, one can understood the method of production of electricity. That idea makes the students to innovative other methods of production of electricity.

Incharge
Department of Physics
Kakatiya Government College
HANAMKONDA

PRINCIPAL
KAKATIYA GOVT COLLEGE
Hanamkonda.

KAKATIYA GOVT. COLLEGE, HANAMKONDA,
DIST: WARANGAL(U) – TELANGANA - 506001
(Affiliated to Kakatiya University, Warangal)

STUDENT PROJECT WORK on

"Numerical Aperture of Plastic Optical Fibre "

A.SHARATH - B.Sc.(MPC) – II yr.
D.RAKESH - B.Sc.(MPC) – II yr.
M.PRANTHA - B.Sc.(MPC) – IIIyr.
M.NAVEEN - B.Sc.(MPC) – III yr.
M.LAXMI RAJU- B.Sc.(MPC) – III yr.
J.NIHARIKA- B.Sc.(MPC) – III yr.
M.SHIVANI - B.Sc.(MPC) – III yr.

DEPARTMENT OF PHYSICS

DECLARATION

We, the undersigned students declare that the project entitled, ***"Numerical Aperture of Plastic Optical Fibre"*** submitted to Department of Physics, Kakatiya Government College, Hanamkonda, this project work is our original work.

PARTICIPANTS

A.SHARATH - B.Sc.(MPC) – II yr.
D.RAKESH - B.Sc.(MPC) – II yr.
M.PRANTHA - B.Sc.(MPC) – IIIyr.
M.NAVEEN - B.Sc.(MPC) – III yr.
M.LAXMI RAJU- B.Sc.(MPC) – III yr.
J.NIHARIKA- B.Sc.(MPC) – III yr.
M.SHIVANI - B.Sc.(MPC) – III yr.

Assisstant Professor of Physics
Kakatiya Government College,
Hanamkonda, Warangal (U) - 506 001

Incharge
Department of Physics
Kakatiya Government College
HANAMKONDA

CERTIFICATE FROM THE MENTOR

This is to certify that the project entitled, ***"Numerical Aperture of Plastic Optical Fibre"*** is a bonafied record of independent work done by the students under our supervision. It is submitted to the Department of Physics.

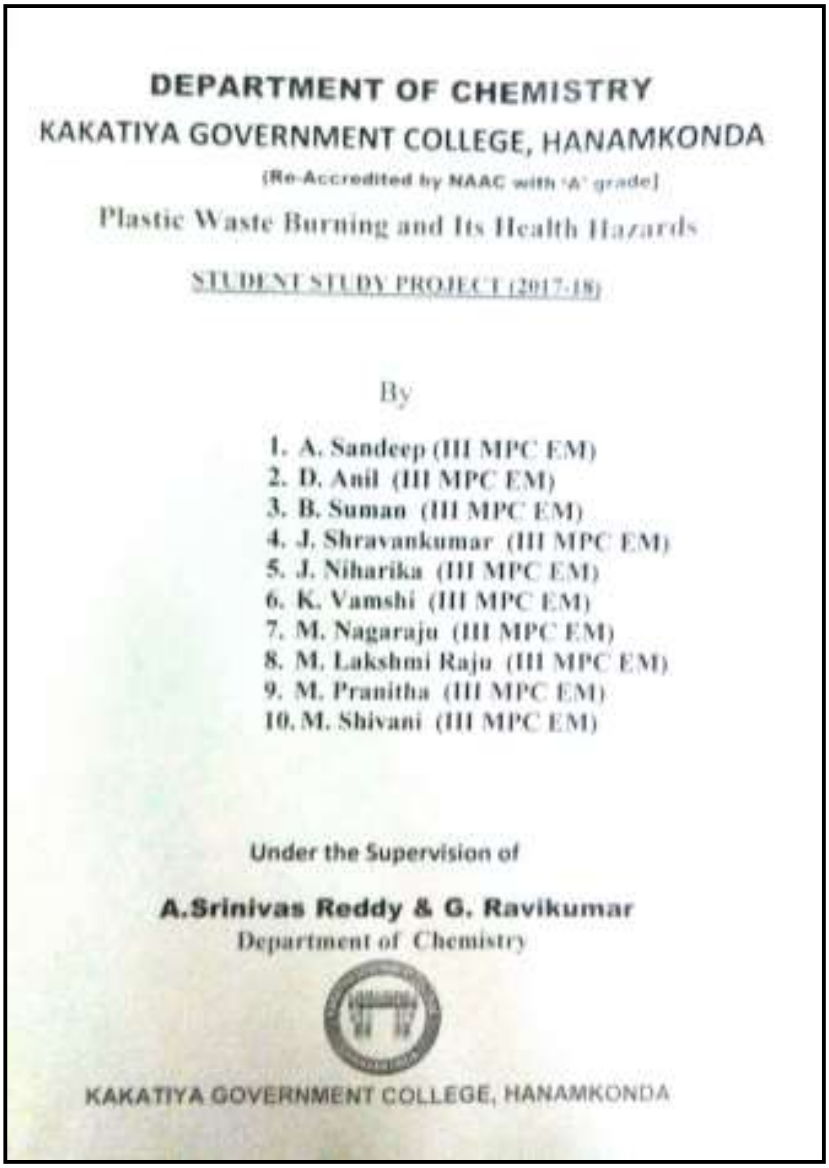
Date: 03/08/2017

Hanamkonda

Assisstant Professor of Physics
Kakatiya Government College,
Hanamkonda, Warangal (U) - 506 001

Incharge
Department of Physics
Kakatiya Government College
HANAMKONDA

DEPARTMENT OF CHEMISTRY



DEPARTMENT OF CHEMISTRY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

(Re-Accredited by NAAC with 'A' grade)

Plastic Waste Burning and Its Health Hazards

STUDENT STUDY PROJECT (2017-18)

By

1. A. Sandeep (III MPC EM)
2. D. Anil (III MPC EM)
3. B. Suman (III MPC EM)
4. J. Shravankumar (III MPC EM)
5. J. Niharika (III MPC EM)
6. K. Vamshi (III MPC EM)
7. M. Nagaraju (III MPC EM)
8. M. Lakshmi Raju (III MPC EM)
9. M. Pranitha (III MPC EM)
10. M. Shivani (III MPC EM)

Under the Supervision of

A.Srinivas Reddy & G. Ravikumar

Department of Chemistry

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

DEPARTMENT OF CHEMISTRY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

(Re-Accredited by NAAC with 'A' grade]

STUDENT STUDY PROJECT ON

Analysis of Food Adulterants from Different Departmental and Local Grocery Stores by Qualitative techniques for Food Safety

Submitted By

1.J. Akhila (III BZC TM)
2. B. Anusha (III BZC TM)
3. Ch. Laxman (III BZC TM)
4. B. Nagaraju (III BZC TM)
5. M. Ravali (III BZC TM)
6. P. Sudharani (III BZC TM)
7. S. Vijay Kumar (III BZC TM)
8. N. Pallavi (III BZC TM)
9. M. Dileep (III BZC TM)
10. Ch Divya (III BZC TM)

Under the Supervision of

Dr. Vasam Srinivas

Asst. Prof. of Chemistry

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

DEPARTMENT OF CHEMISTRY
KAKATIYA GOVERNMENT COLLEGE,
HANAMKONDA
(Re-Accredited by NAAC with 'A' grade)
HANAMKONDA, WARANGAL(U)

STUDENT STUDY PROJECT (2017-18)

A Quick and Efficient One-Pot Synthesis of 2-(4-Methylphenyl)-Benzimidazole Supported by Silica

By

S.No	Name of the student	Class	H.No
1	D.Siddeshe	B.Sc(MPC)III	006-16-4107
2	J.Sharvan Kumar	B.Sc(MPC)III	006-16-4114
3	M.Narsaraju	B.Sc(MPC)III	006-16-4121
4	N.Shivani	B.Sc(MPC)III	006-16-4126
5	S.Ushasree	B.Sc(MPC)III	006-16-4151
6	K.Lingamurthy	B.Sc(MPC)III	006-16-4152
7	Ch.Shakir	B.Sc(BZC)III	006-16-3310
8	D.Mahender	B.Sc(BZC)III	006-16-3314
9	K.Vijay	B.Sc(BZC)III	006-16-3325
10	K.Suresh	B.Sc(BZC)III	006-16-3329
11	K.Charan kumar	B.Sc(BZC)III	006-16-3332
12	M.Sagar	B.Sc(BZC)III	006-16-3337

Supervised by

A. Srinivas Reddy
Lecturer in chemistry
Dept.Of Chemis

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

A Project Report on **ONLINE EXAMINATION SYSTEM** is submitted to department by **A. Sharath, B. Ramgopal, B. Sairam,**

- **D. Aruna, M. Shravan Kumar** and **G. Shravan Kumar** under the guidance of **Dr. D. Suresh Babu** and initially It was selected for District level Competition "**JIGNASA-2019**" held by Commissioner of Collegiate Education at KGC,Warangal.. Students have given a presentation on their project work.

S.No	Date	Conducted through (DRC/JKC/ELF/NCC etc.,	Nature of Activity	Title of the Project	Name(s) of the lecturer(s) involved	No. of students participated
1.	04.01.2018	JIGNASA	Study Projects	ONLINE EXAMINATION SYSTEM	Dr. D. Suresh Babu	06

Later the same project report on "**ONLINE EXAMINATION SYSTEM"** is submitted by **A. Sharath, B. Ramgopal, B. Sairam,**

D. Aruna, M. Shravan Kumar and **G. Shravan Kumar** under the guidance of **Dr. D. Suresh Babu** ,was selected for state level Competition "**JIGNASA-2018**" held by Commissioner of Collegiate Education, Hyderabad. Students have given a presentation on their project work.

S.No	Date	Conducted through (DRC/JKC/ELF/NCC etc.,	Nature of Activity	Title of the Project	Name(s) of the lecturer(s) involved	No. of students participated
1.	18.01.2018 to 26.01.2018	JIGNASA	Study Projects	ONLINE EXAMINATION SYSTEM	Dr. D. Suresh Babu	06

Government of Telangana

Commissionerate of Collegiate Education

Certificate of Participation

Awarded to

B. RAM GOPAL

Kakatiya Govt College, Hanamkonda.

for presenting study project on

Online Examination System

at

IIGNASA

State Level Presentation Programme

held from

18th to 26th January, 2018.

Sponsored by

State Project Directorate

Rashtriya Uchchatar Shiksha Abhiyan

(RUSA)

Officer in charge

Commissioner

STUDENT'S STUDY PROJECT REPORT

ON

ONLINE COLLEGE REGISTRATION SYSTEM

SUBMITTED BY

1. K.AJAY – HTNO: 006-16-2422
   B.COM(CA) FINAL YEAR
2. K.DIVYA– HTNO: 006-16-2423
   B.COM(CA) FINAL YEAR
3. K.PRIYANKA– HTNO: 006-16-2424
   B.COM(CA) FINAL YEAR
4. A.NAVEEN– HTNO: 006-16-2401
   B.COM(CA) FINAL YEAR
5. A.JEEVAN– HTNO: 006-16-2402
   B.COM(CA) FINAL YEAR
6. B.VENKATESH – HTNO: 006-16-2403
   B.COM(CA) FINAL YEAR

Under The Guidance of

SRI K.RAMESH

LECTURER IN COMPUTER SCIENCE

DEPARTMENT OF COMPUTER SCIENCE / APPLICATIONS,

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA,

DIST. WARANGAL URBAN.

KAKATIYA GOVERNMENT COLLEGE,

HANAMKONDA, DIST. WARANGAL URBAN.

(Affiliated to Kakatiya University)

CERTIFICATE

This is to certify that the Project Report entitled **"ONLINE COLLEGE REGISTRATION SYSTEM "**,submitted to the Kakatiya Government College, Hanamkonda. Department of Computer Science & Applications was carried out by the following students under my guidance.

1. **K.AJAY – HTNO: 006-16-2422**
   B.COM(CA) FINAL YEAR
2. **K.DIVYA– HTNO: 006-16-2423**
   B.COM(CA) FINAL YEAR
3. **K.PRIYANKA– HTNO: 006-16-2424**
   B.COM(CA) FINAL YEAR
4. **A.NAVEEN– HTNO: 006-16-2401**
   B.COM(CA) FINAL YEAR
5. **A.JEEVAN– HTNO: 006-16-2402**
   B.COM(CA) FINAL YEAR
6. **B.VENKATESH – HTNO: 006-16-2403**
   B.COM(CA) FINAL YEAR

Signature of the Guide

Name & Address of the Guide
K.RAMESH
Lecturer in Computer Applications,
Kakatiya Government College, Hanamkonda
Department of Computer Applications

Incharge
Dept. of Computer Science
Kakatiya Government College
Hanamkonda, Warangal.

STUDENT'S STUDY PROJECT REPORT

ON

TRAVEL MANAGEMENT SYSTEM

SUBMITTED BY

1. B.KIRAN – HTNO: 006-16-2404
   B.COM CA FINAL YEAR
2. B.RADYA HTNO: 006-16-2405
   B.COM CA FINAL YEAR
3. B.SURESH – HTNO: 006-16-2406
   B.COM CA FINAL YEAR
4. B.BHASKAR – HTNO: 006-16-2407
   B.COM CA FINAL YEAR
5. B.SUMAN – HTNO: 006-16-2408
   B.COM CA FINAL YEAR
6. B.MANASA – HTNO: 006-16-2409
   B.COM CA FINAL YEAR

Under The Guidance of

SRI V.RAMESH

LECTURER IN COMPUTER SCIENCE

DEPARTMENT OF COMPUTER SCIENCE / APPLICATIONS,

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA,

DIST. WARANGAL URBAN.

KAKATIYA GOVERNMENT COLLEGE,

HANAMKONDA, DIST. WARANGAL URBAN.

(Affiliated to Kakatiya University)

CERTIFICATE

This is to certify that the Project Report entitled "**TRAVEL MANAGEMENT SYSTEM**", submitted to the Kakatiya Government College, Hanamkonda. Department of Computer Science & Applications was carried out by the following students under my guidance.

1. **B.KIRAN – HTNO: 006-16-2404**
   B.COM CA FINAL YEAR
2. **B.RADYA HTNO: 006-16-2405**
   B.COM CA FINAL YEAR
3. **B.SURESH– HTNO: 006-16-2406**
   B.COM CA FINAL YEAR
4. **B.BHASKAR – HTNO: 006-16-2407**
   B.COM CA FINAL YEAR
5. **B.SUMAN– HTNO: 006-16-2408**
   B.COM CA FINAL YEAR
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STUDENT'S STUDY PROJECT REPORT

ON

DESIGN & IMPLEMENTATION OF BIOMETRIC

SUBMITTED BY

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Under The Guidance of

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KAKATIYA GOVERNMENT COLLEGE,
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(Affiliated to Kakatiya University)

CERTIFICATE

This is to certify that the Project Report entitled **"DESIGN & IMPLEMENTATION OF BIOMETRIC"**,submitted to the Kakatiya Government College, Hanamkonda. Department of Computer Science & Applications was carried out by the following students under my guidance.

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DEPARTMENT OF BOTANY

KAKATIYA GOVERNMENT COLLEGE,
HANAMKONDA

DEPARTMENT OF BOTANY

STUDENT STUDY PROJECT

2017-18

TITLE: ADVANTAGES OF BIOFERTILIZERS

NAMES OF THE STUDENTS	SUPERVISOR
1. A.Vasanth 2. D.Rakesh 3. B.Suresh 4. D.Ashok 5. P.Naveen	A.Ramana Rao Dr.S.Syam prasad

INTRODUCTION

Biofertilizers are **those fertilizers that contain microbes which are used for promoting the growth of plants**. This is done by increasing the supply of nutrients that are essential for the growth of plants. The microbes that are used in biofertilizers can be bacteria, some blue green algae and mycorrhizal fungi.

Indian economy is an agrarian economy, a reason that makes biofertilisers an essential need for Indian farmers. Though most of our agricultural activities are dependent on monsoon, the use of a good biofertilizer can yield a better crop to the farmers and increase the fertility of the soil. Let's have a look at biofertilizers' definition.Biofertilisers are products that contain microorganisms essential for soil fertility and plant growth when added to the soil. A biofertilizer is a chemical that contains living microorganisms that colonize the rhizosphere or the interior of the plant when given to seeds, plant surfaces, or soil, and encourage growth by controlling the quantity or availability of primary nutrients to the plant host. Biofertilisers supply nutrients to plants through natural processes such as nitrogen fixation, phosphorus solubilization, and the creation of growth-promoting chemicals. They help restore the soil's natural nutrient cycle and increase soil organic matter. Healthy plants can be developed with the application of biofertilisers while also improving the soil's sustainability and health. Biofertilisers will likely decrease the need for synthetic fertilizers and pesticides, but they will not be able to completely replace them.

TYPES OF BIOFERTILISERS

Some important types of Biofertilisers are as follows:

1. Symbiotic Nitrogen-Fixing Bacteria

The symbiotic nitrogen-fixing bacteria like Rhizobium get food and shelter from the plants and provide them with fixed nitrogen in return. One of the most important symbiotic nitrogen-fixing bacteria is Rhizobium. Bacteria seek shelter and food from plants here. In exchange, they assist the plants by delivering free nitrogen.

2. A Loose Association of Nitrogen-Fixing Bacteria

Some bacteria aren’t related directly with the plants but live around them For example, A nitrogen-fixing bacterium called Azospirillum lives near the roots of higher plants but does not form a close bond with them. This is known as rhizosphere association because these bacteria collect plant exudate and use it as food. Associative mutualism is the name given to this phenomenon.

3. **Symbiotic Nitrogen-Fixing Cyanobacteria**

There are many symbiotic nitrogen-fixing cyanobacteria like liverworts, cycad roots, the bacteria released by fern plant decay, etc. Cyanobacteria or blue-green algae from a symbiotic relationship with numerous plants. Anabaena can be found in the fern's leaf cavities. It's in charge of nitrogen fixation. The fern plants decompose and release nutrients for the rice plants to use. Azolla pinnata is a fern that grows in rice fields, however, it has no effect on the plant's growth.

4. **Free-Living Nitrogen-Fixing**

BacteriaFree-living bacteria are found in soil, and they also perform nitrogen fixation. These include clostridium, azotobacter, and bacillus polymyxin.They are nitrogen-fixing bacteria that live in free-living soil. Clostridium beijerinckii, Azotobacter, and other saprotrophic anaerobes are among them. Rhizobium and Azospirillum are the most extensively utilized forms of biofertilisers.

COMPONENTS OF BIOFERTILISERS

The components of a biofertilizer are:

1. Bio Compost: It is eco-friendly and is produced from waste products coming from sugar industry. It also includes bacteria, fungi, and some plants.
2. Tricho-Card: This eco-friendly non-pathogenic product is useful for many crops and plants, as it plays the role of a productive destroyer against the items that are harmful to the crop.
3. Azotobacter: It plays an important role in atmospheric nitrogen fixation and protects the plant roots from pathogens in the soil.

4. Phosphorus: To settle the exact level of need for nitrogen for a plant, and to determine the nitrogen level of the soil, phosphorus fertilizers are very helpful.
5. ermicompost: Known for quickly improving soil fertility, these are probably the most eco-friendly fertilizers that contain vitamins, sulphur, hormones, organic carbon, and antibiotics required for the growth of the plant.

IMPORTANCE OF BIOFERTILISERS

There are various uses of biofertilisers that prove their importance. They include – improving the soil quality, protecting the plants from pathogens, avoiding environmental pollution, destruction of harmful substances present in the soil, etc. Thus, biofertilisers are very important.

APPLICATIONS OF BIOFERTILISERS

These are some important applications of biofertilisers:

1. Seedling Root Dip: Used for rice crops, the seedlings are planted in a waterbed for 8 to 10 hours, in this method.
2. Seed Treatment: In this process, the seeds are dipped in nitrogen-phosphorus mixed fertilizers. After drying them, they are planted as early as possible.
3. Soil Treatment: The mixture of biofertilisers and compost fertilizers is kept overnight and spread over the soil the next day. This treatment takes place before sowing the seeds.

DISADVANTAGES OF FERTILISERS

- Chemical fertilizers are supplemented by biofertilisers, not substituted for them.
- Biofertilisers only improve crop productivity by 20 to 30 percent. Unlike chemical fertilizers, they do not result in a significant improvement in productivity.
- For specific crops, specific fertilizers are necessary. This is more applicable to microorganisms that live in a symbiotic relationship. If non-specific Rhizobium is applied as a fertilizer, root nodulation, and crop production will not rise.
- Strict aseptic precautions are required during the manufacture of microbial fertilizer. During microbial mass manufacturing, contamination is a common problem.
- Microbes are killed when exposed to sunlight for an extended period of time because they are light-sensitive.
- When stored at room temperature, microbial fertilizers must be used within six months, and when stored at chilling temperature, it must be used within two years.

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KAKATIYA GOVERNMENT COLLEGE,
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DEPARTMENT OF BOTANY

STUDENT FIELD PROJECT

2017-18

TITLE: WATER QUALITY STUDY OF FLORA IN BHARAKHALI LAKE OF WARANGAL DISTRICT, TELANGANA STATE

NAMES OF THE STUDENTS	SUPERVISOR
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1. INTRODUCTION

Water is an elixir of the body, a primary need of all living organisms. It is a valuable commodity available in very limited quantities to man and other living beings. The fresh water must be recognised as the Blood of Society (Wetzel, 2000). Water is the most vital resource for all kinds of life as it forms a medium in which physical and chemical transformations especially those of biological significance takes place and is considered as precious component on the earth. This unique component of nature plays an important role in life from molecules to man.

Freshwater ecosystems have been critical to sustaining life and establishing civilizations throughout history. Humanbeings relay on freshwater not only for drinking water but also for the purpose of Agriculture, Transportation, Energy production, Industrial purposes, Waste disposal, and the production of fish and other edible organisms. In aquatic ecosystem, Physico-chemical environment exerts profound influence on its biotic components. It controls biodiversity, biomass and spatial distribution of biotic communities in time and space. The physical and chemical parameters exert their influence both, individually and collectively and their interaction creates a biotic environment, which ultimately conditions the origin, development and finally succession of the biotic communities (Salaskar and Yeragi,1997). Fresh water is a basic human need as well as an important natural resource. Protection or the improvement of water quality is a great concern to Governments around the world. The quality of water has been getting vastly

2. STUDY AREA

Warangal District has several fresh water bodies, temporary and permanent spread out through the district and offer well scope for fisheries. Most of the Fresh water bodies in this District are seasonal and many of them have disappeared because of human activities such as a consequence of increasing industrialization, urbanization and other developmental activities from the last ten years. Inavolu lake located at latitude 79°- 33' - 20" West 79°- 35- '51" East and longitude 17° - 52' - 19" South 17°- 55 - '45" North. The Ayacut of the lake is 59.89 Hectares (147.92 Acres). It has a Krishna Basin and Submergence area of 16 Acres. Length of Bund is 760mt. Weir and Sluice is present in this lake. This lake shows good diversity of Icthyofauna along with other fauna.

DEPARTMENT OF BOTANY

STUDENT STUDY PROJECT

2017-18

TITLE: EFFECT AUXINS ON CLONAL PROPAGATION OF TEAK (*TECTONA GRANDIS* LINN.F.)

NAMES OF THE STUDENTS	SUPERVISOR
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DEPARTMENT OF ZOOLOGY

STUDENT STUDY PROJECTS

2017-2018

TITLE: "IMPACT OF PLASTIC POLLUTION ON ENVIRONMENT AND IN HUMAN BEINGS: A CASE STUDY IN WARANGAL(U) CITY"

SUBMITTED BY

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KAKATIYA GOVERNMENT COLLEGE
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"IMPACT OF PLASTIC POLLUTION ON ENVIRONMENT AND IN HUMAN BEINGS: A CASE STUDY IN WARANGAL(U) CITY"

Aims & Objectives:

The objectives of this survey was to assess usage of plastic and their environmental impacts in Warangal City, and to make our environment an eco- friendly zone.

*. Identifying the main challenges and barriers for reducing plastic waste in mixed waste and residual waste streams, hereby stimulating prevention and recycling of plastic waste

*. Promoting recycling of plastic polymers as a substitute for virgin plastic

*. Diverting waste plastic from the residual waste going to incineration (creating a carbon neutral energy source) and landfill

The result of the present study indicated that most of the respondents, regardless of their demographic background, are (1) in favor of banning of production, distribution and use of these plastic products, and (2) aware of the adverse effects of plastic bag wastes on environment, animal and human health. The survey results and field observations indicated that the city was seriously polluted by plastic wastes particularly plastic bags wastes.

Suggestions:

Various campaigns need to be organized in order to mobilize the public and other stakeholders (Government agencies, business associations, retailers, research institutions, nongovernment organizations(NGOs). Youth Associations, women associations, religious institutions, donors and the media) against indiscriminate use and disposal of plastic bags in order to minimize the excessive accumulation of plastic bag wastes in the environment. Moreover, passing legislations alone is not sufficient condition to curb the problem of plastic wastes. Therefore, the central government in collaboration with other concerned authorities of the city should encourage people to use other alternatives.

Treatment and Prevention of sexually transmitted disease

A case study in Warangal district

2017-18

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Diagnosis

If your sexual history and current signs and symptoms suggest that you have a sexually transmitted disease (STD) or a sexually transmitted infection (STI), your doctor will do a physical or pelvic exam to look for signs of infection, such as a rash, warts or discharge.

Tests

Laboratory tests can identify the cause and detect coinfections you might also have.

- **Blood tests.** Blood tests can confirm the diagnosis of HIV or later stages of syphilis.
- **Urine samples.** Some STIs can be confirmed with a urine sample.

- **Fluid samples.** If you have open genital sores, your doctor may test fluid and samples from the sores to diagnose the type of infection.

Screening

Testing for a disease in someone who doesn't have symptoms is called screening. Most of the time,STI screening is not a routine part of health care. Screening is recommended for:

- **Everyone.** The one STI screening test suggested for everyone ages 13 to 64 is a blood or saliva test for human immunodeficiency virus (HIV), the virus that causes AIDS. Experts recommend that people at high risk have an HIV test every year.
- **Everyone born between 1945 and 1965.** There's a high incidence of hepatitis C in people born between 1945 and 1965. Since the disease often causes no symptoms until it's advanced, experts recommend that everyone in that age group be screened for hepatitis C.
- **Pregnant women.** All pregnant women will generally be screened for HIV, hepatitis B, chlamydia and syphilis at their first prenatal visit. Gonorrhea and hepatitis C screening tests are recommended at least once during pregnancy for women at high risk of these infections.
- **Women age 21 and older.** The Pap test screens for changes in the cells of the cervix, including inflammation, precancerous changes and cancer. Cervical cancer is often caused by certain strains of HPV.

  Experts recommend that women have a Pap test every three years starting at age 21. After age 30, experts recommend women have an HPV test and a Pap test every five years. Or, women over 30 could have a Pap test alone every three years or an HPV test alone every three years.
- **Women under age 25 who are sexually active.** Experts recommend that all sexually active women under age 25 be tested for chlamydia infection. The chlamydia test uses a sample of urine or vaginal fluid you can collect yourself.

Reinfection by an untreated or undertreated partner is common, so you need the second test to confirm that the infection is cured. You can catch chlamydia multiple times, so get retested if you have a new partner.

Screening for gonorrhea is also recommended in sexually active women under age 25.

- **Men who have sex with men.** Compared with other groups, men who have sex with men run a higher risk of acquiring STIs. Many public health groups recommend annual or more-frequent STI screening for these men. Regular tests for HIV, syphilis, chlamydia and gonorrhea are particularly important. Evaluation for hepatitis B also may be recommended.
- **People with HIV.** If you have HIV, it dramatically raises your risk of catching other STIs. Experts recommend immediate testing for syphilis, gonorrhea, chlamydia and herpes after being diagnosed with HIV. They also recommend that people with HIV be screened for hepatitis C.

  Women with HIV may develop aggressive cervical cancer, so experts recommend they have a Pap test at the time of the HIV diagnosis or within a year of becoming sexually active if they are under 21 and have HIV. Then, experts recommend repeating the Pap test every year for three years. After three negative tests, women with HIV can get a Pap test every three years.
- **People who have a new partner.** Before having vaginal or anal intercourse with new partners, be sure you've both been tested for STIs. However, routine testing for genital herpes isn't recommended unless you have symptoms.

  It's also possible to be infected with an STI yet still test negative, particularly if you've recently been infected.

DEPARTMENT OF MICRO-BIOLOGY

STUDENT STUDY PROJECT ON

Macro Nutrients Analysis to Determine Soil Fertility

Submitted By

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CERTIFICATE

This is to certify that students of the B. Sc –MICROBIOLOGY – Second year has been successfully completed the project entitled "**Macro Nutrients Analysis to Determine Soil Fertility"** from the department of Microbiology ,Kakatiya government college, Hanamkonda.

COURSE COORDINATOR
Dr. G. Chandrakala

PRINCIPAL
Dr. V. Vijayalakshmi

TITLE: - Macro Nutrients Analysis to Determine Soil Fertility

1. Hypothesis:

Soil is the critical component of the earth system functioning for the production of food, fodder, fiber and also maintains environment quality. It is the basic natural medium for the plants, and diverse micro and macro flora and fauna. Soil nature and its fertility depend on the types and interaction of micro and macro fauna and flora it harbors, which in turn influence the plant nutrition. The vital plant nutrients are Nitrogen, Phosphorous, and Potassium, which are also called as Essential nutrients. Now a days decreasing crop yields and food nutrients in the crops is due to poor soil quality or lack of vital / essential nutrients in the soil.

As the essential nutrients are needed to the efficient plant growth and crop yield, the project focused on detailed study of physical and chemical properties of representative soil samples from selected villages in Khammam rural region. Fertility status of the soil was determined by interpreting the results obtained by the above study. Interpretation of soil chemical status involves an estimation of its available nutrient status (George rehm et al., 2002).

2. Aims and Objectives

2.1.AIM:

To determine the soil fertility status of selected region by estimating the soil available nitrogen (N), available phosphorus (P) & available potassium (K) levels and physical characteristic features.

2.2.Objectives:

- ✓ To study the soil physical characters like Texture, color and moisture etc.
- ✓ To evaluate Soil pH, Electric Conductivity and organic carbon.
- ✓ To estimate the soil macro nutrients available i.e., available Nitrogen, available Phosphorous and available Potassium.
- ✓ To determine the soil fertility using above observations.
- ✓ To understand the importance of soil testing before crop practice.
- ✓ To know about the nature of soil in the selected sites of study i.e Khammam rural villages.

3. Review of Literature:

Soil characterization in relation to evaluation of fertility status of soils of an area or region is an important aspect in context of sustainable agricultural production. Nitrogen, phosphorus, potassium, sulphur, boron and zinc are important soil elements that control it's fertility and yields of the crops. T. Sujatha *et al.*, (2013). The structure of the soil microbial community is an important component of soil quality and health. Soil microbiological properties could be early

and sensitive indicators of anthropogenic effects on soil ecology in both natural and agricultural ecosystems. Suzanne Visser *et al*., (2009).

Soil is very important and a valuable resource for every human being. Soil is the mixture of rock debris and organic materials, which develop on the earth's surface. The major factors that determine soils' characteristics are parent material, climate, relief, vegetation, time, and some other life-forms. Major constituents of the soil are mineral particles, humus, water, and air. A soil horizon is a layer generally parallel to the soil crust, whose physical characteristics differ from the layers above and beneath. Anderson, J.L., et al (2001)

Soils were classified on the basis of their inherent characteristics and external features including texture, color, slope of land, and moisture content in the soil.Soil Survey of India, established in 1956, made comprehensive study of soils. Aubert, G *et al* (1972) .On the basis of genesis, color, composition, and location, the soils of India have been classified as: Alluvial soils ,Black soils ,Red and Yellow soils ,Laterite soils ,Arid soils ,Forest soils Saline soils and Peaty soils Cottenie, A.,*et al* (1981)

Alluvial soils are widespread in the northern plains and the river valleys and cover about 40% of total area of India. Alluvial soils are depositional soils, as transported and deposited by the rivers streams. Alluvial soils are normally rich in potash, but poor in phosphorous.

In the Upper and Middle Ganga plain, two different types of alluvial soils are found i.e. *Khadar* (it is the new alluvium and is deposited by floods annually) and *Bhangar* (it is a system of older alluvium, deposited away from the flood plains). The alluvial soils normally vary in nature from sandy, loamy, to clayey and its color varies from light grey to ash grey .

Also popular as Regur Soil or the Black Cotton Soil, Black soil covers most of the Deccan Plateau; for example, black soil is found in parts of Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh, and Tamil Nadu. Black soil is usually clayey, deep, and impermeable; therefore, it can retain the moisture for a very long time (very useful for the crops especially cotton). Black soil is rich in lime, iron, magnesia, alumina, and also potash. *Bellotto, M., et al., (2014)*

Red soil develops on crystalline igneous rocks in the areas of low rainfall, especially, in the eastern and southern parts of the Deccan Plateau. Red soil develops a reddish color because of a wide diffusion of iron in crystalline and metamorphic rocks. On the other hand, it develops yellow color when it occurs in a hydrated form. The fine-grained red and yellow soils are usually fertile, whereas coarse-grained soils found in dry upland areas have poor fertility. Kang, B.T. *et al (1986).*

The fourth criterion is used because some specific plants need certain elements. For example, cobalt (Co) is required by bacteria responsible for nitrogen (N) fixation in legumes; therefore, Co is classified as 'beneficial', rather than essential. Silica (Si) is not 'essential', but highly 'beneficial' to help plants cope with multiple stresses. Other beneficial elements include sodium (Na) and vanadium (V).

Plants require 17 nutrients, also called 'essential elements', which assist with different plant functions for growth and reproduction. Each plant nutrient is needed in different amounts and varies in how mobile it is within the plant and the soil. It is useful to know the relative amount of each nutrient that is needed by a crop in making fertilizer recommendations. In addition, understanding plant functions and mobility within the plant are useful in diagnosing nutrient deficiencies. Soil characteristics that affect nutrient availability to plants are also presented, as they influence nutrient management decisions. Clain Jones *et al.,* (2016).

4. Research Methodology

4.1.Soil sampling:

The selected areas for soil collected are the villages named Kamanchikallu, Peddamanduva, Kamalapuram, Ammapeta, Theerdhala, pallegudem, Pandurangapuram, Danavayagudem located near Khammam and Mudigonda mandal of Khammam District.They are mostly rain fed and few are irrigated by bore wells. The representative soil samples were collected in duplicate and analysed. Each site has given numbers like sample-1,2,3…16.

4.1.1.Collection of representative soil sample:

Depending upon of the field condition and the objective of the samplings, we mostly used spade. Based on different soil types, colour, crop growth or the slop, the area is divided into different homogenous units. Brady *et al*,. (2006).The uniform field was clearly demarcated with specific sampling points by the zig –zag fashion or randomly in such a way that whole field was covered for the sampling. At the sampling site the extra fertile layer and the surface liter was removed using spade ,then using anger sample was collected in a plastic bowl and transferred to bags. During the sampling, the soil was found hard, then a 'v' shaped cut was done into the soil at a depth of 15 cm then the soil in the pit was removed.

The collected soil samples were stored in the polythene bags of 6x 8 sizes, made up of a film about negligible thickness, which were sealed by furisting; some were by tying the neck by

means of rubber bands or adhesives tape. The collected soil was used for the estimation of macronutrients like nitrogen, phosphorus, potassium so use of metallic tools was highly avoided seriously fried to use stick [or] stainless steel.

The soil sample was collected and information was furnished as below.

- ❖ Sample number
- ❖ Name of address of the farmed
- ❖ Details of field
- ❖ Date of sampling
- ❖ Number of crops grown
- ❖ Name of crop growing in this season
- ❖ Sources of irrigation
- ❖ Type of fertilizer using ,either chemical [or] bio-fertilizer
- ❖ Date \month of harvesting of the previous crop
- ❖ Any technical [or] seasonal problem observed in the crop

5.1.1.1.Sample preparation for testing.

- ✓ Spreader sample for drying on clean cloth, plastic [or] brown paper sheet.
- ✓ Removed the stone pieces, roots, leaves &other un-decomposed organic residues from the samples.
- ✓ Large lumps or moist soils should be broken.
- ✓ After air drying these samples have been crushed gently and sieved through a nylon sieve.
- ✓ About 250g of sieved sample was used and labeled in the sample bag for testing.

Precautions taken during the soil sample collection.

- ✓ The ideal and preferred time for soil sampling is just after the harvest of the rabi crop
- ✓ Removed all debris from the surface before collection of soil samples.
- ✓ Avoided taking of the samples from upland and low land areas in the same field
- ✓ Taken separate samples from the areas of the different appearance.
- ✓ In row crop taken samples in between the rows.
- ✓ Kept the samples in a moisture free clean bag.
- ✓ Samples were taken in a small area less than 1-2 hectares.

- ✓ For the analysis rust free spade and Kurpi were used and kept in clean polythene bags.
- ✓ Samplings was not done nearer to the trees and from the place where fertilizers and manure were not used for storing the chemical, fertilizers were placed.
- ✓ Clean bags were used for sample collection .bags used for storing the chemical; fertilizers and manure were not used for sample holding.

4.1.2.Storing Soil samples:-

- ✓ The register and labeled samples in laboratory are finally placed in a cardboard carton. Label the carton properly with the details of soil sample and stored in the separate room.
- ✓ The room was kept away from direct sunlight/wind.

4.2. ELEMENTAL ANALYSIS

4.2.1: Estimation of available Nitrogen:

Reagents:

- 0.32% potassium permanganate ($KMnO_4$) solution.
- 2.5%sodium hydroxide (NaOH).
- 2%boric acid solution containing 20-25ml of mixed indicator / liter.
- Mixed indicator: 0.066g methyl red + 0.99g bromocerol green dissolve in 100 ml of 95%alcohol.
- 0.02 N sulphuric acids (H_2SO_4).

Procedure:-

i. Weigh 5 g of prepared soil sample and transfer it to the digestion tube.
ii. Load the tube in distillation unit and other sides of those keep 20 ml of 2%boric acid with mixed indicator in 250 ml conical flask.
iii. 25 ml each of potassium permanganate (0.32%) and sodium hydroxide (2.5%) solution is automatically added by distillation unit programmer.
iv. The sample is heated by passing steam at a steady rate and the liberated ammonia absorbed in 20ml of 2% boric acid containing mixed indicator solution kept in a 250 ml conical flask.
v. With the absorption of ammonia, the pinkish colour turns to green.
vi. Nearly 150 ml of distillate is collected in about 10 minutes.
vii. The green colour distillate is titrating with 0.02N sulphuric acid and the colour changes to original shade (pinkish color).
viii. Simultaneously, blank sample (without soil) is to be run.
ix. Note the blank & sample titer reading (ml) and calculate the available nitrogen in soil.

4.2.2: Estimation of available Phosphorous

A) *Olsen's method for the neutral & alkaline soils*

Principle

The most widely used extranctant is the 0.5M NaHCO3 solution at the pH 8.5. the reagent is most widely suitable for neutral to alkaline soils and is designed to control the ionic activity of calcium through solubility product of $CaCO_3$ thus extracting the most reactive forms of P from Al- , Fe-, and Ca- phosphates. The solubility calcium phosphate is increased because of the precipitation of the Ca^{++} as $CaCO_3$. Phosphorous is the extract can be determined using suitable method of colour development and measuring the color intensity at an appropriate wave length.

Instruments

Colorimeter or spectrophotometer, mechanical shaker for Extraction of the available phosphorous

It is prepared by the dissolving of 42.0 g of NaHCO3 (laboratory reagent) in distilled water to give on liter of the solution. The pH is adjusted to the 8.5 with the small quantities of the 10% NaOH.

PROCEDURE

- Take 2.5 g of soil in 100ml conical flask, add a liter of Dacron G 60 charcoal powder (free of phosphorous) followed by 50ml of Olsen's reagent.
- Run the blank with the soil
- Shake the flask for 30 minutes on the platform type shaker and filter the contents immediately through the dry filter paper (what man paper no.1) into a clean and dry beaker or vial.
- Estimate the phosphorous calorimetrically by atonable and Olsen's procedure.

CALICULATION

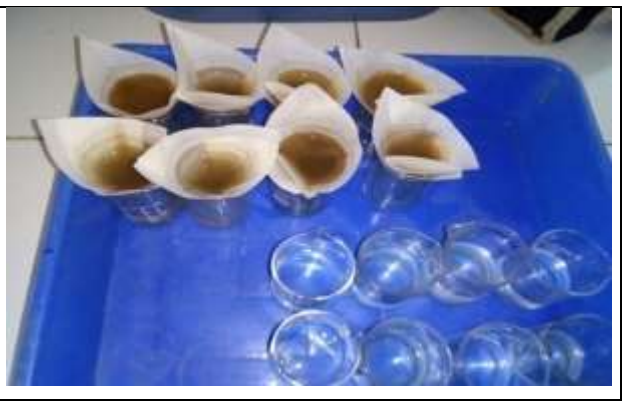
$$(Available\ P2O5\ (OR) OLSEN'S P2O5\ (kg/ha)) = R \times \frac{total\ volume\ of\ the\ extract}{weight\ of\ the\ soil\ taken} \times \frac{25}{volume\ of\ the\ aliquot} \times \frac{2.24}{1} \times 2.29$$

Where,

R= ppm of P in the aliquot (to be seen from the standard curve)

$$\left(Available\ P2O5\ \left(\frac{kg}{ha}\right)\right) = R \times \frac{50}{2.5} \times \frac{25}{5} \times \frac{2.24}{1} \times 2.29 = R \times 513$$

$$\left(Available\ P2O5\ \left(\frac{kg}{acre}\right)\right) = R \times 208$$



5.2.3: Estimation of available Potassium:

The available potassium exchangeable and water soluble potassium is determined by extracting soil with neutral normal ammonium acetate solution. The estimation of potassium is carried out by flame photometer.

Principle:

The principle underlying this is that a large number of elements when excited in a flame, emit radiation of characteristic wave length. The excitation cause one of the outer electron of neutral atoms to move to an outer orbit of higher energy level or the atoms may be excited sufficiently to lose an electron completely from the attractive force of the nucleus where excited atom return to the lower energy, light at characteristics is emitted. Excited atom or ions give line radiation at very definite wave length and thus K gives at 404.4 and 767(mu). The flame photometer employs relatively low temperature excitations and a measure with a photocell the emission intensity which is proportional and the concentrated in selected wave length (767 mu) and for these red filter is used.

Apparatus and reagent:-

A) Flame photometer with red filter.

B) Pipette, volumetric flask and conical flask

Reagent:-

(a) Natural normal ammonium acetate:

Add 58ml of glacial acetic acid to about 600 ml of H2o and then add 70ml of concentrated ammonia dilute the solution to one liter. Then adjust PH Of solution at 7.0 with the help of

ammonia or acetic acid or this can be prepared amino. Acetic directly in H2o volume to be made ones then adjust the pH. 7.0.

(b) Stranded potation solution:

Dissolve 1.9066 gm of dried KCl in distilled water dilute to one liter. This 1000mg kg /1k solution. 100ml solution distilled to one liter to make 100ppm K solution.

Preparation of stranded curve:-

Take 0,1,2,3,4,5,6,7,8,9 and 10ml of 100mgkg/1 K solution different 25ml of volumetric flask. Make of the volume with 1N NH4O AC solution. Adjust the flame photometric reading the zero with the blank solution and at the 100 for 40mg kg /1K solution. Take the flame photometric reading for every dilution .plot the standard curve on the graph paper by taking K CONS. On X-axis and photometric reading on the Y-axis. This will give a factor (F) of the one flame photometric reading =0.4mgkg/k.

Procedure:-

Take 5gm of soil in 100ml of conical flask and add 25ml of 1N NH4O AC solution shake the content for the 5mints and the filter to through thewhat man no1 filter paper. Potassium extract is measured by flame photometer of caliber.

Precaution:-

- ✓ These should not be any turbidity or suspended practical is extract, it will chock the capillary feeding tube.
- ✓ The gas and air pressure should be constant.
- ✓ It sample reading goes beyond 100 then dilute the extract.

4.3. PHYSICAL ANALYSIS

4.3.1. Soil pH:

The pH value of a soil an indicator of soil reaction i.e. acidic, neutral or alkaline. The nutrient availability is governed by soil reaction. It is maximum at neutral pH and decreases with increase in acidity or alkalinity. Thus, pH value gives an idea about the availability of nutrients to plants.

- ➢ Principle:

The pH is usually measured by pH meter, in which the potential of hydrogen ion indicating electrode (glass electrode) is measured potentiometrically against calomel saturated reference electrode days, most of the pH meters have Single Combined Electorate. Before measuring the PH of the soil the instrument has to be calibrated with standard buffer solution of

Known PH. Since, The PH is also affected by the temperature, Hence the PH meter should be adjusted to the temperature of the solution by temperature correction Knob

- Reagents:

Standard buffer solutions : these may be of PH 4.0,7.0 Or 9.2 And are prepared by dissolving one standard buffer standard buffer tablet in 100ml distilled water, it is necessary to prepare fresh buffer solution after few days .in absence of buffer tablet, a0.05 M potassium hydrogen Phthalate solution can be used which gives PH of a 4.0 (dissolve 10.21g. of A.R Greed potassium hydrogen Phthalate in distill Water and dilute to 1lt. Add 1 ml of chloroform or a crystal of thymol per liter as a preparative).

- Procedure:

(a) Soil to water ratio of 1:2 (PH2)

Take 20g of soil in 100ml beaker and add 40ml of distill water to it. The suspension is stirred at a regular interval for 30 mi. determine the PH by Immersing Elector` in suspension. For soils containing high salts, The PH should be determined by using 0.01M Calcium Chloride Solution. (Dissolve 0.110 grams of $CaCl_2$ in Water and dilute to 1lt)

(b) Saturate soil Paste (PHs)

Add small amount of distill to 250gr of Air dried soil. Stir the mixture with a spatula. At saturation the soil paste glistens and flows slightly when the container is tapped its slide freely and ensures cleanly of the spatula. After mixing allow the sample to stand for an hour if the paste as stiffened markedly or lost its glistening, add more water 0r if free water has collected on the surface of the paste, add an additional weighed quantity of dry soil and mixed it again. Then insert the electrode carefully in the paste and measure the PH.

(c) Saturation extracts (pH)

The soil is extracted using vacuum extractor and the PH is Measure in the saturation extractor.

Categories of soil pH values:

Soil PH		*Interpretation*
<5.0	:	Strongly Acidic
5.1-6.5	:	Slightly Acidic
6.6-7.5	:	Neutral
7.6-8.0	:	Mild Alkaline
>8.0	:	Strongly Alkaline

4.3.2. Determination of Electrical Conductivity:

Amount of Soluble Salts in a sample expressed in terms of the electrical conductivity and measure by a conductivity meter. The instrument consists of an AC sol bridge or electrical resistance bridge and conductivity cell having electrode coated with Platinum black. The instrument is also available as an already calibrated assembly (solubride) for representing the conductivity of solution in dSm^{-1} (Decisiemen per meter) 25^0 C.

Principle:

The simple wheat stone bridge circuit is used to measure EC by Null Method the bridge Consists of two Known and fixed resistance r_1, r_2, One Variable Standard resistance r_4 and the unknown r_3. The variable resistance r_4 is adjusted until a minimum or zero current flows Through the AC Galvanometer. At equilibrium

$$\frac{RI}{R2} = \frac{R3}{R4} \quad (OR) \quad R3 = \frac{R1}{R2} \times R4$$

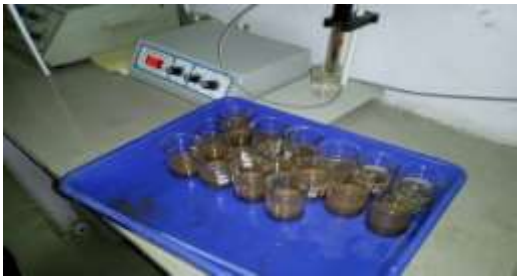
Since Conductivity is reciprocal of receptivity, it is measured with the help of R_3

Reagents:

Potassium chloride: Dissolve 0.7456gr of dry potassium chloride (AR) in distills Water and make up the volume to 1lt

Procedure:

Take 20gr of soil in 100ml beaker, add 40m,l of distill water and shake intermittently for 30min. determined the conductivity of the supernatant liquid with the help of conductivity meter. The electrical conductivity of saturation extract (E.C.e) is also determent for salinity ratings.



Categories of soil ELECTRIC CONDUCTIVITY values:

ELECTRIC CONDUCTIVIT (dSm^{-1})	*EFFECT*
<1	- No deleterious effect on crop
1-2	- Critical for salt sensitive crops
2-3	- Critical for salt tolerant crops
>3	- Injurious to most crop

5. Results and Discussion

The representative soil samples 1 to 16 are analyzed and results were noted. All the representative values are the average of duplicate soil sample from each sites of collection.

5.1. Results

The soil type pH, Electric conductivity & Organic carbon are available macro nutrients,

Available' N', Available 'P' & Available' K' values were tabulated for analysis.

All the soils in the region are Black loam soils with neutral to moderate alkaline pH, and normal Electric conductivity. Organic carbon (OC%) is medium to high range which indicate available decomposing organic matter and moderate microbial activity.

Available macronutrients in each soil sample are determined and analyzed using standard methods. The observations are noted in table.1.

The results obtained were compared with the standard values according to methods manual, Department of Agriculture & Cooperation Ministry of Agriculture, Govt of India, New Delhi, 2011.Table.2.

Table:1. Values of Macro nutrients of soil samples.

Sample No	**pH**	**E.C**	**OC (%)**	**N Kg/Acre**	**P Kg/ Acre**	**K Kg/Acre**

1	6.46	0.08	0.4	147	03	76
2	7.93	0.14	0.4	120	11	47
3	7.97	0.24	0.75	182	05	125
4	6.72	0.20	0.75	162	06	131
5	7.54	0.08	0.6	178	03	76
6	7.93	0.18	75	142	09	44
7	7.39	0.08	04	142	05	70
8	7.52	0.05	0.7	164	03	39
9	7.77	0.1	0.5	164	04	84
10	7.94	0.11	0.7	160	06	92
11	7.9	0.12	0.4	142	08	62
12	766	0.07	0.4	138	02	84
13	7.73	0.09	0.4	125	10	92
14	7.7	0.08	0.74	185	14	102
15	7.62	0.13	0.74	148	03	130
16	7.52	0.15	0.64	200	06	184

Table:2. *Standard values of soil major elements*

S.No	Elements	High	Medium	Low
1	Nitrogen	>224 kg/acre	112-224 kg /acre	0-112 kg /acre
2	Phosphorous	>24 kg /acre	10-24 kg/acre	0-10 kg acre
3	Potassium	>136	58-136 kg/acre	0-58 kg / acre

5.2. Interpretation of results:

The above results are compared with the standard values and interpreted and determined the nutrient status of each sample shown in table.3

Table.3. The Nutrient status of Soil Samples:

Sample	p^H	E. C	O.C %	N	P	K
1	Neutral	Normal	Low	Medium	Low	Medium
2	Moderately alkaline	Normal	Low	Medium	Medium	Medium
3	Moderately alkaline	Normal	High	Medium	Low	Medium
4	Moderately alkaline	Normal	High	Medium	Low	Medium
5	Moderately alkaline	Normal	High	Medium	Low	Medium
6	Moderately alkaline	Normal	High	Medium	Low	Medium

7	Moderately alkaline	Normal	Low	Medium	Low	Medium
8	Moderately alkaline	Normal	High	Medium	Low	Low
9	Moderately alkaline	Normal	Medium	Medium	Low	Medium
10	Moderately alkaline	Normal	High	Medium	Low	Medium
11	Moderately alkaline	Normal	Low	Medium	Low	Medium
12	Moderately alkaline	Normal	Low	Medium	Low	Medium
13	Moderately alkaline	Normal	Low	Medium	Low	Medium
14	Moderately alkaline	Normal	High	Medium	Medium	Medium
15	Moderately alkaline	Normal	High	Medium	Low	High
16	Moderately alkaline	Normal	Medium	Medium	Low	High

5.3 Determination of Fertility index of the region:

According to nutrient status of the above samples from the Khammam rural region , each macronutrient content was caliculated for its nutrient index by using below formula:

Calculation of the Nutrient Index $= \frac{(N_L \times 1 + N_M \times 2 + N_H \times 3)}{N_t}$

$\underline{N_L}$

O. C: - $\frac{6 \times 1 + 2 \times 2 + 8 \times 3}{16} = \frac{6+4+24}{16} = 2.125$

Nitrogen: - $\frac{0+16x2+0}{16} = 2$

Phosphorous: - $\frac{14x1+2x2+0}{16} = 1.125$

Potassium: - $\frac{1x1+13x2+2x3}{16} = 2.6$

Standard Table for Nutrient Index(Reference- *Methods Manuel Department of Agriculture Govt of India***)**

Levels	Reading of Nutrients Index	Interpretation
1	Below 1.67	Low
2	1.67-2.33	Medium
3	Above 2.33	High

From the above analysis the Fertility status of the region

Nutrients	Nutrient Index	Interpretation
O.C	2.12	Medium(1.67-2.33)
N	2.0	Medium
P	1-125	Low(Below 1.67)
K	2.6	High (Above 2.33)

6. Conclusion

From the above observation it is concluded that the representative soil sample are possessing medium fertility status. Especially Organic Carbons and available Nutrients are in medium level and available Potassium is slightly high but available Phosphorous is very low (1.125). The Ph range of the soil are neutral to moderately alkaline the conductivity of all the soil is normal.

By increasing the organic matter by natural means will increase the Organic carbon, Nitrogen & Potassium which in then increase the microbial population. The available Phosphorous depend on phosphate solibulizers present in the soil which have scope for further study to investigate the regions for low available phosphorous and microbial activity in the soil.

Suggestions :

The available Phosphorus is low in the represtataive soil sample and overall fertility index of this region is 1.125 which is low.

Phosphorus is generally present in the combined organic or inorganic salt farm in the soil this farm is unavailable for the plant. If calculate the total phosphate it will be always high but the available phosphate very less this is due to very low microbial conversion or solubulization of phosphate so the level can be increased by increasing microbial activity which involves in solubulization of combined phosphate to available phosphate

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DEPARTMENT OF BIO-TECHNOLOGY

STUDENT STUDY PROJECT (2017-2018)

Name of the Topic:

Isolation of antibiotic producing microorganisms from soil (Streptomycin).

Under the Guidance of

G. Raghu

Asst.Prof of Biotechnology

DEPARTMENT OF BIOTECHNOLOGY

Kakatiya Government College, Hanamkonda.

Names of the Students

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3	M.Rajesh	006-16-3508	BTBC 2nd Year
4	Aimeera Raju	006-16-3509	BTBC 2nd Year
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Introduction

After Penicillin was discovered the search for additional antibiotics focused on the many fungi and bacteria that call the soil home

One particular family of microbe grabbed the attention of scientists the actinomycetes. This mouthful of name comes from the ancient Greek words for ancient Greek.

Even so, some scientists consider actinomycetes to be bacteria while others peg them as fungi. Still others think the actinomycetes are the prototype from which both bacteria and fungi are derived. Finally, some believe that the actinomycetes should be in a separate group between true bacteria and the filamentous fungi. In the final analysis, research investigations have placed the actinomycetes with the bacteria. Regardlesss, the soil-dwelling actinomy cetes give us a variety of antibiotics including streptomycin, aureomycin, terramycin, and chloromycetin. Actinomycetes are unicellular organisms that mass together to form filaments called hyphae. Colonies of actinomycetes can then form a mass of in intertwined hyphae called a mycelium.

In the activities that follow, you will attempt to isolate the hypae of actinomycetes that successfully grow on agar. You will also attempt to determine if any of the actinomycetes species have antibiotic properties. Finally, for those actinomycetes that appear to have antibiotic properties, there is a procedure for isolating the antibiotic compound. This procedure is a kind of fermentation, and it mimics the processes used by pharmaceutical companies to isolate antibiotics from fungi.

ISOLATION OF ACTINOMYCETES FROM SOIL

COLLECTION OF SOIL SAMPLES :

Soil samples were collected from three Indian states viz. Maharashtra, Karnataka and Kerala. The Samples were collected in sterile containers and maintained at 4^0C until analysis.

PROCEDURE :

1. Mass 1.0g of soil for each sample to be tested
2. Transfer to 9 cm3 of sterile water. This is a 1/10 dilution. SHAKE VIGOROSULY 50 times.
3. Perform a series of dilutions – 1/10, 1/100, 1/1000, 1/10,000 1/100,000, 1/1,000,000 (see notes on performing a soil dilution below)
4. Add 1.0 Cm3 samples of each of the dilutions, 1/100,000 and 1/1,000,000, to each of two petri dishes that have been sterilized previously.
5. To each of the dishes, add 10-15 cm3 of soil extract agar at approximately 45^0C. Immediately upon addition of the agar, the dishes are rotated by hand in a broad swiriling motion so that the inoculum is uniformly dispersed in the medium.
6. Allow the agar to solidify and then incubate the plates at 28^0C for 7 days.
7. After 7 days of incubation, when there is growth of organisms on the two sets of plates examine the petri dishes carefully. Hold them up to the light and look for clear zones or HALOS around actinomycetes colonies. The zone of inhibition may be small or the actionomycete colony may be completely surrounded by an area free of growth by other organisms.

SCREENING OF ANTIBIOTIC PRODUCING MICRO ORGANISAM

1. After 5 days, remove the plates and prepare to test the antibiotic production and effectiveness by adding streaks of various bacteria. To do this, you need to have solutions of various bacteria prepared form stock cultures.
2. Water Solutions of the various bacteria are made by transferring a sterile loop of the bacteria taken from a stock culture to a sterile test tube containing 5 cm^{3} of sterile distilled water. From this water solution, a loop of the bacteria is transferred to the nutrient agar plate containing the center streak of the antibiotic-producing.
3. For purposes of relating antibiotic effectiveness against particular bacterium, a collection of different bacterial types (Gram positive, Gram Negative) are suggested. They include Sarcina lutea(+), Serratia marcescens (-)as well as the yeast, Saccharomyces cerevisiae.
4. Incubate the plates at 28^{0} for 2 days.
5. Examine the plates for evidence of antibiotic activity against the various bacterial streaks. Is there any correlation between those bacteria that are affected by the antibiotic and their designation, Gram Possitive, Gram Negetive? Refer to literature that explains Gram staining results relative to the type of bacterial cell wall composition. How is this related to the activity of Streptomycin

STREPTOMYCIN

Introduction

Streptomycin is discovered first by Waksman and his team in 1944. They isolated the antibiotic from Streptomyces griseus.

The Nobel Prize in Physiology or Medicine 1952

In 1951 Dr. Waksman and one of his assistants had isolated from the soil a strain of actinomycete which they called Actinomyces griseus. This name was changed to Streptomyces griseus in 1943 and under this name it has now become world renowned. It is from strain of this species that streptomycin is produced. Dr. Waksman had shown that of the microbes, Streptomyces was best able to survive when the living conditions in thesoil became unsatisfactory, and this was an additional reason for commencing with the Streptomyces.

In 1940 Dr. Waksman and his collaborator had succeeded in isolating the first antibiotic, which was called <<actinomycin>> and it was very toxic. In 1942 another antibiotic was detected and studied, called <<streptothricin>>. This had a high degree of activity against many bacteria and also against the tubercle bacillus. Further studies revealed that streptothricin was too toxic. During the streptothricin studies Dr. Waksman and his collaborators developed a series of test-methods, which turned out to be very useful in the isolation of streptomycin in 1943.

The activity of streptomycin is principally bacteriostatic, i.e. it checks the bacterial growth and is in some degree also bacteriolytic, i.e. it destroys the tubercle bacillus. The mechanism of this important antibacterial effect is not yet known.

Chemistry of Streptomycin

Streptomycin is one of the aminoglycoside antibiotics. The aminoglycosides are the oligosaccharide antibiotics and consist an aminocyclohexanol moiety which is linked glycosidically to other amino sugars.

Medical use of Streptomycin

Streptomycin is particularly active against Gram-negative bacteria and Mycobacterium tuberculosis. It is used in therapeutic treatment of infections caused by organisms which are resistant to penicillin. Streptomycin also acts as systemic antibiotic in the treatment of some plant diseases caused by bacteria. The prolonged treatment with streptomycin high dosages results in neurotoxic reactions and partial hearing loss in man.

Activity

The general process of protein synthesis involves the binding of Ribosome to m-RNA

Streptomycin recognizes 30s subunit of bacterial Ribosome thus it inhibits the binding of Ribosome to the m-RNA & No more the protein synthesis occurs. The recognition of the Streptomycin to Ribosome is specific in killing Gram-Negative bacteria mostly and Norcardia and tuberculosis bacillus.

Industrial Production of Streptomycin

Industrially, the antibiotic Streptomycin is known to be produced only from different strains of Streptomyces griseus.

Media Composition

Majority of the media employed in commercial production of Streptomycin are more or less similar in their composition. They commonly consist soyabean meal, Glucose and Sodium Chloride but at different concentrations

Glucose	10g
Soyabean meal	10g
Peptone	5g
Meat extract	5g
Sodium chloride	5g

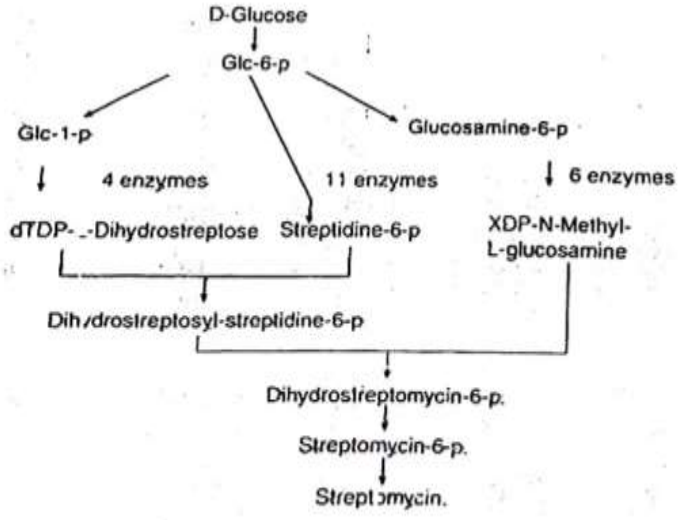
Inoculum

For the production of streptomycin, spores of Streptomyces griseus are normally used as inoculum.

The stock cultures of Streptomyces spores are usually maintained as soil stocks or are lyophilized with a carrier substance such as sterile skim milk. Initially, spores are inoculated into sporulation medium in which spores germinate to build up mycelial inoculum.

The fermentative production of Streptomycin lasts for 6 to 7 days and yields a maximum of 1200 micrograms per milliliter. High aeration and agitation of medium strongly influence the streptomycin yield. The temperature between 25°C to 30°C and pH between 7.6 to 8.0 are optimum for streptomycin production. But at 28°C temperature and at pH 7.6, Streptomycin production occurs at highest rate. The streptomycin produced is not destroyed by the microorganisms that occur as contaminants during fermentation process.

Chemistry of Streptomycin formation : The Convertion of D-glucose into streptomycin involves several enzymes.



Recovery

Usually, harvest is carriedout before the start of the senescence phase of the fermentation. After the completion of fermentation, mycelium is separated from the broth by filtration and Streptomycin is finally recovered. The mode of antibiotic recovery differs among the industries. In one of the procedures, Streptomycin is adsorbed from the broth onto activated carbon. From this activated carbon, Streptomycin is eluted with dilute acid. The Streptomycin is then precipitated by solvents, fitered and dried before further purification.

In an another procedure, the fermentation broth is acidified filtered and neutralized. Then it is passed through a column containing a cation exchange resin to adsorb the Streptomycin from the broth. Then the column is washed with water and the adsorbed streptomycin is extracted with HCl. Then it is dissolved in methanol and filtered. To this fitrate, acetone is added to precipitate the antibiotic. This precipitate is once again washed with acetone and dried in vaccum. It is then dissolved in methanol for preparation as pure Streptomycin calcium chlorided complex.

Secondary products

During the Streptomycin fermentation by Streptomyces griseus, small amount of vitamin B_{12} is also produced in addition to Streptomycin. The leval of vitamin B_{12} production can be markedly increased by adding a soluble cobalt salt to the medium as precursor, without affecting the yield of Streptomycin. But the concetration of cobalt salt should be at non-toxic level to Streptomycin production. The vitamin B_{12} that is produced as an additional product during Streptomycin fermentation process can be recovered from broth and used as supplement to animal feed.

DEPARTMENT OF COMMERCE

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

WARANGAL URBAN

A study the Self Help Group Rural Women empowerment – A Case Study in Warangal

(2017-18)

Students Field Study Project

Under the Supervision of

Dr.Aayesha Shaik
Asst.Prof of Commerce,

Kakatiya Government College, Hanamkonda

Participated Student List

S.No	Admission No	Name of the Student	Year
1	006-17-2101	ADARSANDAY SREEKANTH	B.Com II Year
2	006-17-2102	AJMEERA MOUNIKA	B.Com II Year
3	006-17-2103	AKKALA SHASHIKANTH	B.Com II Year
4	006-17-2104	AKULA NAGESH	B.Com II Year
5	006-17-2105	ANDURTHI VENU	B.Com II Year
6	006-17-2106	BANDARI ANJITH	B.Com II Year
7	006-17-2107	BANKA SRIKANTH	B.Com II Year
8	006-17-2108	BHUKYA CHANTI	B.Com II Year
9	006-17-2109	BHUKYA YADAMMA	B.Com II Year
10	006-17-2110	BODA RAMESH	B.Com II Year
11	006-17-2111	CHENNABOINA SHIVARAJKUMAR	B.Com II Year
12	006-17-2112	CHINTHAKULA RAMYA	B.Com II Year
13	006-17-2113	CHINTHALA PAVAN	B.Com II Year
14	006-17-2114	EDLA ANJI	B.Com II Year
15	006-17-2115	ELLANDULA SHIVA PRASAD	B.Com II Year
16	006-17-2116	ENDLA MAHESH	B.Com II Year
17	006-17-2117	GAIKWAD SHYAM SANDHYA	B.Com II Year
18	006-17-2118	GURRAM NAVEEN	B.Com II Year
19	006-17-2119	JATOTH VENKATESH	B.Com II Year
20	006-17-2120	JATOTH VINOD	B.Com II Year
21	006-17-2121	KAKARLA MOHANBABU	B.Com II Year
22	006-17-2122	KAKKERLA RAJANIKANTH	B.Com II Year
23	006-17-2123	kalakoti vinod	B.Com II Year
24	006-17-2124	KOMMULA PALLAVI	B.Com II Year

25	006-17-2125	KONDOJU RAJESH	B.Com II Year
26	006-17-2126	KOYYADA ABRAHAM	B.Com II Year
27	006-17-2127	KUMMARI SURENDER	B.Com II Year
28	006-17-2128	KUNTA SRIDHAR	B.Com II Year
29	006-17-2129	KUNUSOTH SANDHYA	B.Com II Year
30	006-17-2130	LAKKAM ABHILASH	B.Com II Year
31	006-17-2131	MACHARLA AJAY KUMAR	B.Com II Year
32	006-17-2132	MACHERLA MAMATHA	B.Com II Year
33	006-17-2133	MADDELA VINOD	B.Com II Year
34	006-17-2134	MALOTHU RAJU	B.Com II Year
35	006-17-2135	MEHNAZ AFREEN	B.Com II Year
36	006-17-2136	MERUGU MADHU	B.Com II Year
37	006-17-2137	MOLUGURI RAMESH	B.Com II Year
38	006-17-2138	PIDISHETTI JAYASRI	B.Com II Year
39	006-17-2139	RALLABANDI RAKESH	B.Com II Year
40	006-17-2140	RATHNAM RANJITH	B.Com II Year
41	006-17-2141	RAVULA RAKESH	B.Com II Year
42	006-17-2142	REGUNTA LATHA	B.Com II Year
43	006-17-2143	SHAIK ABDUL JEELANI	B.Com II Year
44	006-17-2144	SHEEPALLI ANUSHA	B.Com II Year
45	006-17-2145	SHIVARATHRI SAMBARAJU	B.Com II Year
46	006-17-2146	SODAARI RAGHUVARDHAN	B.Com II Year
47	006-17-2147	SRUTHI KUNJA	B.Com II Year
48	006-17-2148	SUDDALA SRUJANA	B.Com II Year
49	006-17-2149	SUNKARI HARSHAVARDHAN	B.Com II Year
50	006-17-2150	THALLAPALLY PRAVEEN KUMAR	B.Com II Year

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

WARANGAL URBAN

Effect of Advertising on the Brand Loyalty of Cosmetic Products Among College Students

(2017-18)

Students Field Study Project

Under the Supervision of

Asst.Prof.of Commerce,
Kakatiya Government College, Hanamkonda

Details of the Students Participated in this Study Project

S.NO	ADMISSION NO	STUDENT NAME	Year
1	006-18-2101	ALLEPU ANUSHA	B.Com I Year
2	006-18-2102	ANKESARAPU SHYAMALA	B.Com I Year
3	006-18-2103	ARURI VASANTHA	B.Com I Year
4	006-18-2105	BENDADI SRIPRIYA	B.Com I Year
5	006-18-2106	BHONSLE HARSHA PRIYA	B.Com I Year
6	006-18-2107	BIRRU YASHWANTH	B.Com I Year
7	006-18-2108	BOGAM MAHESH BABU	B.Com I Year
8	006-18-2109	BOMMAGANI KALYANI	B.Com I Year
9	006-18-2110	CHEPURI MAHESH BABU	B.Com I Year
10	006-18-2111	CHEVULA RAJENDER	B.Com I Year
11	006-18-2112	DARAVATH VENKATESHWARLU	B.Com I Year
12	006-18-2113	DUDAPAKA RAJU	B.Com I Year
13	006-18-2114	DUNNAPOTHULA RAJINIKANTH	B.Com I Year
14	006-18-2115	DURGAM JANARDHAN	B.Com I Year
15	006-18-2116	ELAGONDA SAI KRISHNA	B.Com I Year
16	006-18-2117	ERPA KASTURI	B.Com I Year
17	006-18-2118	GABBETA RAMAKRISHNA	B.Com I Year
18	006-18-2119	GADAMALLA MOUNIKA	B.Com I Year
19	006-18-2120	GADE AKHIL	B.Com I Year
20	006-18-2121	GADIGA SOUJANYA	B.Com I Year
21	006-18-2122	GANDI MAHESH	B.Com I Year
22	006-18-2123	GOMASE SUPRIYA	B.Com I Year
23	006-18-2124	GONGALLA GEETHA	B.Com I Year
24	006-18-2125	GOPAGANI RAJINIKANTH	B.Com I Year
25	006-18-2126	GORRE RAKESH	B.Com I Year
26	006-18-2127	GUNDE LAKSHMAN	B.Com I Year
27	006-18-2128	JAKKULA SHIVA PRASAD	B.Com I Year
28	006-18-2129	KADIVENDI VAMSHI	B.Com I Year
29	006-18-2130	KALLURI LAXMI	B.Com I Year
30	006-18-2131	KOYADA RAVEENA	B.Com I Year

31	006-18-2132	KOYYADA BALU	B.Com I Year
32	006-18-2133	KUKKALA RAVIKIRAN	B.Com I Year
33	006-18-2134	KUMMARI PRASHANTH	B.Com I Year
34	006-18-2135	MADASU VIVEK	B.Com I Year
35	006-18-2136	MANTHU SANDEEP	B.Com I Year
36	006-18-2137	MARKA SURENDER	B.Com I Year
37	006-18-2138	MOGILICHERLA SAI KUMAR	B.Com I Year
38	006-18-2139	MOHAMMAD ASSUPASHA	B.Com I Year
39	006-18-2140	MOHAMMAD JAHANGEER	B.Com I Year
40	006-18-2141	MUKKA PRAVEEN KUMAR	B.Com I Year
41	006-18-2142	MUPPIDI GANESH	B.Com I Year
42	006-18-2143	NALUKALA PADMA	B.Com I Year
43	006-18-2144	NEDUNURI KRISHNAM RAJU	B.Com I Year
44	006-18-2145	NOMULA RAJESH	B.Com I Year
45	006-18-2146	PANIKARA MAHESH	B.Com I Year
46	006-18-2147	PARNANDI SAKETH	B.Com I Year
47	006-18-2148	PATHRI BIKSHAPATHI	B.Com I Year
48	006-18-2149	PIDIKALA THARUN	B.Com I Year
49	006-18-2150	POLU NARENDER	B.Com I Year
50	006-18-2151	PURELLA VIKAS RAJ	B.Com I Year

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

WARANGAL URBAN

Perception of Traders and consumers on GST Implementation –A case study of Warangal

(2016-2017)

Filed Study Project

Under the Supervision

Of

Lt.Dr.Aayesha Shaik

Asst. Professor of Commerce,

Kakatiya Government College, Hanamkonda

STUDENT PARTICIPATED

S.No	**H.T No**	**Name of the Student**	Group
1	006-16-2401	BEERTHI PRUDVIRAJ	B.Com II Year
2	006-16-2402	MACHERLA MANASA	B.Com II Year
3	006-16-2403	BOUTHSHANKAR RAJKUMAR	B.Com II Year
4	006-16-2404	AMAROJU AJAY	B.Com II Year
5	006-16-2405	MOHAMMED KHAIRUNNISSA	B.Com II Year
6	006-16-2406	MOHAMMED SUFAN SUBHANI	B.Com II Year
7	006-16-2407	JANNU ANNAMAIAH	B.Com II Year
8	006-16-2408	J JAMPAIAH	B.Com II Year
9	006-16-2409	GANGARAPU MANASA	B.Com II Year
10	006-16-2410	EDLA PRAVEENKUMAR	B.Com II Year
11	006-16-2411	SRAVAN KUMAR KOLUGURI	B.Com II Year
12	006-16-2412	KATA HARIKA	B.Com II Year
13	006-16-2413	SHETTI KIRAN	B.Com II Year
14	006-16-2414	KANAKAM ANUSHA	B.Com II Year
15	006-16-2415	BAASA MANOHAR	B.Com II Year
16	006-16-2416	MUNIGALA RAJESH	B.Com II Year
17	006-16-2417	MALLELA BHARGAVI	B.Com II Year
18	006-16-2418	GANAPAKA S S SAIKUMAR	B.Com II Year
19	006-16-2419	POOJARI SHRAVANI	B.Com II Year
20	006-16-2420	KANUKUNTLA BHASKAR	B.Com II Year
21	006-16-2421	MOHD RIAZ	B.Com II Year
22	006-16-2422	KODEM PRAVALIKA	B.Com II Year
23	006-16-2423	MEDIDA SAMPATH	B.Com II Year
24	006-16-2424	NAGULA KARUNASRI	B.Com II Year
25	006-16-2425	MAGGIDI MALINI	B.Com II Year

26	006-16-2426	PARIPELLY NAGARAJU	B.Com II Year
27	006-16-2427	GUGULOTHU VIJAYKUMAR	B.Com II Year
28	006-16-2428	BALABOINA RAJU	B.Com II Year
29	006-16-2429	BODA KUMAR	B.Com II Year
30	006-16-2430	CHAPARTHI SRIKANTH	B.Com II Year
31	006-16-2431	KONATHAM RAMU	B.Com II Year
32	006-16-2432	SUKUMAR NAMINDLA	B.Com II Year
33	006-16-2433	MADASI PAVAN	B.Com II Year
34	006-16-2434	THATIKONDA SUSHANTH	B.Com II Year
35	006-16-2435	BANEPALLY MADHU KUMAR	B.Com II Year
36	006-16-2436	JANNU ANUSHA	B.Com II Year
37	006-16-2437	MITTAPALLI PAVAN	B.Com II Year
38	006-16-2438	PARLAPELLY AKHILA	B.Com II Year
39	006-16-2439	ERLA MOUNIKA	B.Com II Year
40	006-16-2440	SAMARLA THIRUPATHI	B.Com II Year
41	006-16-2441	GIDDAE RAJESHWARI	B.Com II Year
42	006-16-2442	BANDELA SRAVANKUMAR	B.Com II Year
43	006-16-2443	UPPULA SHIVAGANESH	B.Com II Year
44	006-16-2444	JAMPALA SHEKHAR	B.Com II Year
45	006-16-2445	UPPUNUTHULA LAVANYA	B.Com II Year
46	006-16-2446	JAMPALA SHIVANI	B.Com II Year
47	006-16-2447	GOGU SREENU	B.Com II Year
48	006-16-2448	JIRRA NAGARAJU	B.Com II Year
49	006-16-2449	KOMMULA ASHWINI	B.Com II Year
50	006-16-2450	JADE NAMDEV	B.Com II Year

DEPARTMENT OF HISTORY

STUDENT STUDY PROJECT WORK

ON

MEDARAM JATARA

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE,
HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

N. JOSNA
P.VAMSHI
P. RANJITH
P. RAJU
P. PRAMOD
P. LAXMI VENKAT
P. LAXMINARAYANA
S. RADIKA
S. SRIKANTH
S.DINESH
S. SRILATHA
T. RAMYA
M. MOUNIKA
M. SRILATHA
M. NAVEEN
K. RENUKA
K. LAXMAN
K. RAJU
K. CHANAKYA
K. NARSIMHA

STUDENT STUDY PROJECT WORK

ON

TELANGANA CULTURE

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

BALOJI DEEPTHI
BOLI RAMESH
BOSU RAJASHEKAR
DASARI MOUNIKA
KONDAPAKA MAHESH
KUMMARI ANIL
MAMIDI ANUSHA
MAMIDI NARESH
MANAKALI RAMU
MATHORI SANTHOSHKUMAR
PAKA RENUKA
PALAPU PRASHANTH
POLEPAKA RAMYA
SANIGARAPU VINODA
VALAPU SRINIVAS
VANGA JYOTHI
GALIGE NARESH
ERLA GANESH
BANOTHU RAJU
BANOTHU ANITHA

STUDENT STUDY PROJECT WORK

ON

FORTS OF KAKATIYAS

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE,
HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

ADLA PRIYANKA
ADLA SHUSMITHA
AMBALA RAJU
AUNURI RAJU
BANOTH ANIL
BANOTHU RAJU
BANOTHU ANITHA
BARIGELA RAKESH
BETHU PAVANI
BHUKYA KALYANI
BORA VINAY
ERLA GANESH
ESTABOINA KRANTHIKUMAR
GOLLENA SHANKER
GONDLA ANIL
GONELA SHIREESHA
GUDURU PAVAN
GULLA MADHUKAR
JADI THIRUPATHI
JANIGA SANTHOSH

STUDENT STUDY PROJECT WORK

ON

TELANGANA HANDICRAFTS

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

ALLAM PRAVEEN
AMARAJU RAKESH
BATTU SHAILAJA
BHUKYA ANIL
BHUKYA JALENDER
BHUKYA RAVI
BIJA AJAYKUMAR
DAMERA MAHENDER
DEEKONDA ANIL
GONGALA ARUNA
GUDEPU JALAJA
JAKKULA RAKESH
POTHURI POOJA
KOPPULA NARSIMHA
PURE RENUKA
MABBU NAVEEN
NAGIDI SHALINI
MATTI SRILATHA
MOKIDI MOUNIKA
MOODU RAMARAO

STUDENT STUDY PROJECT WORK

ON

IMPORTANCE OF KAKATIYA AGE

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

A. PRAVEEN
A. RAJESH
A. NAVEEN
A. RAJINIKANTH
B. ANIL
B. RAVI
B. JALENDER
B. AJAYKUMAR
B. SANDEEP
B. YAKUB
D. MAHENDER
D. ANIL
G. SHASIKUMAR
G. ARUNA
G. JALAJA
J. NARESH
J. SRAVANI
J. SRIKANTH
K. RAJESH
K. POOJA

STUDENT STUDY PROJECT WORK

ON

HISTORICAL IMPORTANCE OF VISNURI GADI

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE,
HANAMKONDA

LIST OF THE PARTICIPATED STUDENTS

KESARI NAGARAJU
KOMMU AKHIL
KURSAM DIVYA
MAMIDI RAVALI
KALIKI MOUNIKA
GONDLA ANIL
GOLLENA SHANKER
GANGARAPU RAMYA
GANEPAKA PRASAD
GALIKE NAGESH
ELUKA MOHAN
IMMADI BALAKRISHANA
DAMERA SHETTI NARESH
GUDIVENI SHIVAKUMAR
KADARI SRAVANKUMAR
BARIGELA RAKESH
ISTOBOINA KRANTHIKUMAR
GALIGE NARESH
GULLA MADHUKAR
GANEPAKA PRASAD

STUDENT STUDY PROJECT WORK

ON

HISTORY OF KOTHAKONDA VEERABHADRASWAMY TEMPLE

SUBMITTED TO

DEPARTMENT OF HISTORY

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA

2017-18

LIST OF THE PARTICIPATED STUDENTS

K. RAMBABU
K. ESHWAR
M. SHYAMALA
N. RAJKUMAR
T. VENKATESH
M. KALYANI
A.JAMPANNA
E. SANTHOSH
K. KIRAN KUMAR
M. DEVENDER
M. SANDEEP
P. SHIVA
P. MADHU
T. SANDEEP
A.ROJA
V. VISHNU
G. ASHOK
M. JITHENDER
D. GEETANJALI
N. SRIDHAR

DEPARTMENT OF ECONOMICS

Institutional and Non Institutional Credit Resources

(14-12-2017)

To study the rural credit system, a study tour was organized by the department on 14-12-2017to Pathipaka village of Shyampet mandal in Warangal district. The objective of the tour was to study the institutional and non institutional credit sources and also the accessibility of banking facilities to villagers.

It was found that still villagers were in the clutches of land lords and money lenders for their loan requirements and paying exorbitant interests. As the coverage of institutional credits resources like banks and cooperative societies was very limited and their loan amount was not sufficient to meet the requirements, the villagers mainly depended on local brokers (Dalal) for their loans.

Total 45 students of BA groups participated in the tour and interacted with the villagers. The faculty members Y. Narendra, Dr. M. Ravinder and Dr. A. Venkata Ramana acted as facilitators for the tour.

The students interacting with the villagers to know the credit resources in Pathipaka village of Shyampet mandal in Warangal district on 14-12-2017.

Field trip (14-12-2017)

Institutional and Non Institutional Credit Resources

Attendance of JMC I 2017-18 BAJMC I year

Department of Economics

Kakatiya Government College, Hanamkonda

1	6181301	ADUNOORI RANADHEER	Group	Signature
2	6181302	ALETI POORNACHANDAR	BA JMC I	A. Poornachandar
3	6181303	BHUKYA HUSSAIN	BA JMC I	husband
4	6181304	BHUKYA KAVERI	BA JMC I	B. Kaveri
5	6181305	BHUKYA RAKESH	BA JMC I	Bhukya Rakesh
6	6181306	BOGAM THIRUPATHI	BA JMC I	Bogam Thirupathi
7	6181307	BOJJA PAVANKALYAN	BA JMC I	B. Pavankalyan
8	6181309	CHERIPELLI PRASHANTH	BA JMC I	C. Prashanth
9	6181311	CHINTHAKULA BHARATH KUMAR	BA JMC I	Chinthakula Bharath Kumar
10	6181312	DADA RAJULU	BA JMC I	Dada Rajulu
11	6181313	DANDU KUMAR	BA JMC I	D. Kumar.
12	6181314	EDLA HARI HARAN	BA JMC I	Edla Hari Haran
13	6181315	EDULA NAVEEN	BA JMC I	E. Naveen
14	6181316	ELLANDULA SRIKANTH	BA JMC I	E. Srikanth
15	6181317	GANDLA SAI KUMAR	BA JMC I	Gandla Saikumar
16	6181318	GANDRAKOTA ANIL	BA JMC I	Gandrakota Anil
17	6181319	GONELA VENU	BA JMC I	Gonela Venu
18	6181320	GUGULOTHU JANU	BA JMC I	Gugulothu Janu
19	6181321	GUGULOTHU NARESH	BA JMC I	Gugulothu Naresh
20	6181322	HANMAKONDA VIJAY KUMAR	BA JMC I	H. Vijay Kumar
21	6181323	KANAKAM RAKESH	BA JMC I	Kanakam Rakesh.
22	6181324	KOLANUPAKA BHARATH	BA JMC I	Kolanupaka Bharath
23	6181325	KONGA AKHIL	BA JMC I	K. Akhil
24	6181327	KOTTEM NAVEEN	BA JMC I	K. Naveen
25	6181329	LADELLA ABHISHEK	BA JMC I	L. Abhishek

Jignasa

STUDENT'S STUDY PROJECT

Impact of Demonitization on Consumer Behaviour : A Study In Warangal

2018-19

Submitted by

BA III HEML & BA II HRM students

Supervisor

Dr. G. Shyamu

Assistant Professor of Economics

Department of Economics

KAKATIYA GOVERNEMENT COLLEGE HANAMKONDA

DEPARTMENT OF ECONOMICS

JIGNASA - STUDENT STUDY PROJECT

జిజ్ఞాస-విద్యార్థి పరిశోధన ప్రాజెక్ట్

2018-19

ప్రాజెక్ట్ అంశం (Title of the Project)

"తెలంగాణరాష్ట్రంలో రైతు ఆత్మహత్యలపై ప్రభుత్వ నూతన పథకాల ప్రభావం"

(IMPACT OF GOVERNMENT'S NEW INITIATIVES ON FARMER SUICIDES IN TELANGANA STATE)

By the students:

BA II Year

Supervisor

Dr. G. SHYAMU M.A., Ph.D.

Asst. Professor of Economics,

KAKATIYA GOVERNMENT DEGREE COLLEGE
HANAMKONDA

STUDENT'S STUDY PROJECT 2018-19

THE ROLE AND IMPORTANCE OF AGRICULTURE FOR ECONOMIC GROWTH

Submitted by

BA III Year 2018-19

Under the Supervision of

Ch. Raju

Assistant Professor of Economics

Department of Economics

KAKATIYA GOVERNMENT COLLEGE, HANAMKONDA (TS)

Impact of Alcohol Consumption on Socio, Economic conditions of People in Selected Villages of Warangal District

(A comparative analysis between Alcohol & Non- Alcohol Consumption Families)

Introduction:

Alcohol consumption is drinking of beer, wine (or) distilled spirits such as gin, whiskey (or) vodka that contains ethyl alcohol. Today people drink alcohol to relax and socialize to get high or because they are physically addicted to it. Ethyl alcohol (or) ethanol is produced by yeast fermentation of natural sugars in plants such as grapes (wine), hops (beer), sugar cane (rum) agave (tequila) or rice (saki). The process of fermenting plants to produce alcohol is atleast 10000 years old and appears to have developed independently in many cultures.

The highest consumption rates of alcohol seem to be concentrated in Europe and other places in the Hemisphere of the globe. The highest rates can be seen in countries like Lithuania, Belarus, Estonia the Czech Republic, Ireland and France. World Health Organization report per the year 2014 released the global status report on alcohol and health about 38.3 percent of world's population is reported to consume alcohol regularly. On an average an individual consumption amounts to 6.2 litres of alcohol per annum of individuals over 15 yearsof age. Among all these Lithuania tops in the world where the average consumption of alcohol at around 14 litres per capita per year among total member countries 194 of WHO. Worldwide alcohol consumption per capita is 6.5 litres per year in 2005 and increased to 12 litres per year in 2017 per aged above 15 years and above.

DEPARTMENT OF POLILTICAL SCIENCE

KAKATIYA GOVERNMENT COLLEGE, HANUMAKONDA

DEPARTMENT OF POLITICAL SCIENCE

2017 - 18

STUDENT STUDY

GROUP PROJECT

TOPIC:

FUNCTIONING OF LOCAL GOVERNMENTS

73 rd CONSTITUTIONAL AMENDMENT

Student Researchers

1. B.Ramdev Vishnu, HEP III
2. M.Nagaraju, JMC I
3. J.Sambaraju, JMC III
4. B. Sahithya, HEP I
5. D. Naveen, HEP III
6. M.Shravan, HEP III
7. Ch.Bharath Kumar JMC I
8. R.Damoder, JMC I
9. G. Harish, JMC III
10. J.Santhosh, HEP I
11. K. Sreedhar, HEP III
12. K. Raju, JMC II
13. V.Arjun, JMC II
14. B.Shiva, JMC II
15. K. Jagan, HEP II
16. D.Anil, HEP II
17. K. Pooja, HEP II
18. M. Raju, HEP II

Research Supervisor

T. Sambasiva Rao, Asst. Prof.

KAKATIYA GOVERNMENT COLLEGE, HANUMAKONDA

DEPARTMENT OF POLITICAL SCIENCE

2017 - 18

STUDENT STUDY

GROUP PROJECT

TOPIC:

INDIAN CULTURE AND TRADITIONS

Student Researchers

1. M.Deepak Tea, HPJ II	7. G. Ashok, HEP III	13. V.Geetha, HEP II
2. D. Naresh, JMC III	8. P. Rakesh, JMC II	14. J.Raju, HEP III
3. V. Naveen, JMC III	9. Y.Shirisha, JMC II	15. P.Madhu, HEP III
4. J. Akhila, HEP I	10. G. Ramya, HEP I	16. JRaju, HEP III
5. M. Venu, HEP III	11. P. Shiva, HEP III	17. B. Ravi, HEP II
6. P. Tharun, HEP III	12. M. Praveen, JMC II	18. V. Ravali, HEP II

Research Supervisor

K. Mallesham, Asst. Prof.

KAKATIYA GOVERNMENT COLLEGE
DEPARTMENT OF PUBLIC ADMINISTRATION
STUDENT STUDY PROJECT

TOPIC: SUKANYA SAMRUDDI YOJANA SCHEME

Academic Year 2017-18

STUDENT RESEARCHERS

1. B.Raju. BA 3rd year
2. E.Sateesh. BA 3rd year
3. D.Raniith. BA 3rd year
4. D.Srilatha. BA 3rd year
5. B.Raju. BA 3rd year
6. L.Tharun kumar. BA 3rd year
7. K.Anil. BA 3rd year
8. K.Manoj kumar. BA 3rd year
9. K.Anil. BA 3rd year
10. K.Raniith Kumar, BA 3rd year
11. M.Raju. BA 3rd year
12. P.Santhikumar. BA 3rd year
13. P.Harish. BA 3rd year
14. P.Prem kumar. BA 3rd year
15. M.Manichandra. BA 3rd year
16. P.Venkateshwarlu. BA 3rd year
17. M.Dhanunjaya. BA 3rd year
18. Hussian. BA 3rd year
19. N.Dinesh. BA 3rd year
20. N.Paramesh. BA 2nd year

RESEARCH SUPERVISOR

G.MADHAVI

Assistant Professor of Public Administration

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HANUMAKONDA, WARANGAL (U)

KAKATIYA GOVERNMENT COLLEGE
DEPARTMENT OF PUBLIC ADMINISTRATION
STUDENT STUDY PROJECT

TOPIC: THE STUDY OF MODEL VILLEGE GANGADEVPELLY

Academic Year 2017-18

STUDENT RESEARCHERS

1. Medhari.UshaRani. BA 2nd year
2. Mohammad.Sabeeb. BA 2nd year
3. Mothe.Suresh. BA 2nd year
4. Moutam.Raju. BA 2nd year
5. Muthyala.Hariprasad. BA 2nd year
6. Namindla.Shiva Kumar. BA 2nd year
7. Kothuri.Naresh. BA 2nd year
8. Neela.Naresh. BA 2nd year
9. Payam .Venkatesh. BA 2nd year
10. Pilli.Divya. BA 2nd year
11. Pulsam.Kalyani. BA 2nd year
12. Saruqula.Swamy. BA 2nd year
13. Sathuri.Suresh .BA 2nd year
14. Siluvri. .Venu. BA 2nd year
15. SK.Muzeena. BA 2nd year
16. Thatikonda.Ravinder. BA 2nd year
17. Ummala.Venkesh. BA 2nd year
18. Vangala Prashanth. BA 2nd year
19. Vasmpelly.Kiran BA 2nd year
20. Kodati.Ashok. BA 2nd year

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DEPARTMENT OF PUBLIC ADMINISTRATION
STUDENT STUDY PROJECT

TOPIC: ANNA PURNA SCHEME (5 Rupees meals)

Academic Year 2017-18

STUDENT RESEARCHERS

1. Aribilla Praveen, BA 2nd year
2. Mula Kanaka Laxmi , BA 2nd year
3. Anuri Venkata Manoja, BA 2nd year
4. Beesu Yakanna, BA 2nd year
5. Billa. Suresh, BA 2nd year
6. Boini Ganesh, BA 2nd year
7. Chilla Sunil, BA 2nd year
8. Daddu Rajesh, BA 2nd year
9. Eega Suresh, BA 2nd year
10. Eerasani Sambaiah, BA 2nd year
11. Eram Rakesh, BA 2nd year
12. Ganga Ramesh, BA 2nd year
13. Gugulothi BabuRao ,BA 2nd year
14. Guvva AnilKumar, BA 2nd year
15. Janagama. Balakrishna, BA 2nd year
16. Karagani Srivalan, BA 2nd year
17. Janagam Yeliya, BA 2nd year
18. Mallela Sandhya Rani, BA 2nd year
19. Mandapelly Suresh, BA 2nd year
20. Metteda Arun Kumar, BA 2nd year

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