

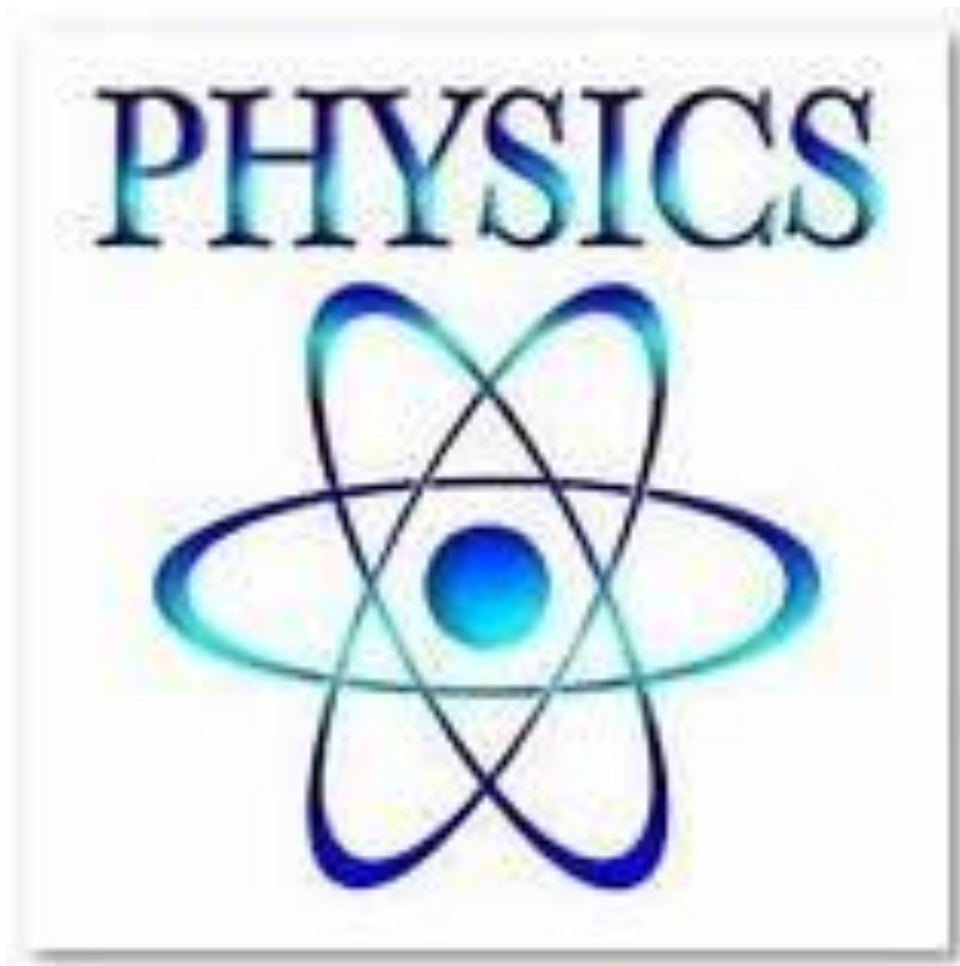


GOVERNMENT DEGREE COLLEGE, THORRUR
MAHABUBABAD DISTRICT, TELANGANA STATE-506163
E-Mail: jc.gdc.thorrur@gmail.com, Mobile: 8008307999



Website: <https://gdcts.cgg.gov.in/thorrur.edu>

DEPARTMENT OF PHYSICS



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INTRODUCTION:

- Government Degree College, Thorrur was established on 2008 in Mahabubabad District of Telangana.
- Thorrur is a major town located 70 Kilometers away from District head quarters to cater the higher Education needs of the students of Thorrur.
- The college is affiliated to Kakatiya University, Warangal and completed as per the almanac prescribed by the University.
- The Department of Physics in the College has started in the year of 2015 with B. Sc, M.P.C and with B.Sc, MPCs in the year of 2019.

ABOUT THE DEPARTMENT

The Department maintains a tradition of excellence in teaching at undergraduate level. Faculty of the department participates in research in the active and exciting areas of physics. The Physics Department is committed to continuous improvement in the quality of education by enhancement of the knowledge of students and staff members. The Physics Department has highly qualified staff & is well equipped with laboratories. The department presents a unique opportunity to study the exciting field with the guidance of well-qualified teachers.

VISION AND MISSION

Vision:

- Popularize the subject among the students

Mission

Lay strong foundation of the subject in the students leading to further higher studies and research

- Simplification of the subject by the faculty in the form of simplified notes and easy to understand lectures.
- Inculcating interesting the subject among the students by involving them in research activities.

DEPARTMENT PROFILE

1. Name of the Department : Physics
2. Year of Establishment : 2015
3. Names of Programmers / Courses offered
(UG, PG, M.Phil., Ph.D., UG, B.A (H.E.P) : B.Sc (MPC), B.Sc (MPCs)
4. Annual/semester/choice based credit System
(Programme wise) : Choice Based Credit System
5. MoUs With Other Colleges : 03
6. Faculty Details:

Designation	sanctioned	Filled
Asst. Professors	01	01

7. Faculty profile:

Name	Qualification	Designation	No. of Years of Experience
T.Venkanna	M.Sc , B.Ed	Contract Lecturer	18
Dr.B.Srinivas Goud	M.Sc ,B.Ed	Asst.Professor	12

8. List of senior Faculty Visiting the Department:

- 1) Dr.B Sanjiva Rao Assist. Professor of Physics A.V.V Degree College Warangal.
- 2) B.Raju Assist. Professor of Physics Kakatiya Government College Warangal.

9. Student-Teacher Ratio(programme wise) : 20 :1
10. Student progression :

Student progression	Against % Enrolled
UG to PG	02

11. Details of Infrastructural facilities

- a) Department Library : 41 Books Reference are
with Department
- b) Internet facilities for Staff & Students : Yes Available
- c) Class rooms with ICT facility : LCD Projector
- d) Laboratories : Well equipped
laboratories available.

12. Details on student enrichment programmes

(Special Lectures/Workshops/Seminars)

With external Experts : Extension Lectures,
Group discussion, Quiz, Seminars.

13. Research Teaching methods adopted to

Improve Student learning

: Lecture cum

Demonstration tools

Like Computers, LCD
Projectors,

Mobile Phones, Online tool
such as ZOOM, You tube,
what's app, etc are being
utilized for student
centered teaching and
learning process.

14. Participation in Institutional

Social Responsibility (ISR)

: Participation in NSS,
Career Guidance Cell,
TSKC, and Alumni
Association

COURSES/PROGRAMMES OFFERING (At present)

The Physics department offers the following UG courses Under CBCS System (BSc, Physical Sciences).

1. Mathematics-Physics-Chemistry - EM
2. Mathematics-Physics-Computer science - EM

C.B.C.S.PROGRAMMES: COURSES (Semester Wise)

S.No	Group	Medium	Year	Semester
1	B.Sc(M.P.Cs)	EM	First Year	I-Sem
				II-Sem
2	B.Sc(M.P.Cs)	EM	Second Year	III-Sem
				IV-Sem
3	B.Sc(M.P.Cs)	EM	Final Year	V-Sem
				VI-Sem

SYLABUS:

https://drive.google.com/file/d/1u2Z2JXBtSB-du2HoS_Rbn9VFal6U4uAu/view?usp=share_link

STRENGTH PARTICULARS:

Academic Year	Group	I YEAR	II YEAR	III YEAR	Total
2017-18	B.Sc.(M.P.Cs.)EM	01	02	02	05
2018 - 19	B.Sc.(M.P.Cs.)EM	Nil	Nil	Nil	Nil
2019-20	B.Sc.(M.P.Cs.)EM	18	Nil	Nil	18
2020 - 21	B.Sc.(M.P.Cs.)EM	17	02	Nil	19
2021-22	B.Sc.(M.P.Cs.)EM	22	18	02	42
2022-23	B.Sc.(M.P.Cs.)EM	27	21	18	66

WORK LOAD PARTICULARS:

S.No	Class	Year	Medium	Hours/Week		Total
				Theory	Practical	
01	B.Sc(MPCs)	First	English	4	3	7
02	B.Sc(MPCs)	Second	English	4	3	7
03	B.Sc(MPCs)	Third	English	4	3	7
Grand Total						21

GOVERNMENT DEGREE COLLEGE-THORRUR, MAHABUBABAD (Dist)

TIME TABLE-(2021-22) I, III and V SEMISTER

B.Sc (PHYSICS)

DAY	YEAR/TIME	I (10.00 to 11.00)	II (11.00 to 12.00)	III (12.00 to 1.00)	(1.00 to 1.30)	IV (1.30 to 2.30)	V (2.30 to 3.30)	VI (3.30 to 4.30)
MON	First Year			PHY-I	L U N C H			
	Second Year					PHY-III		
	Third Year	PHY-V			PHY.....		
TUE	First Year			PHY-I				
	Second Year					PHY-III		
	Third Year	PHY-V						
WED	First Year			PHY-I	PHY.....		
	Second Year							
	Third Year	PHY-V						
THU	First Year							
	Second Year							
	Third Year	PHY-V						
FRI	First Year			PHY-I				
	Second Year		PHY-III					
	Third Year							
	First Year							
	Second Year		PHY-III		PHY.....		
	Third Year							

GOVERNMENT DEGREE COLLEGE-THORRUR, MAHABUBABAD (Dist)

TIME TABLE-(2021-22) II, IV and VI SEMISTER

B.Sc (PHYSICS)

DAY	YEAR/TIME	I (10.00 to 11.00)	II (11.00 to 12.00)	III (12.00 to 1.00)	(1.00 to 1.30)	IV (1.30 to 2.30)	V (2.30 to 3.30)	VI (3.30 to 4.30)
MON	First Year			PHY-II	L U N C H			
	Second Year					PHY-IV		
	Third Year		PHY-VI		PHY. Lab.....		
TUE	First Year			PHY-II				
	Second Year					PHY-IV		
	Third Year		PHY-VI					
WED	First Year			PHY-II				
	Second Year							
	Third Year		PHY-VI					
THU	First Year			PHY-II	PHY. Lab.....		
	Second Year							
	Third Year		PHY-VI					
FRI	First Year							
	Second Year			PHY-IV				
	Third Year							
SAT	First Year							
	Second Year			PHY-IV	PHY. Lab.....		
	Third Year							

INFRASTRUCTURE FACILITIES:

1. Internet facilities for Staff & Students : Yes Available
2. Class rooms with ICT facility : LCD Projector
3. Laboratories : Well equipped
laboratories available.

DEPARTMENT LIBRARY:

1. Department Library : 41 Books Reference are
with Department

ACADEMIC ACTIVITIES/TEACHING LEARNING PROCESS/METHODS:

- Extension Lectures
- Group Discussions
- Assignments
- Quiz Competitions
- Student Seminars
- Field Trips
- Student Study Projects

Extension Lecture:



Extension Lecture was given by B.Raju Associate professor in Physics Kakatiya Government Degree College Hanamkonda on Transverse wave propagation on along a Stretched string for B.Sc Physics 1st year Students on 24-02-2020.

Group Discussion:

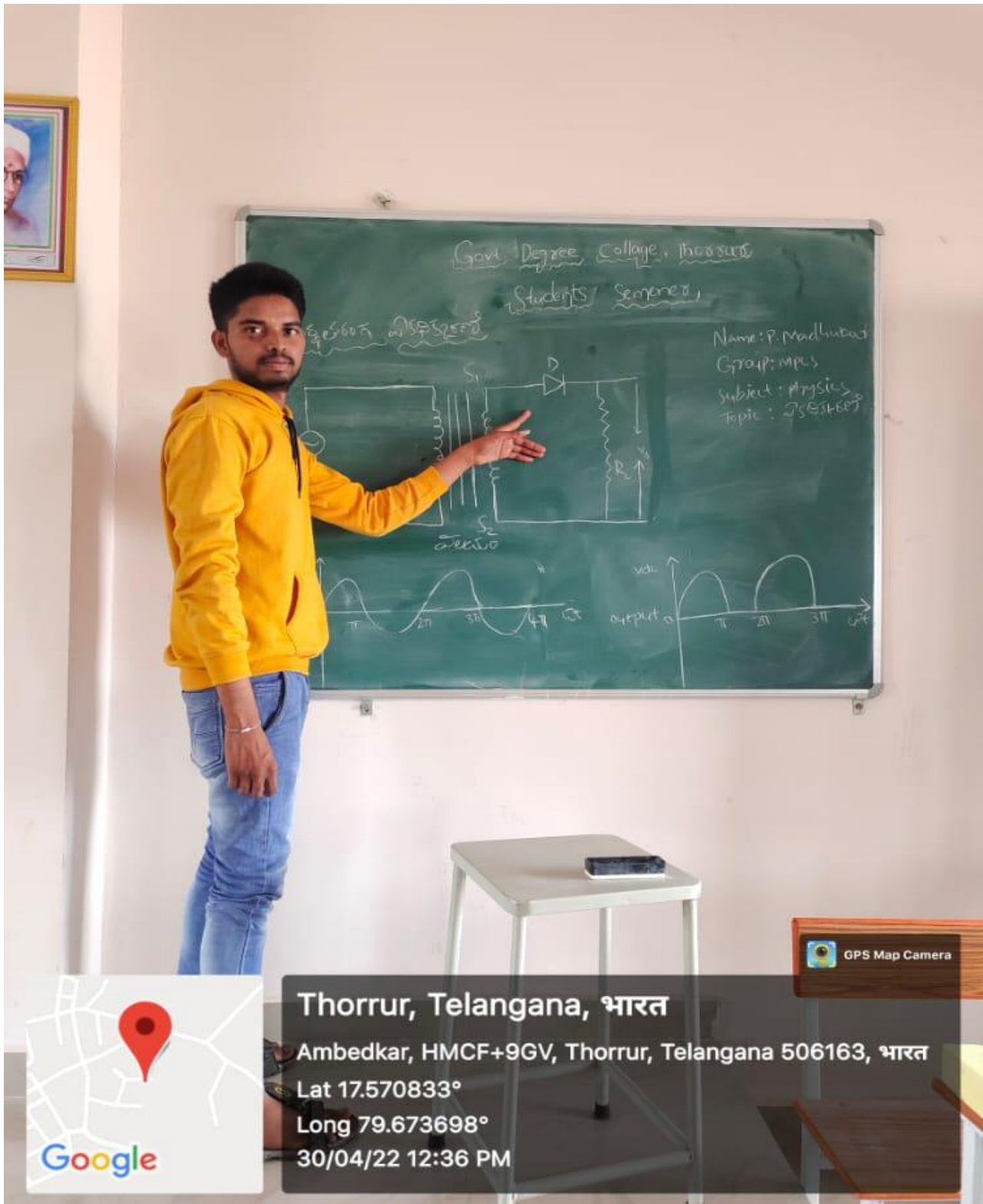


Quiz Competition:



Quiz competition was conducted on 28-02-2020

Student seminars:



Student seminar was conducted on 30-04-2022

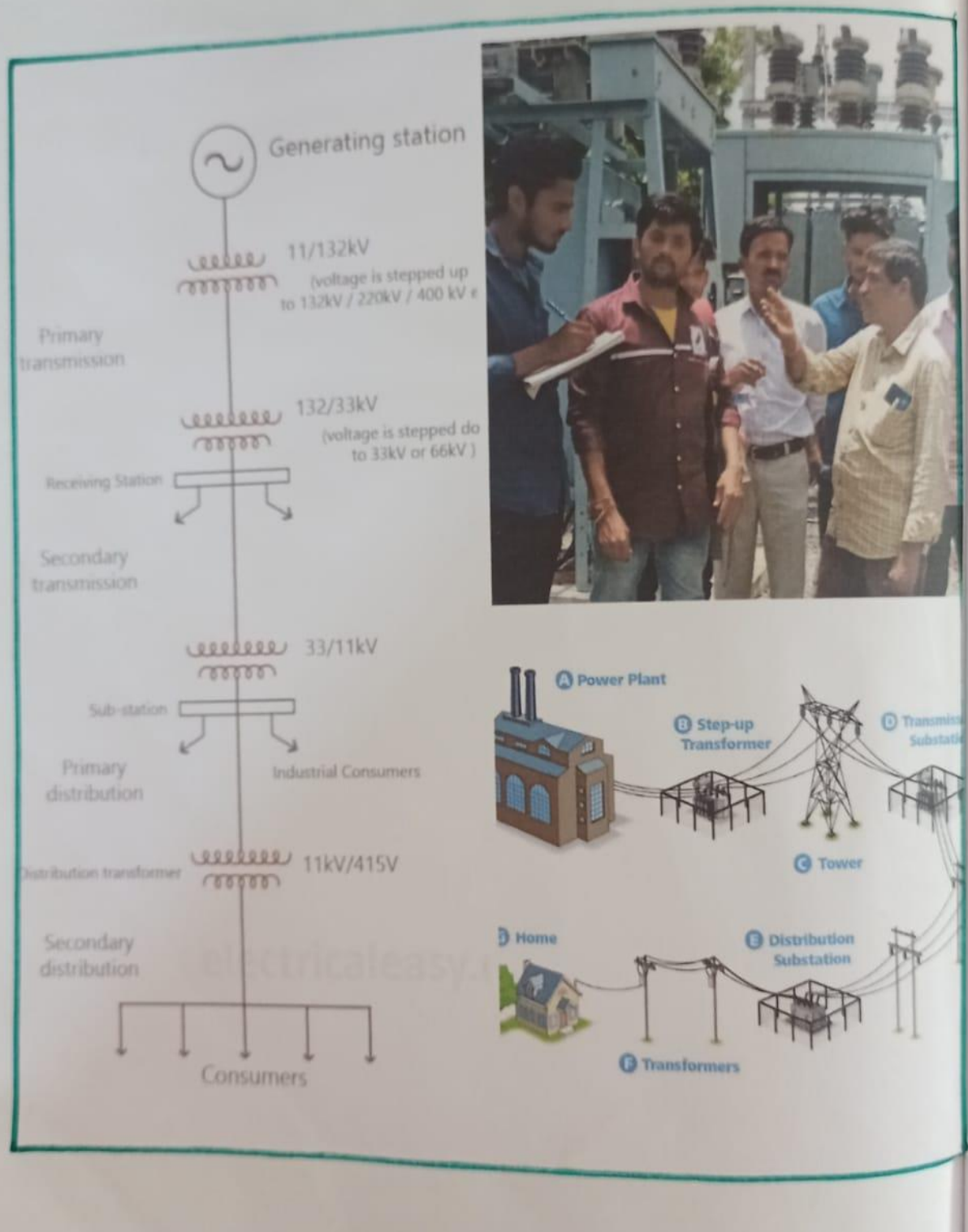
Physics Lab:



Physics Practical's Explained 3rd year Students

Field Trip:





Field trip program we are visited Thorrur power station on 09-05-2022.

Result Analysis:

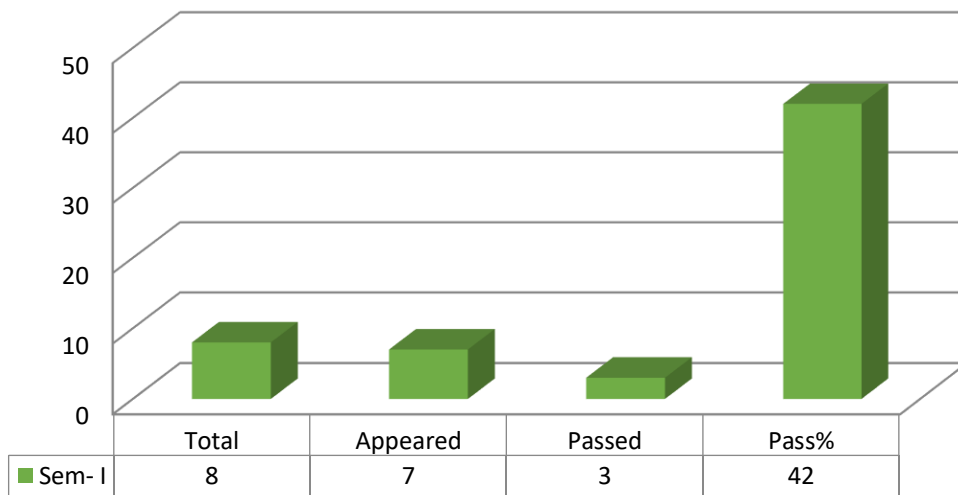
Government Degree College ,Thorrur,Mahabubabad(Dist)

Result Analysis-(2019-20)

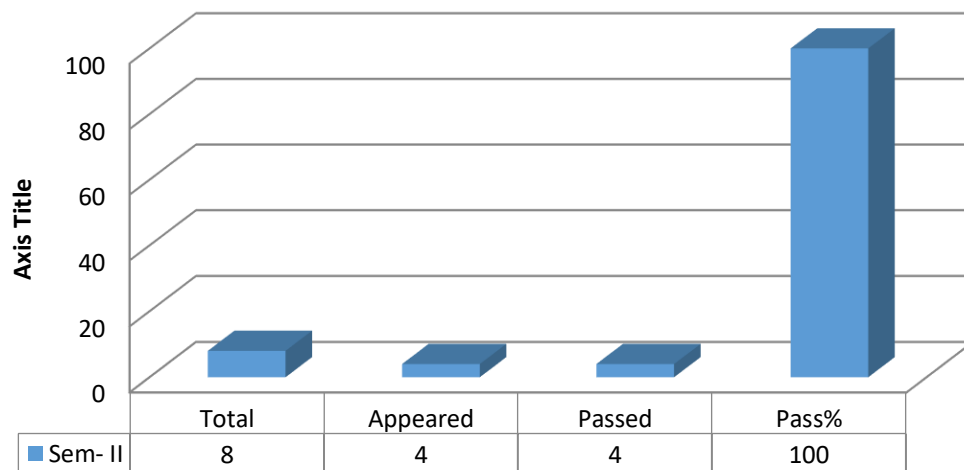
Department of PHYSICS

Si.No	Semester	Total	Appeared	Passed	Pass%	Remarks
1	I	8	7	3	42	
2	II	4	4	4	100	

Sem- I

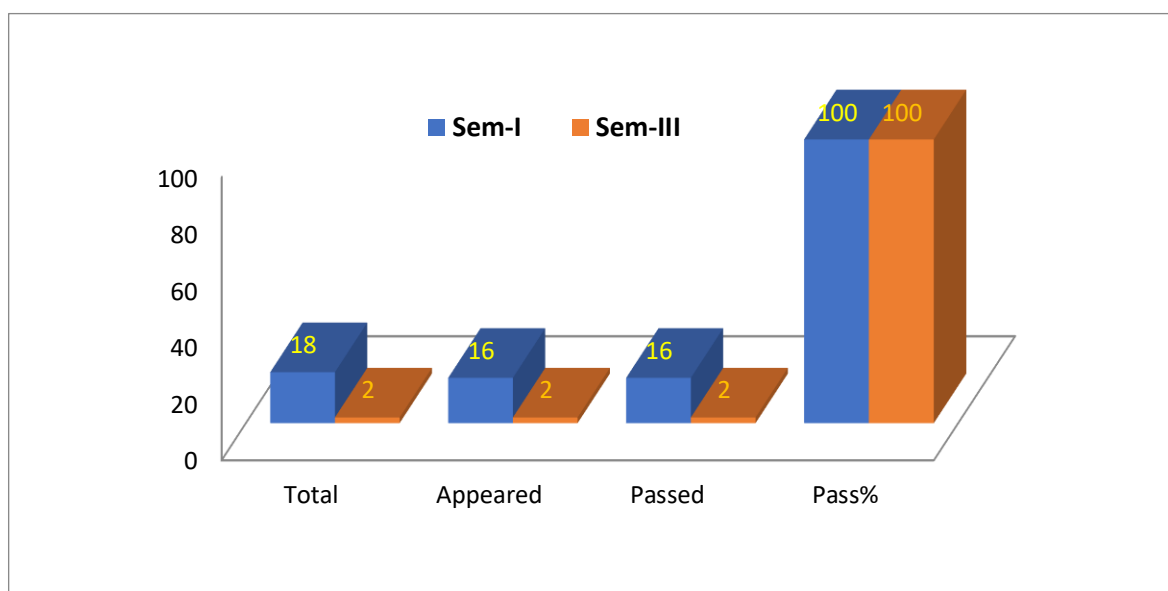


Sem- II



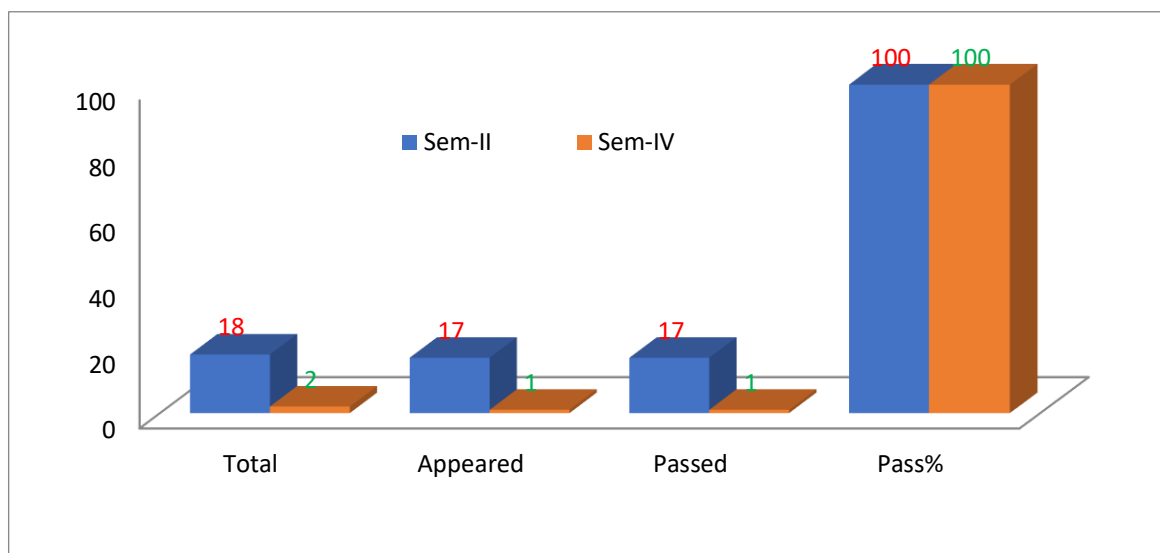
Result Analysis-(2020-21)

S.No	Semester	Total	Appeared	Passed	Pass%	Remarks
1	I	18	16	16	100	
2	III	2	2	2	100	



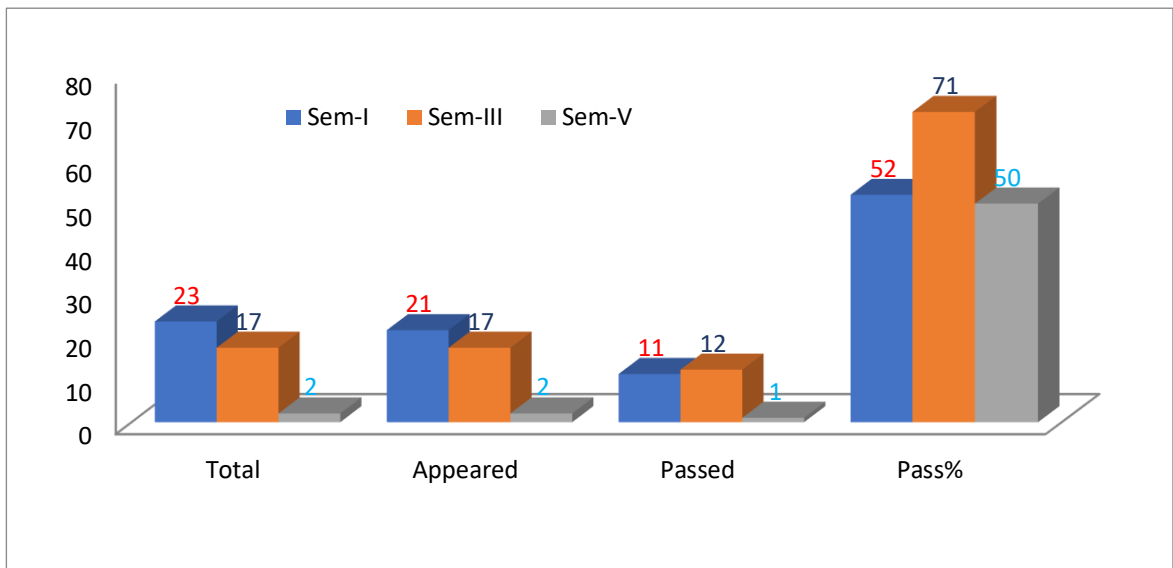
Result Analysis-(2020-21)

S.No	Paper	Semester	Total	Appeared	Passed	Pass%	Remarks
1	Thermal Physics	II	18	17	17	100	
2	Waves & Optics	IV	2	1	1	100	

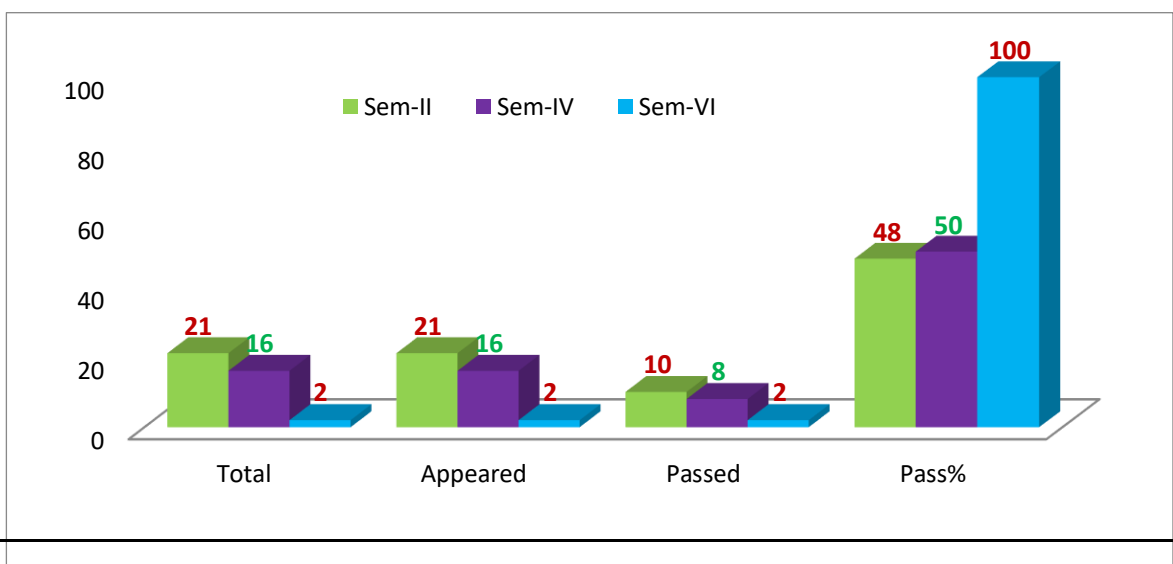


Result Analysis-(2021-22)

S.No	Paper	Semester	Total	Appeared	Passed	Pass %	Remarks
1	Mechanics	I	23	21	11	52	
2	Electromagnetic Theory	III	17	17	12	71	
3	Modern Physics	V	2	2	1	50	

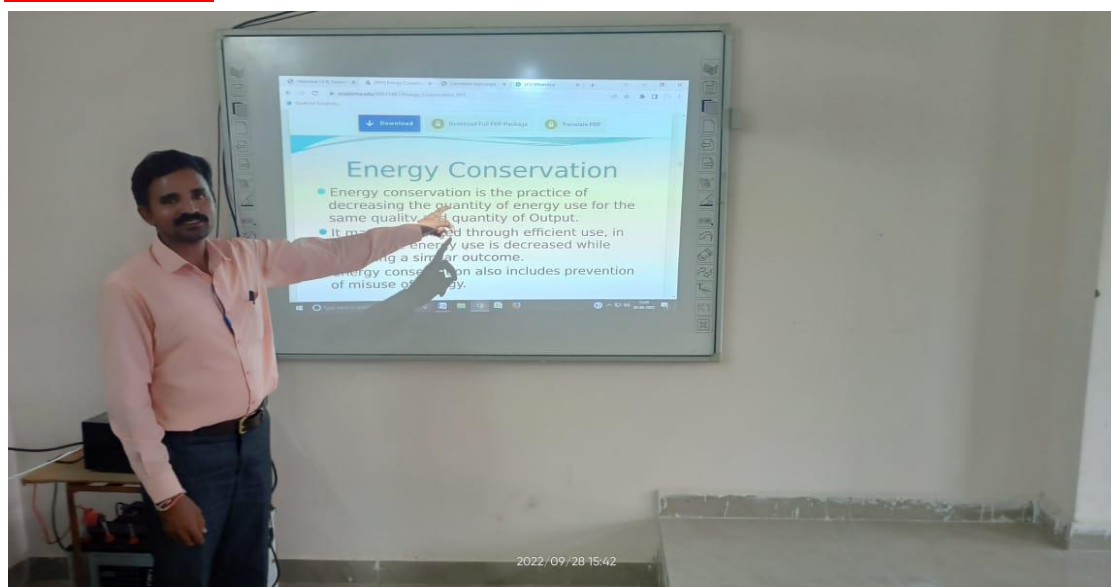


S.No	Paper	Semester	Total	Appeared	Passed	Pass%	Remarks
1	Thermal Physics	II	21	21	10	48	
2	Waves & Optics	IV	16	16	8	50	
3	Electronics	VI	2	2	2	100	



Details of e-content/ICT:

Virtual Class:



Virtual Class in ICT Tools

S. No	Name of the Lecturer	PPT	Lectures uploaded on YouTube
1	T.Venkanna	8	44

Paper	Semester	Topic	Video Link
Thermal Physics	II	Thermal Radiation	https://youtu.be/T8hLdGJxFPA
Thermal Physics	II	Pyrometers	https://youtu.be/yjhWCXvHcoE
Thermal Physics	II	Disappearing filament pyrometer	https://youtu.be/waCUM03nXjU
Thermal Physics	II	Joule-Kelvin effect	https://youtu.be/5rUuJCSuxL8
Thermal Physics	II	Liquefaction of Helium	https://youtu.be/fHVhFqFWpc8
Thermal Physics	II	Principle of Refrigeration	https://youtu.be/MEvxs1YywjA

Thermal Physics	II	Thermal Radiation	https://youtu.be/82E1i-Fbbk
Thermal Physics	II	Solar Constant	https://youtu.be/eszamktSIKg
Thermal Physics	II	Thermodynamic Potentials	https://youtu.be/Ltglmuy8Jo
Thermal Physics	II	Maxwell's equations	https://youtu.be/RmurULb8NMc
Thermal Physics	II	TDS Equations	https://youtu.be/TdFAC_zSzh8
Mechanics	I	Scalar and Vector Fields	https://youtu.be/X2MXTfKcS0s
Mechanics	I	Curl of a Vector field	https://youtu.be/xJzQgbvj4_M
Mechanics	I	Stokes Theorems	https://youtu.be/bxXrGTuja9E
Mechanics	I	Greens Theorem	https://youtu.be/3goS2D0CgME
Mechanics	I	Vector analysis some Worked out problems	https://youtu.be/G.JEZzay109c
Mechanics	I	Central Forces	https://youtu.be/54vg8bkHiGg
Thermal Physics	II	Disappearing filament pyrometer	https://youtu.be/yjhWCXvHcoE
Mechanics	I	Negative gradient of potential energy	https://youtu.be/1HPKdUgc-p0
Mechanics	I	Motion Under Inverse square law of force	https://youtu.be/6PArunBW3Vo
Mechanics	I	Keplars Law	https://youtu.be/sAeP07V5K6M
Mechanics	I	Special Theory of Relativity	https://youtu.be/vlraAhPM0Tb8
Mechanics	I	Mahycalson - Morely Experiment	https://youtu.be/U7EDCKw18ww
Mechanics	I	Lorentz Transformations	https://youtu.be/7cypyXG2m_0
Mechanics	I	Length Contraction and Time Dilation	https://youtu.be/p1qTVcxGU24
Thermal Physics	II	Thermodynamics	https://youtu.be/WKthYtf_RQg

Thermal Physics	II	First law of Thermodynamics	https://youtu.be/j95MPg5sekA
Thermal Physics	II	Isothermal and Adiabatic process	https://youtu.be/39BAWLC1hKc
Thermal Physics	II	Thermodynamic Scale of Temperature	https://youtu.be/USl_lawsaL4
Thermal Physics	II	Entropy	https://youtu.be/lZtZY5pR-R4
Thermal Physics	II	Calculation of Entropy changes	https://youtu.be/xgXmbhOzXZM
Thermal Physics	II	Thermodynamic Maxwell's equations	https://youtu.be/4_K5gfUKkktk
Thermal Physics	II	Joule-Thomson Effect	https://youtu.be/OOwBa7CCy5s
Thermal Physics	II	$C_p - C_v = R$ & $C_p / C_v = \gamma$	https://youtu.be/owVnDBoQvYk
Thermal Physics	II	Liquefaction of He Kapitza's method	https://youtu.be/Lwr5m2gIR-Q
Thermal Physics	II	Ferry black body and energy distribution in black body Radiation	https://youtu.be/WJ_QLzWTz48
Thermal Physics	II	Disappearing filament Optical pyrometer	https://youtu.be/Z4gLmToHCRA
Thermal Physics	II	Planks Radiation law	https://youtu.be/PKkJrL5n2tl
Electromagnetic Theory	III	Electrostatic Gauss law	https://youtu.be/q_c1_zAwMOc

Electromagnetic Theory	III	Electric field at a point due to uniformly charged Sphere	https://youtu.be/jqtKaJ5GVV0
Electromagnetic Theory	III	Biot - Savart law and its Application	https://youtu.be/GCw3bNux-Yo
Electromagnetic Theory	III	Faraday's law's of Electromagnetic Induction	https://youtu.be/x3FbxU6jZT0
Electromagnetic Theory	III	Electromagnetic Maxwell's equation	https://youtu.be/FpURogJosl4
Electromagnetic Theory	III	Poynting vector	https://youtu.be/n32-QuXqneg

CERTIFICATE/ADD ON COURSES:

The Department of Physics Conducted Certificate Courses:

- House Wiring-Academic Year-2020-21
- Renewable Energy Sources- Academic Year-2021-22

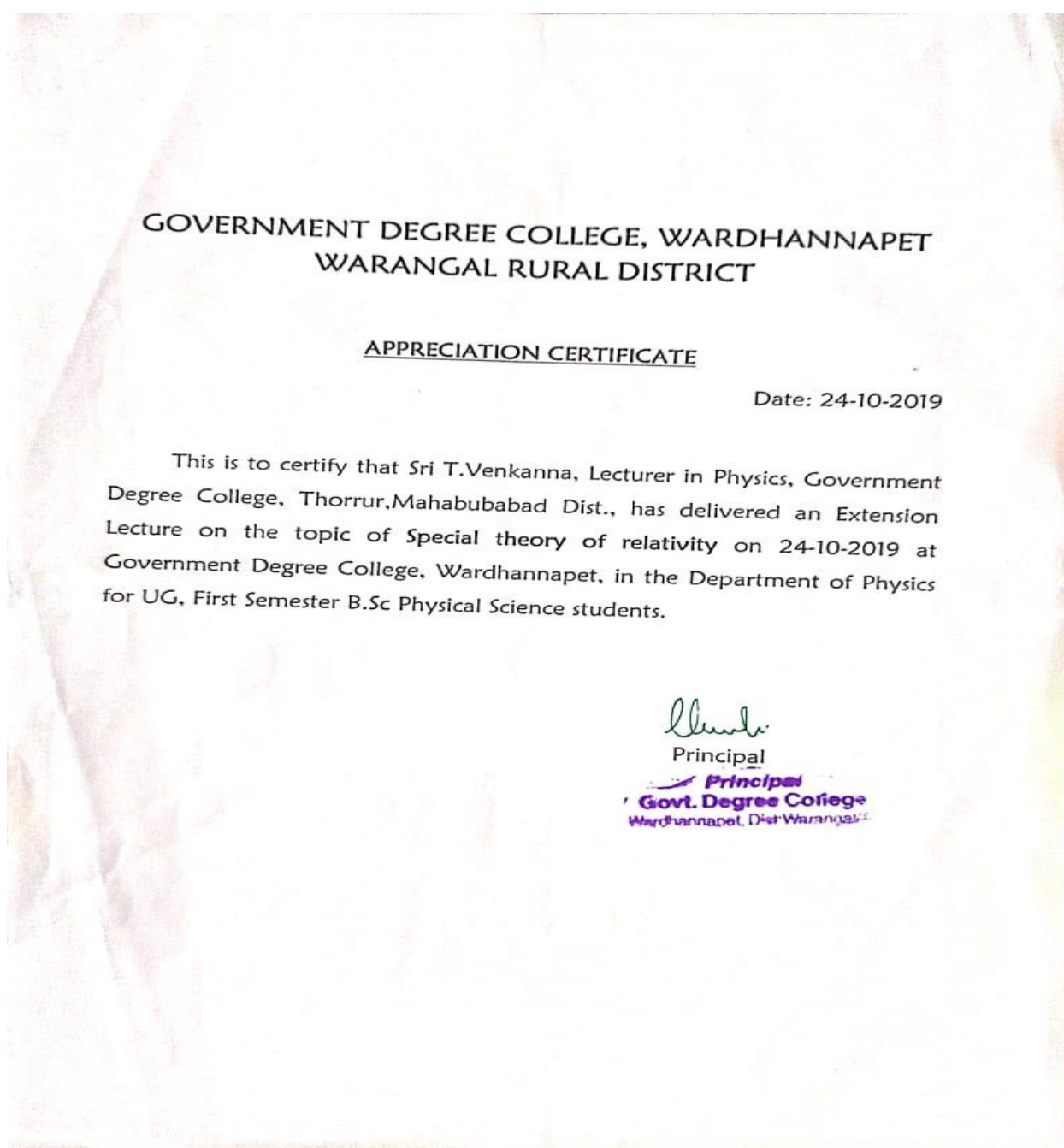
Certificate Course



EXTENSION ACTIVITIES:

Academic Council Evaluation Services by Faculty:

S. No.	Name of the Lecturer	Paper Setting	Resource Person	Examiner
1	THIPPANI VENKANNA	Paper Setting	-	Examiner



SRI VIKAS DEGREE COLLEGE, NEKKONDA
WARANGAL DISTRICT

ATTENDENCE CERTIFICATE

Date: 10-02-2020

This is to certify that Sri T.Venkanna, Lecturer in Physics, Government Degree College Thorrur, Mahabubabad Dist., has delivered an Extension Lecture on the topic of **Simple Harmonic Oscillations** on 10-02-2020 at Sri Vikas Degree College, Neekkondas, in the Department of Physics for UG, Second Semester B.Sc Physical Science students.


Principal
SRI VIKAS DEGREE COLLEGE
NEKKONDA, Warangal-506122.

National Science Day Celebrations:



National Science Day Conducted on 28th February-2022



National Science Day Conducted on 28th February-2021



National Science Day Conducted on 28th February-2020

Plantation Program with the help of Alumni Association and NSS Unit:



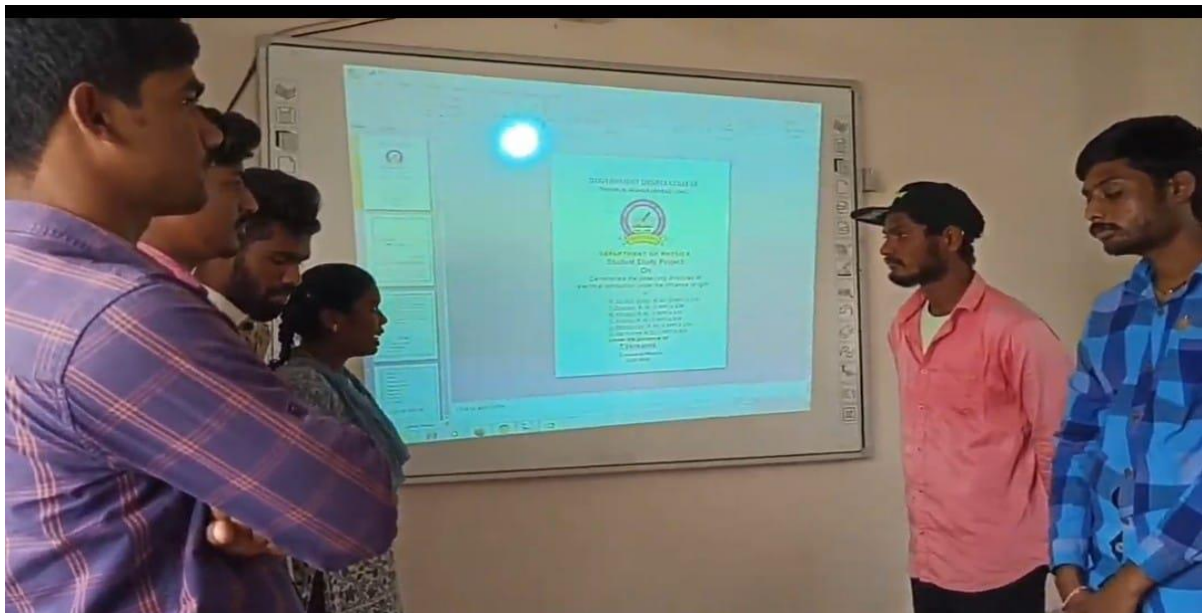
Plantation program was conducted on 28-02-2022; Plantation program was conducted on 10-07-2020

RESEARCH ACTIVITIES:

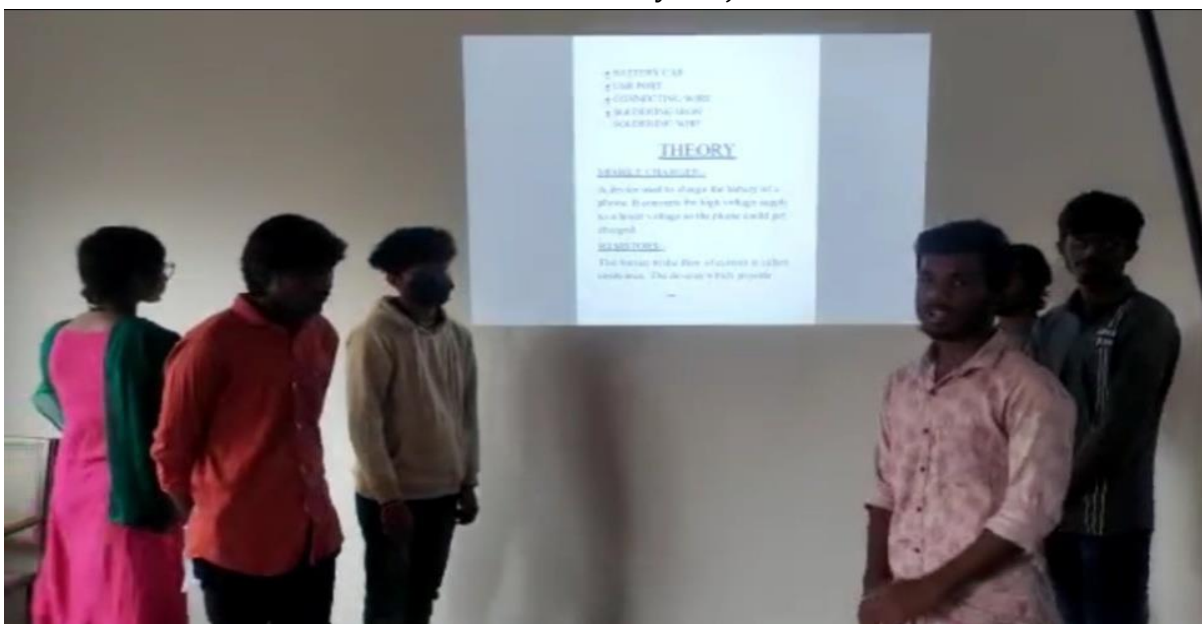
Publications : 02
T.Venkanna

- * A Paper published on "Comparative analysis on various Natural Polymers "For IJRDT Volume-1Issue-2, Aug-2021 in IJRDT
- * A Paper published on "Review on Analysis of polymers and its blends and applications For Volume-5, Issue-04, and Apr-2022 in JIDPTS International Journal.

Study Project:



Presentation of Study Project



Presentation of Study Project

Collaborations:

**GOVERNMENT DEGREE COLLEGE-THORRUR,
MAHABUBABAD (Dist), TELANGANA (State) -506163**

Email: jc.gdc.thorrur@gmail.com Molle no: 8008307999
Website: <https://gdcts.egg.gov.in/thorrur.edu>

**DEPARTMENT OF PHYSICS
COLLABORATION**

Date: 05.03.2018

Government Degree College, Mahabubabad and Government Degree College Thorrur have together decided to collaborate with each other for the enrichment of Academic Activities of both the colleges for the period of (Five years) 2018- 2023.

Through the collaboration, we are agreed upon focusing on the following activities:

- Research, Exchange of Faculty, Exchange of Students/Internships
- Conduct of workshops/seminars/conferences

In charge
Department of Physics
Government Degree College,
Mahabubabad.
Govt. Degree College,
Mahabubabad, (Dis:
Telangana State.

In charge
Department of Physics
Govt. Degree College Thorrur.

Principal
Government Degree College
Mahabubabad.
Principal
Govt. Degree College
MAHABUBABAD

Principal
Government Degree College
Govt. Degree College
THORRUR, Dt. Mahabubabad

**GOVERNMENT DEGREE COLLEGE-THORRUR,
MAHABUBABAD (Dist), TELANGANA (State) -506163**

Email:gc.thorrur@gmail.com Mollc no: 8008307999
Website:https://gdcts.egg.gov.in/thorrur.edu

**DEPARTMENT OF PHYSICS
COLLABORATION**

Date: 27.08.2019

Government Degree College, Wardhannapet and Government Degree College Thorrur have together decided to collaborate with each other for the enrichment of Academic Activities of both the colleges for the period of (Four years) 2019- 2023.

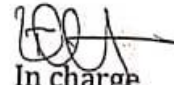
Through the collaboration, we are agreed upon focusing on the following activities:

- Research, Exchange of Faculty, Exchange of Students/Internships
- Conduct of workshops/seminars/conferences


In charge

Department of Physics
Government Degree College,
Wardhannapet.

ప్రభుత్వ డిగ్రీ కళాశాల
వర్ధన్నపేట - వరంగల్ జిల్లా

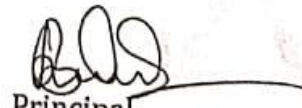

In charge

Department of Physics
Govt. Degree College Thorrur.


Principal

Government Degree College
Wardhannapet.

Principal
Govt. Degree College
Wardhannapet, Dist Warangal, TS


Principal

Government Degree College

Principal
Govt. Degree College
THORRUR, Dt. Mahabubabad

**GOVERNMENT DEGREE COLLEGE THORRUR,
MAHABUBABAD (Dist), TELANGANA (State) -506163**

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Website: <https://gdcts.egg.gov.in/thorrur.edu>

**DEPARTMENT OF PHYSICS
COLLABORATION**

Date: 10.09.2024


Sri Vikas Degree College, Nekkonda and Government Degree College Thorrur have together decided to collaborate with each other for the enrichment of Academic Activities of both the colleges for the period of (Five years) 2020- 2025.

Through the collaboration, we are agreed upon focusing on the following activities:

- Research, Exchange of Faculty, Exchange of Students/Internships
- Conduct of workshops/seminars/conferences


In charge

Department of Physics
Sri Vikas Degree College,
NEKKONDA, Warangal-506122, T.S.


In charge

Department of Physics
Govt. Degree College Thorrur.


Principal

Sri Vikas Degree College
NEKKONDA, Warangal-506122


Principal

Govt. Degree College
THORRUR, Dt. Mahabubabad
Thorrur.

BEST PRACTISES:

1. Problem-Based Learning- Introduction of problem solving assessment to the UG students to have comprehensive understanding of Physics.
2. Study material: The department is providing the study materials to the Students.

STUDENT PROGRESSION:

:

Student progression	Against % Enrolled
UG to PG	02

SWOC ANALYSIS OF THE DEPARTMENT AND FUTURE PLANS:

Strengths:

- a) Staff is well qualified
- b) There is scope for creating learning atmosphere with the ICT method of teaching

Weaknesses:

- a) Most of the students are first generation learners
- b) They help their parents in field work and fail to be regular to the classes

Opportunities:

The colleges is located in the revenue division surrounded by many villages

Challenges:

The students hailing from Telugu medium background are scared of English medium.

REMEDIAL COACHING FOR SLOW LEARNERS:

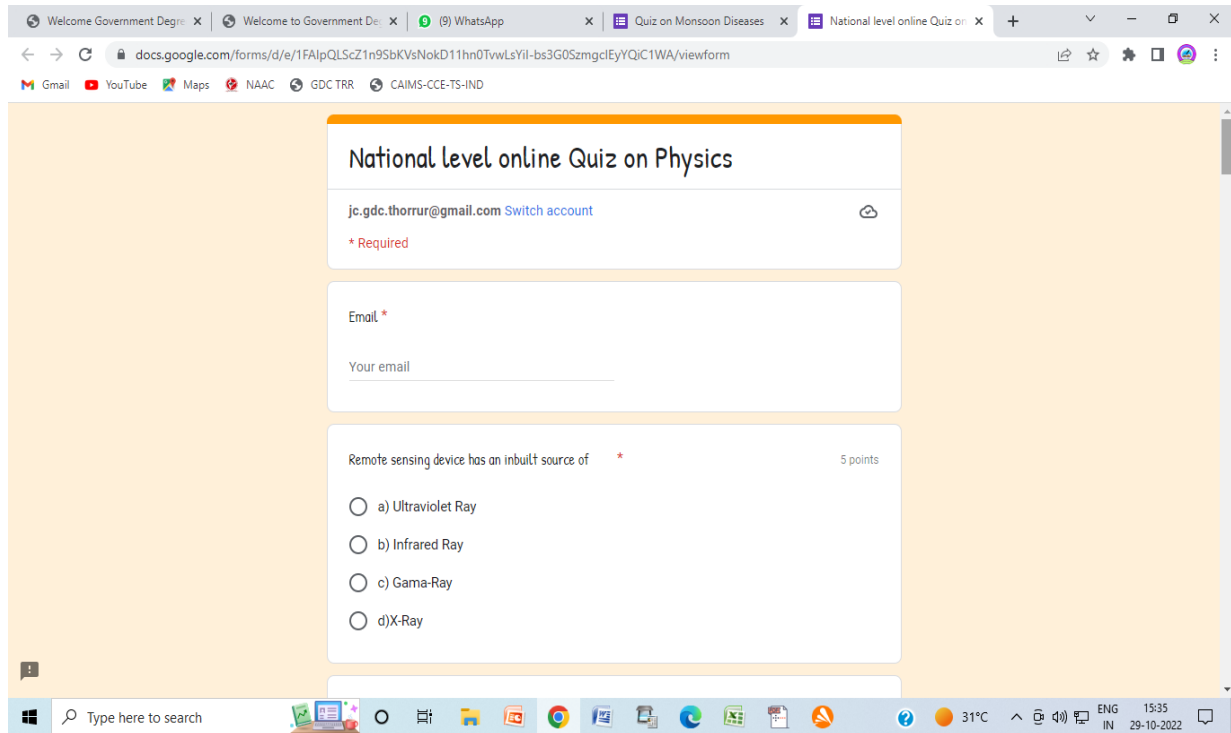
Remedial classes are arranged every year in the department to the academically slow learners, we actively participates in taking classed for them. The students are given extra coaching in various subjects and topics to improve their academic performance.

FUTUR PLAN:

- a) To start UG course with Electronics as specialization.
- b) To offer a certificate course in Areas of Physics.

Any other – Department Highlights:

National Level e-Quiz on Physics conducted by Department of Physics:



The screenshot shows a web browser window displaying a Google Form. The browser's address bar shows the URL: docs.google.com/forms/d/e/1FAIpQLScZ1n9SbKVsNokD11hn0TvwLsYil-bs3G05zmglEYQ/C1WA/viewform. The form title is "National level online Quiz on Physics". Below the title, the user's email is listed as "jc.gdc.thorur@gmail.com" with a "Switch account" link. A red asterisk indicates a required field. The form contains an "Email" field with the placeholder text "Your email". Below this is a multiple-choice question: "Remote sensing device has an inbuilt source of". The question is worth 5 points. The options are: a) Ultraviolet Ray, b) Infrared Ray, c) Gama-Ray, and d) X-Ray. The Windows taskbar at the bottom shows the search bar, several application icons, and system tray information including 31°C, ENG IN, and the date 29-10-2022.

Conducted on 23-07-2020