



ST. ANN'S COLLEGE FOR WOMEN

(Affiliated to Acharya Nagarjuna University,
Recognized Under Section 2(f) of UGC Act 1956-New Delhi)
Amaravathi Road, Gorantla, Guntur – 522034 (A.P)

Email: st_anns_coll@yahoo.co.in Website: www.stannscollegeforwomen.org

Criterion: II

Metric –2.3.1



2.3.1 STUDENT CENTRIC METHODS

Department of Physics



Department of
Physics

STUDENT CENTRIC METHODS

Experiential Learning	Participative Learning	Problem-Solving Methods
<ul style="list-style-type: none">- ICT Methods- Work shop- Lab sessions- Project & Internship- Group Discussions- Community service project- Poster presentations	<ul style="list-style-type: none">- Practical Demonstration- Exhibitions- Student seminars- Competitions – Quiz- JAM (Just A Minute)	<ul style="list-style-type: none">- Campus recruitment training programmes- Assignments- Question bank preparation

ICT METHODS


The Department of Physics has been using ICT tools to teach the students such that the activities carried out through digital and interactive tools increase student concentration and, therefore, they assimilate concepts more quickly, enhancing learning. This type of tool involves students in more practical learning, with the aim of reinforcing what they have learnt. The diverse sources of information that technologies provide bring new points of view to students. It facilitates communication between teachers and students. New technologies in the classroom, specifically those that allow access to online content, improve learning productivity



LECTURE ON SOLAR ENERGY AND ITS APPLICATIONS





 **GPS Map Camera**

Guntur, Andhra Pradesh, India
133-2-273, Ravi Nagar, Gorantla, Guntur, Andhra Pradesh 522034, India
Lat 16.331185°
Long 80.441412°
20/03/23 12:48 PM GMT +05:30



 **GPS Map Camera**

Guntur, Andhra Pradesh, India
133-2-273, Ravi Nagar, Gorantla, Guntur, Andhra Pradesh 522034, India
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Long 80.441412°
20/03/23 12:47 PM GMT +05:30



 **GPS Map Camera**

Guntur, Andhra Pradesh, India

133-2-273, Ravi Nagar, Gorantla, Guntur, Andhra Pradesh 522034, India

Lat 16.331185°

Long 80.441412°

03/04/23 12:19 PM GMT +05:30



Google



 **GPS Map Camera**

Guntur, Andhra Pradesh, India

10-109/2, Amaravathi Rd, Gorantla, Guntur, Andhra Pradesh 522034, India

Lat 16.346788°

Long 80.437436°

12/12/23 12:02 PM GMT +05:30



Google

Participative Learning STUDENT SEMINARS

The Department of Physics conducted student seminars to enable the students to improve their knowledge and understanding of a topic by engaging with key issues - participation is therefore necessary and successful participation involves preparation. This helps Identify own strengths and develop areas for growth. Demonstrate that challenges have been undertaken, developing new skills in the process.





Explained different types of evaporators



A Seminar by S. Veda Phani Sri on "Super Conductivity".



A Seminar by N. Sruthi on “Joule Thomson Effect”.

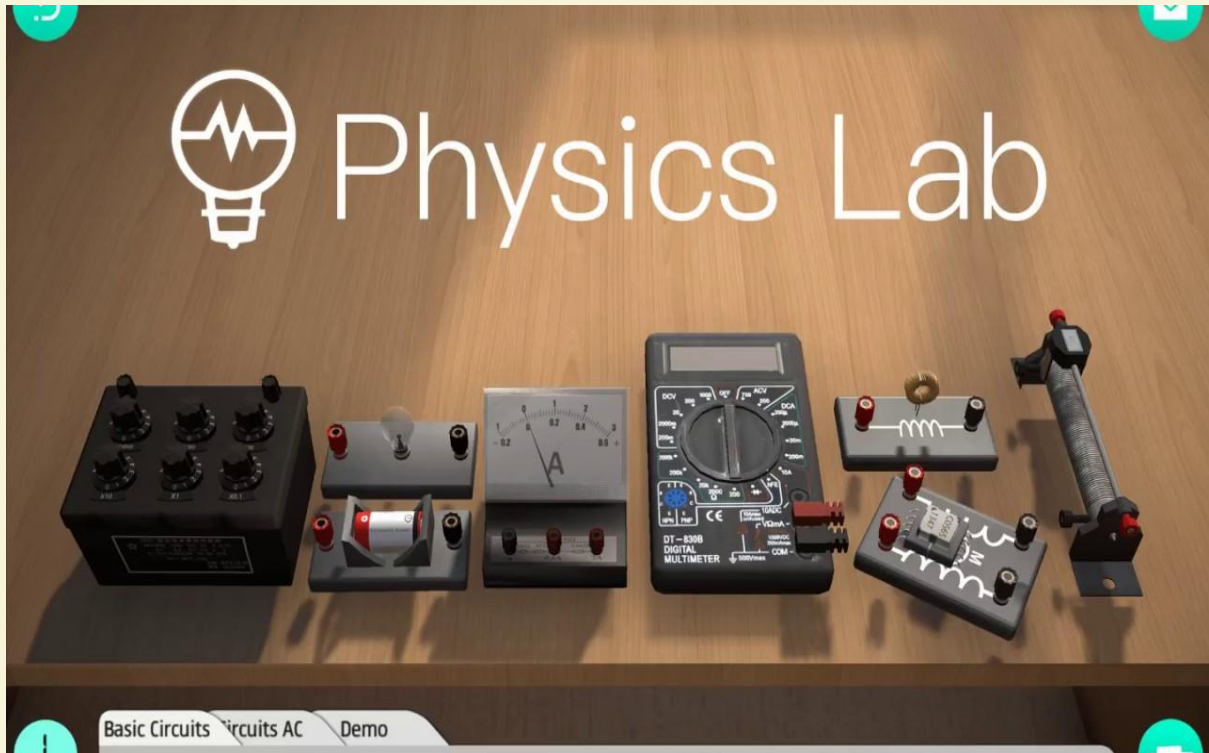


A Seminar by B. Remya on “Raman Effect”.



A Seminar by P. Chamundeswari Devi on “ Coupling Schemes”.

Experiential Learning



LAB SESSIONS



Demonstrating the Experiment



Demonstration of the transistor experiment



Zener Diode experiment



Characteristics of Transistor



Demonstration of Solar Cell Characteristics





Diffraction Grating by using Spectrometer





---Experiential Learning through Community engagement

1.Introduction

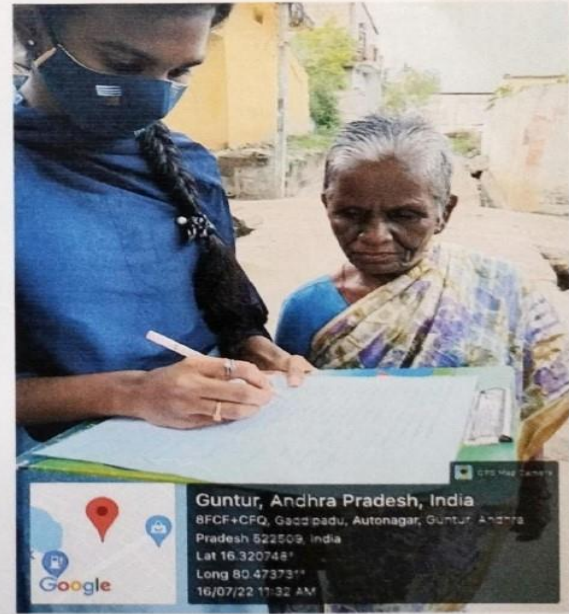
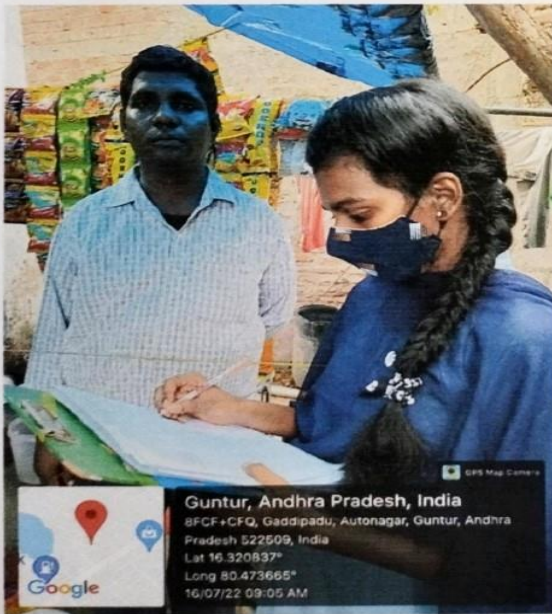
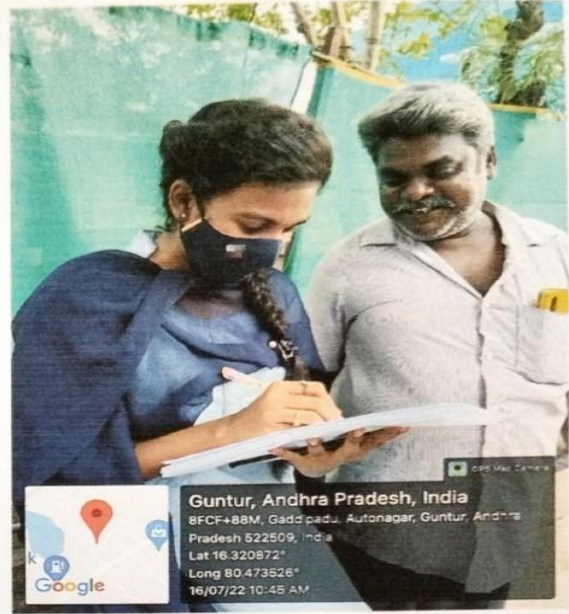
- Community Service Project is an Experiential Learning Strategy that integrates meaningful community service with instruction, participation, Learning and Community development.
- Community Service Project involves Students in Community development and Service Activities and applies the experience to personal and Academic development.
- Community service Project is meant to link the Community with the college for mutual benefit.

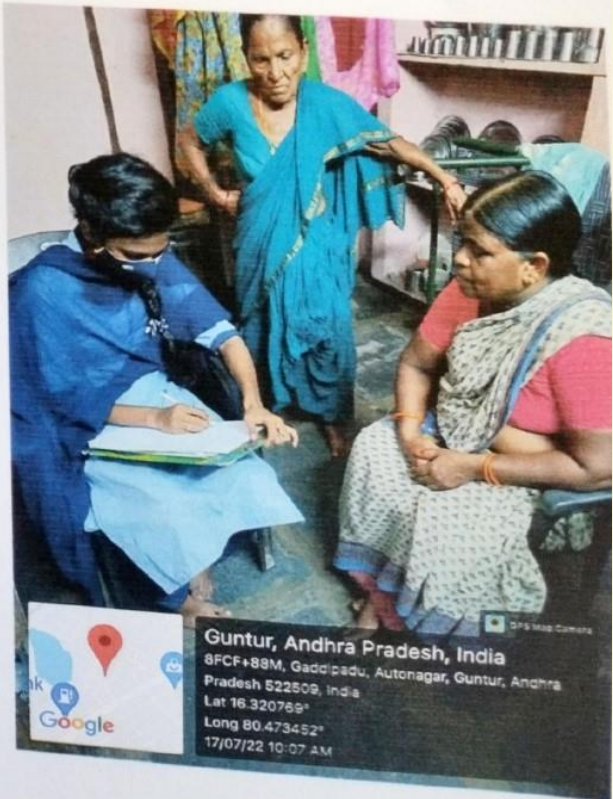
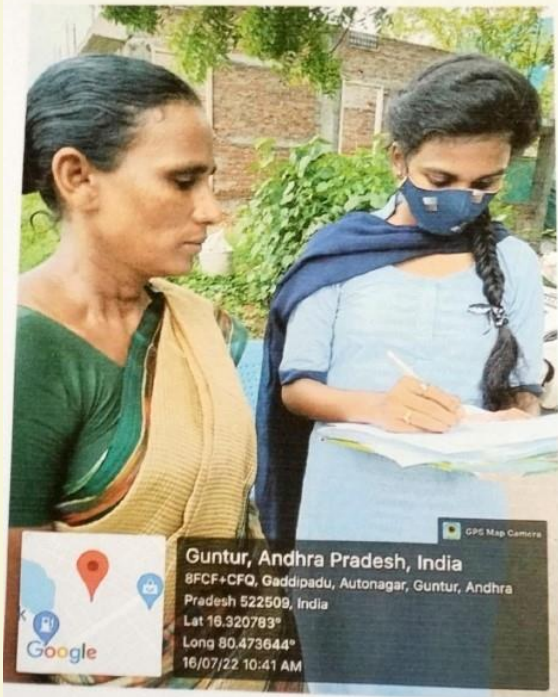
2.Objectives

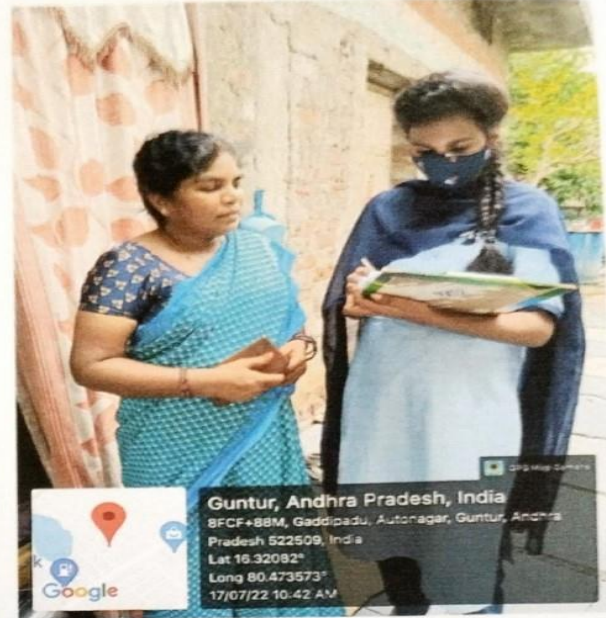
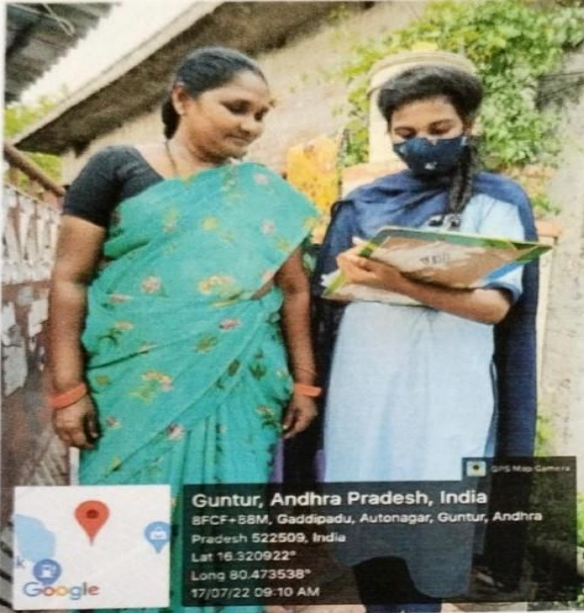
Community Service project should be an integral part of the curriculum.

The Specific Objectives are:

- To sensitize the students to the living conditions of the people who are around them.
- To help Students to realize the Stark realities of the Society.
- To make Students Socially responsible Citizens who are sensitive to the needs of the disadvantaged sections.
- To help Students to initiate developmental activities in the Community in coordination with Public and Government authorities.
- To develop a Holistic life perspective among the students by making them study culture, tradition, life styles, resources utilization, wastages and its management, social problems, public administration system and the role and responsibilities of different persons across different social systems







ST. ANN'S COLLEGE FOR WOMEN

GORANTLA, GUNTUR – 35.

STUDENT'S DECLARATION

I **PALISSETTY KEERTHI** a student of B.Sc – M.P.Cs Program, Reg. No. **Y223158093** of the Department of **PHYSICS**, **St. Ann's College for Women**, do hereby declare that, I have completed the mandatory Community Service Project from **01-05-2023** to **30-06-2023** in **GORANTLA, GUNTUR (Mandal), Guntur (District)** under the Faculty Guideship of **Miss . N. SRI HARIKA**, Lecturer in Department of Physics in **St. Ann's College for Women, Gorantla, Guntur.**

P. Keerthi
Signature and Date

N. Sri Harika
01/09/23
Faculty Guide :

Lecturer Incharge
Department of Physics
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

C. Parvathi
Head of the Department :

Head of Dept. of Physics
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

D. C. J.
Principal

PRINCIPAL
St. Ann's College for Women
GORANTLA, Guntur-522 035



Learning Outcomes:

- To know the ways of Transforming the Society through systematic programme Implementation.
- To enable the students to engage in the development of Community.
- To plan activities based on the Focused groups.

ST. ANN' S COLLEGE FOR WOMEN
GORANTLA, GUNTUR - 35.

STUDENT' S DECLARATION

I SOMA VEDA PHANI SRI a student of **II Year BSc - MPCs** Program,
Reg. No.Y213158137 of the Department of **COMPUTER SCIENCE** ,
St. Ann' s College for Women, do hereby declare that, I have completed the mandatory
Short-term internship from **MAY To JULY**, in **SALES FORCE** in virtua I manner
under the Faculty guide-ship of Ms.P.ANITHA, MCA. Lecturer of Computers in
St. Ann' s College for Women, Gorantla, Guntur.

S.Vedaphani Sri (01-9-23)
Signature and Date

Faculty Guide **P. Anitha (01-09-2023)**
Lecturer Incharge
Department of Computer Science
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

Head of the Department : **D.V.C.V**
Head of Dept. of Computer Science
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

PRINCIPAL
St. Ann's College for Women
GORANTLA, GUNTUR-522 035

CERTIFICATE OF COMPLETION

September 04, 2023

Soma Veda Phani Sri

**Salesforce Developer Virtual
Internship**

During the 8 Weeks period of Virtual Internship (**May-July 2023**),
Soma Veda Phani Sri has completed the following Salesforce
Trailhead modules

Salesforce Fundamentals
Organizational Setup
Relationship & Process Automation
Types Of Flows & Security
Apex, Testing & Debugging
VS Code Setup & CLI Setup
Lightning Web Components (LWC) & API

Developer Super Set

Certificate ID: SISFVIPAD2022-64004 | Verify this certificate @ https://smartinternz.com/internships/salesforce_certificates/fb9d57756d9e20bbb92bec513da68884

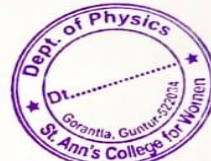
Shri Buddha Chandraseker
Chief Coordinating Officer (CCO),
NEAT Cell-AICTE

Mr Amarender Katkam
Founder & CEO, TheSmartBridge &
SmartInternz

Official Certification

This is to certify that VALLERU NAGA LAKSHMI Reg. No. Y203158167 has completed her Internship in CAMPUS GLUES on Python under my supervision as a part of partial fulfillment of the requirement for the Degree of Bachelor Of Science in the Department of PHYSICS, St. Ann's College For Women, Gorantla.

This is accepted for evaluation.



(Signatory with Date and Seal)

Endorsements

N. Sri Harika 11/07/23
Faculty Guide

Lecturer Incharge
Department of Physics
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

Ch. Rama Devi
Head of the Department 11/7/22

Head of Dept. of Physics
St. Ann's College for Women
GORANTLA, GUNTUR-522034.

Labelled by
ICSM
12/17

P
Principal
PRINCIPAL
St. Ann's College for Women
GORANTLA, GUNTUR-522 035



CAMPUS GLUES

Software Training & Development Centre

5/14, Brodipet, Guntur

Reg No: AP-07-58-006-03167742



Semester Internship Certificate

This is to certify that Mr. / Mrs. Valleru. Nagalakshmi

Register. No. Y203158168 of

St, Anns College for Women Guntur,

has successfully completed semester Internship program on

Python CAMPUSGLUES (Software Training & Development),

from 5th April 2023 to 25th June 2023

The overall performance of the Intern during his / her Internship is found Satisfactory.

CENTER MANAGER

GROUP DISCUSSION



GROUP DISCUSSION: Group Discussion brought out the skills of the students. Enthusiastic students enthralled the audience with their presentations. It was conducted for the I, & II year students on 22th June, 2023. Some mind blowing overflow of wit and intelligence of young minds.

List of the Participants

Sl. No.	GROUP	NAME OF THE PARTICIPANTS	TOPIC NAME
1	I	B. Remya Ch. Sasi Rekha Sd. Zainab Anjum M. Pravallika	Nano technology
2	II	S. Veda Phani Sri P. Keerthi B. Sravanthi P. Renuka	Superconductivity
3	III	N. Sruthi V. Geethika K. Amulya P. Triveni	Wave particle duality
4	IV	B. Vasavi J. Naga Malleswari B. Lavanya A. Naga Srivalli	Solar Energy

WINNERS and RUNNERS are as follows:

WINNERS: Group-II.

RUNNERS: Group-I.



GROUPDISCUSSION ON NANOMATERIALS



GROUPDISCUSSION ON SUPERCONDUCTIVITY

Poster and Model Presentations

REPORT ON POSTER PRESENTATION

To create interest on subject and to improve logical thinking among students Poster Presentation competition was conducted for II year students with different topics like Digital India, Physics in Everyday Life, Aeroplanes, Bio Eye Laser Application, Ultrasonics . Eight students formed as five groups were participated actively in the competition. With their intense and intellectual presentation V. Pooja & V. Prasanna stood in 1st position and B. Supraja & M.S ai Bhavani stood in 2nd position.

List of the Participants

Sl. No.	GROUP	NAME OF THE PARTICIPANTS	TOPIC NAME
1	Group-A	K. Sai sree M. Madhavi	Digital India
2	Group-B	V. Pooja	Physics in Everyday Life
3	Group-C	V. Prasanna	Aeroplanes
4	Group-D	B. Supraja M. Sai Bhavani	Bio Eye Laser Application
5	Group-E	M. Triveni T. Priyanka	Ultrasonics

WINNERS: V. Pooja & V. Prasanna

RUNNERS: B. Supraja & M. Sai Bhavani



Poster Presentation on applications of Physics in daily Life by V. Pooja II MPCs



Creative abilities of the students were enhanced with their participation in the project work. Project launching brought out the skills and intelligence of young minds. This event is the main attraction of the whole program. Students of final and second year presented the interesting topics such as Wind energy, Earthquake alarm, Homemade projector, Laser and water security alarm, Automatic charger, volcano and water indicator alarm.

List of the Participants

Sl. No.	NAME OF THE STUDENTS	TOPIC NAME
1	Ch. Ramya Sree D. Niharika	Wind energy
2	Sk. Sumayya Fathima D. Yamuna	Earthquake alarm
3	S. Lakshmi Prasanna J. Pavani	Homemade projector
4	B. Sireesha Bai M. Naga Jyothi	Laser and water security alarm
5	G. Alekhya K. Sushma	Automatic charger
6	M. Bharathi U. Bhargavi	Volcano
7	R. Samyuktha V. Triveni	Water indicator alarm



Project on Water Alarm



Project on Home made Projector



Project on Earthquake Alarm

Poster presentation brought out the skills of the students. Enthusiastic students enthralled the audience with their presentations. It was conducted for the I, II & III years on 29th January 2019. Some mind blowing overflow of wit and intelligence of young minds.

List of the Participants

S. No.	NAME OF THE PARTICIPANT	TOPIC NAME
1	A. Preethi B. Manasa	Rainbow & Thunders
2	Sk. Sumayya Fathima D. Yamuna	Solar energy
3	P. Yamini D. Sireesha	Dynamic Lift
4	Ch. Bhargavi T. Aswini	Theory of Relativity

WINNERS: A. Preethi

B. Manasa

RUNNERS: Sk. Sumayya Fathima

D. Yamuna



Poster Presentation on Rainbow and Thunder by A. Preethi & B. Manasa



Poster Presentation on Solar Energy by Sk. Sumayya Fathima & D. Yamuna



Poster Presentation on Dynamic Lift



Poster Presentation on Theory of relativity

WORKSHOP



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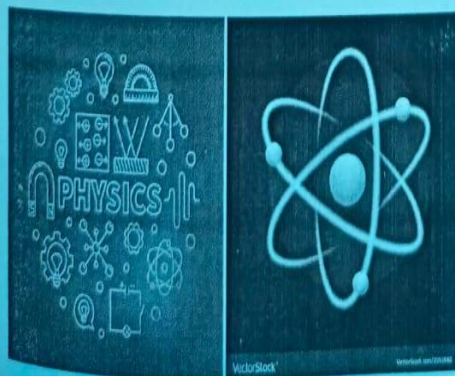
ONE DAY WORKSHOP ON PROGRESS IN PHYSICS

ORGANISED BY

DEPARTMENT OF PHYSICS

On
03rd, February, 2020

VENUE:
ST. ANN'S COLLEGE FOR
WOMEN
Seminar Hall



MOTTO:

EDUCATE, ENRICH, EMPOWER

About the College :

St. Ann's college for women was established in 1997 to uplift the rural women, impart intellect and spiritual integrity into the young lives and serve them for overall development. It is affiliated to Acharya Nagarjuna University and ever since its inception it has been emerging as a universal cosmopolitan and prestigious college in Guntur.

Initially the college had only B.Sc (M.B.C), B. Sc (M.P.Cs) and B.Com (General) courses. In 1998, B.C.A course & B.Sc (M.S.Cs) were introduced. Keeping in pace with the emerging needs of the society, additional course of B.Com (Res) was added in 1999. Seeing the aptitude for research in Biology, the courses were again streamlined in 2003 with the introduction of Biotechnology (B.B.C). To bridge the gap of previous value based education and the present day job oriented education, a Post Graduate course of M.C.A was installed into College academics in 2003.

During the Academic year 2007-2008,

to be in par with the professionalism, M.B.A course was introduced and the college grew to the heights of excellence in educational ladder and thus reached the status of Post Graduate College.

In the present day of Commercialization of Education., though the college is encircled with many corporate colleges, still it has a strength of 900 students and 35 experienced, competent teaching Staff and 10 non teaching Staff, both at UG and PG levels. As the college is away from hustle & bustle of City, a serene and calm environment prevails in the campus.

About the Department:

The department of Physics was established in the year 1997 with B.Sc Mathematics, Physics and computer science with intake 30 students. Later it was enhanced to 50 students as intake in the academic year 2013. The course B.Sc Mathematics, Physics and Chemistry was introduced in the academic year 2003-2004 with intake of 60 students. In the academic year 2019-2020 additional section Mathematics, Physics and Computer Science with intake 50 students

has granted by APSICHE, affiliated to Acharya Nagarjuna University.

The Department has dedicated, experienced and well qualified faculty members who continually update the knowledge on global trends. Teaching is a noble profession that shapes the character, caliber and future of an individual to develop a broad, deep and rigorous knowledge of the quantitative problems that govern the natural world. In this connection, the department of physics organizes various curricular and co-curricular activities like seminars workshops, quiz and PowerPoint presentation etc.

Objectives:

1. To make students aware of progress in physics before 20th century and after.
2. To understand Physics emerged from the scientific revolution of the 17th century, grew rapidly in the 19th Century then was transformed by a series of discoveries in the 20th century.
3. To provide the knowledge of how physics has been emerging in space, technology and industry etc.

Major Topics to be covered:

1. Physics before 20th Century.
2. Physics after 20th Century.
3. The way Physics has been developing and emerging in research and industry.
4. Revolutionary changes in technology throughout the world based on research in Physics.

Resource Person:

1. Mr.T.Bala Narendra Prasad
Professor, Department of Physics,
JKC College, Guntur.

Registration Fee Details:

Registration is completely free of cost.

Who can register

Students Only

Chief Patron:

Rev. Dr. Sr. Fatima Rani. P
B.Sc., B.Ed., MA(Litt.), M. Phill., Ph.D.
Principle & Correspondent
St. Ann's College for Women.

Workshop Convener:

Mr. Ch.Rama Rao
HOD, Department of Physics,
St. Ann's College for Women.

Organizing Committee:

Mrs. K. Sirisha
Lecturer,
Department of Physics.

Students committee:

1. B.Sireesha Bai(III MPCs)
2. D.Priyanka(III MPCs)
3. T.Aswini(III MPC)
4. G.Manu Sri(II MPCs)
5. K. Pavani Lakshmi(MPCs)
6. Ch.Prema Kumari(II MPC)
7. K.Swetha(I MPCs)
8. D.Alekhyia(I MPCs)
9. M.Ramya Sri(I MPC)

*"We Request the Honor of your
Presence"*

The effective presentation of Mr. T. Bala Narendra Prasad, Professor, Dept of Physics, JKC College, Guntur, attracted the attention of the students on the topic "Progress in Physics".



Lecture on Progress in Physics by Mr. T. Bala Narendra Prasad Garu



ST. ANN'S COLLEGE FOR WOMEN
GORANTLA, GUNTUR-522034.

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Mr./Mrs./Miss C. Leelavathi
of III - MPCs has participated in the One Day Workshop
on "PROGRESS IN PHYSICS" organized by the Department of Physics on **03rd,
February, 2020**, held at Seminar Hall, St. Ann's College For Women.

C. Leelavathi
Convener

D. K.
Dr. Sr. Fathima Rani. P
Principal
PRINCIPAL
St. Ann's College for Women
Gorantla, Guntur-522034.



ST. ANN'S COLLEGE FOR WOMEN
GORANTLA, GUNTUR-522034.

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Mr./Mrs./Miss D. Yamuna
of II - MPCs has participated in the One Day Workshop
on "PROGRESS IN PHYSICS" organized by the Department of Physics on **03rd,
February, 2020**, held at Seminar Hall, St. Ann's College For Women.

C. Leelavathi
Convener

D. K.
Dr. Sr. Fathima Rani. P
Principal
St. Ann's College for Women
Gorantla, Guntur-522034.

Participative Learning

PRACTICAL DEMONSTRATION

Practical demonstration is the performance of an activity under the direct observation of a designated examiner for the purpose of establishing that the performer is sufficiently proficient in a practical skill to meet a specified standard of competence or other objective criterion.



Demonstrating the Experiment



Experiment On Transistor Characteristics



Quiz competition was conducted to encourage the students to showcase their knowledge. A large number of students actively took part in the competition held on 22nd, June ,2023. In quiz competition overall 24 students are participated. The participants list given below:Firstly, a preliminary round has been conducted to select 16 students out of 24 for further rounds. In preliminary round, a rapid fire test comprising of 10 questions 5 from GK and 5 from physics was conducted. Based on the marks obtained in the test 16 students got qualified for further rounds. These 16 students have been divided into 4 teams based on lottery process.

S.No	Reg. no	Name of the student	Event	Topic	Year and Group
TEAM - A					
1	Y213158073	Sadhika	Quiz	PHY and GK	II Year , MPC
2	Y223158105	Sravanthi	Quiz	PHY and GK	I Year , MPCs
3	Y223158095	Renuka	Quiz	PHY and GK	I Year , MPCs
4	Y223158106	Zinab Anjum	Quiz	PHY and GK	I Year , MPCs
TEAM - B					
1	Y213158055	Srivalli	Quiz	PHY and GK	II Year , MPC
2	Y213158082	Pallavi	Quiz	PHY and GK	II Year , MPCs
3	Y213158095	Akanksha	Quiz	PHY and GK	II Year , MPCs
4	Y213158081	Blessena	Quiz	PHY and GK	II Year , MPCs
TEAM - C					
1	Y213158138	Sanjana	Quiz	PHY and GK	II Year , MPCs
2	Y223158072	Amulya	Quiz	PHY and GK	I Year , MPCs
3	Y223158061	Lavanya	Quiz	PHY and GK	I Year , MPCs
4	Y213158130	Lalitha	Quiz	PHY and GK	II Year , MPCs
TEAM - D					
1	Y213158070	Triveni	Quiz	PHY and GK	II Year , MPC
2	Y213158066	Lavanya	Quiz	PHY and GK	II Year , MPC
3	Y223158081	Pravallika	Quiz	PHY and GK	I Year , MPCs
4	Y213158102	Madhavi	Quiz	PHY and GK	II Year , MPCs



QUIZ A ,B, C & D TEAMS



Quiz competition was held on 20th April, 2022 for the I, II & III year students. It was a tough competition among five groups in four rounds.

P. Ooha Suma & group stood in the first position and K. Nagulbi & group stood in the second position.

The participants list given below:

GROUP	Name of the Students	Topic
A	K. Nagulbi Ch. Anusha A. Sunitha K. Manisha	GK, Physics
B	M. Geethika N. Mery S. Nissi K. Krupa	GK, Physics
C	P. Ooha Suma B. Vijaya D. Srija I. Navya	GK, Physics
D	S. Kavya Sri T. Mounika V. Anitha V. Sudha	GK, Physics





QUIZ TEAMS A,B,C and D



Quiz competition was held on 4th January 2019 for the I, II & III year students. It was a tough competition among four groups in four rounds.

Sr. K. Nirosha Mary & group stood in the first position and B. Varalakshmi & group stood in the second position.

The participants list given below:

Group	Name of the Student	Topic
A	G. Durga D. Usha I. Anusha Ch. Vasavi	GK, Physics
B	Sr. K. Nirosha D. Sravani B. Triveni M. Lalitha	GK, Physics
C	B. Varalakshmi J. Divyavani D. Mounika A. Madhavi	GK, Physics
D	K. Kranthi V. Tejaswi P. Jyothi Sk. Reshma	GK, Physics

WINNERS : Group-B

RUNNERS : Group-C





JAM Competition :

To improve the concentration and sharpness of mind, JAM competition was held on 20th April, 2022 more than 20 students participated in this competition.

Sr. Jos Mary, P. Kiran Bedi and T. Manasa of III MPCs stood in the first position and S. Sanjana of I MPCs stood in the second position.

The participants list given below:

Sl. No.	Name of the Student	Topic
1	A. Sneha Sadhana	Newton's I Law
2	K. Swapna	Gravity
3	Sr. Jos Mary	Law Of Conservation of Energy
4	V. Anitha	Types Of Forces
5	T. Gowthami	Impulse
6	S. Sanjana	Collisions
7	P. Kiran Bedi	Gravity
8	K. Sowjanya	Newton's III Law
9	T. Manasa	Types Of Forces
10	D. Akanksha	Law Of Conservation Of Energy

WINNERS: Sr. Jos Mary,
P. Kiran Bedi and
T. Manasa

RUNNERS: S. Sanjana



Sr. Jos Mary and T. Manasa participating in JAM Competition



To improve the concentration and sharpness of mind, JAM competition was held on 4 th, January, 2019 more than 30 students participated in this competition.

Sr. B. Pavani and K. Kalyani of III MPCs stood in the first position and T. Yamuna of II MPCs stood in the second position.

The participants list given below:

Sl.NO.	Name of the Student	Topic
1	D. Usha	Superconductivity
2	V. Pooja	I Law Of Thermodynamics
3	K. Kalyani	Raman Effect
4	S. Ramya	Gauss's Law
5	T. Yamuna	Heisenberg Uncertainty Principle
6	P. Nayomi	II Law Of Thermodynamics
7	Sr. B. Pavani	DE Broglie Wavelength
8	N. Alekhya	Zeeman Effect

WINNERS : Sr.B.Pavani

RUNNERS : V. Pooja



Sr. B. Pavani won in JAM Competition



Power Point presentation brought out the skills of the students. Enthusiastic students enthralled the audience with their presentations. It was conducted for the I, & II year students on 26th June, 2023. Some mind blowing overflow of wit and intelligence of young minds.

List of the Participants

Sl.No.	GROUP	NAME OF THE PARTICIPANTS	TOPIC NAME
1	I	Ch.Vaishnavi N.Sruthi	Renewable Energy
2	II	Ch.Vijaya Lakshmi G.Prasanna	Nano Materials
3	III	K.Sowjanya V.Koteswari	Black Holes
4	IV	R.Sravanthi Amulya	Black Holes
5	V	D.Akanksha A.Pallavi	Black Holes



PPT Presentation on Black Holes by D. Akanksha, A. Pallavi

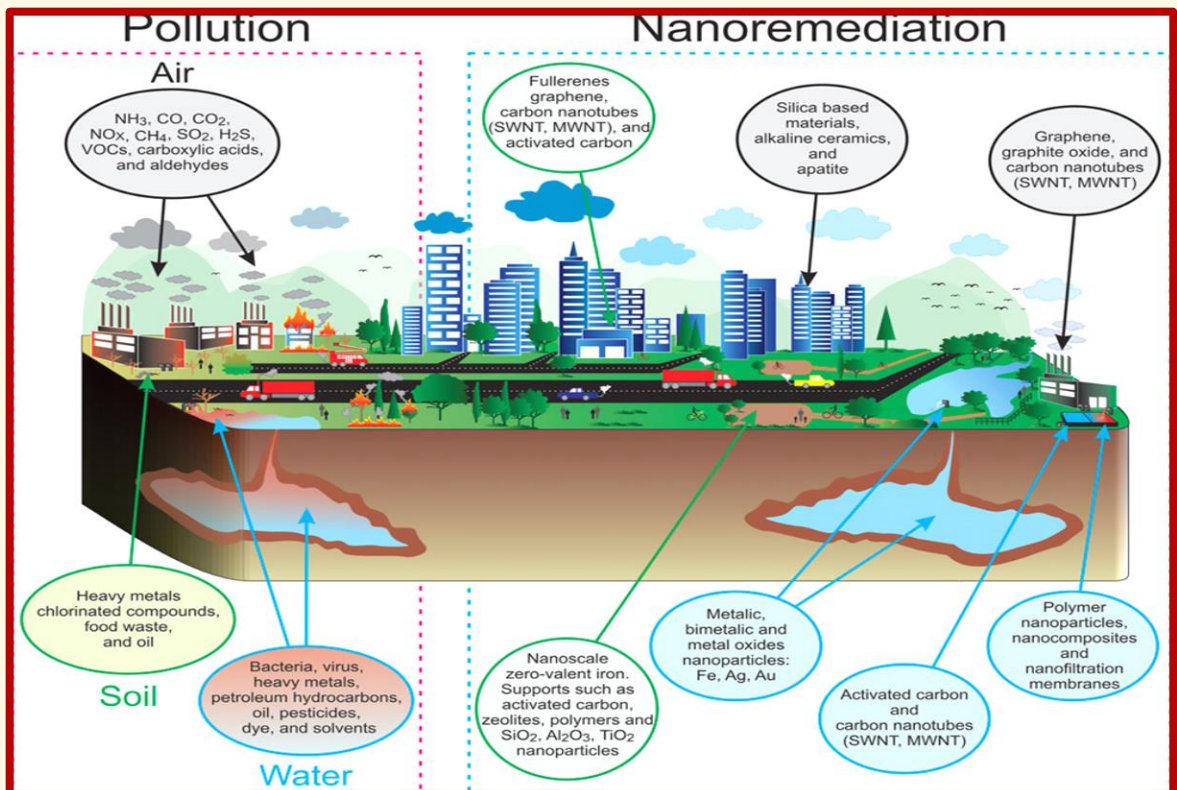


PPT Presentation on Black Holes by Amulya and Sravanthi

PPT



Presentation on Black Holes by B. Remya,



PPT Presentation on NANO MATERIALS by Ch. Vijaya Lakshmi G. Prasanna

To bring out the hidden talents and presentation skills of the students PPT was conducted for the II & III year students. Innovative abilities of the Students are sharpened in their presentations with interesting topics such as Networking, Fiber Optics, Terminal Velocity, Climate Change, Touch screens and Li-Fi Technology. 6 students from the 2nd & 3rd year presented powerfully and won the hearts of the audience. In this D. Vasundhara of III MPCs bagged 1st position and G. Alekhya of II MPCs bagged 2nd position.

List of the Participants

Sl. No.	NAME OF THE PARTICIPANTS	TOPIC NAME
1	M. Triveni	Li-Fi Technology
2	D. Vasundhara	Networking
3	J.S. Krishna Priya	Fiber Optics
4	K. Kranthi	Terminal Velocity
5	G. Alekhya	Climate Change
6	K. Sai Sri	Touch screens

WINNERS: D. Vasundhara

RUNNERS: G. Alekhya



PPT on Li-FI Technology Presentation



PPT on Networking & Fiber optic Applications Presentation



PPT Presentation by K. Unnathi & K. Josephus Alex Libnah



Special lecture



A SPECIAL LECTURE ON LIQUID CRYSTALS AND IMAGE PROCESSING

The effective Presentation of Dr.M.Ratna Raju, lecturer in Physics, Department of Physics, A.C. College, Guntur., attracted the attention of the students on the topic "Liquid Crystals and Image Processing" on 29-01-2019.



Special lecture by Dr. M. Ratna Raju



PPT Presentation on LIQUID CRYSTALS AND IMAGE PROSESSING



Students of MPCs attended lecture

SEMINAR



ST. ANN'S COLLEGE FOR WOMEN

Amaravathi Road, Gorantla,
Guntur-522034, AP.

(Affiliated to Acharya Nagarjuna University,
Recognized Under Section 2(f) of UGC Act
1956-New Delhi).

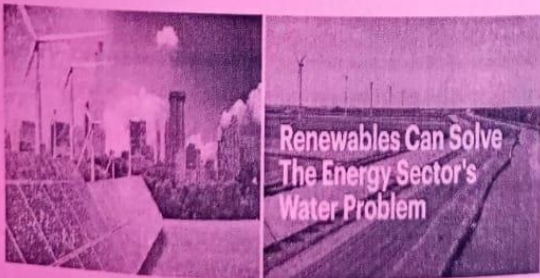
SEMINAR ON "RENEWABLE ENERGY"

ORGANISED BY

DEPARTMENT OF PHYSICS

On
28th, April, 2022

VENUE:
ST. ANN'S COLLEGE FOR
WOMEN
Seminar Hall



MOTTO:
EDUCATE, ENRICH, EMPOWER

About the College :

St. Ann's college for women was established in 1997 to uplift the rural women, impart intellect and spiritual integrity into the young lives and serve them for overall development. It is affiliated to Acharya Nagarjuna University and ever since its inception it has been emerging as a universal cosmopolitan and prestigious college in Guntur.

Initially the college had only B.Sc (M.B.C), B. Sc (M.P.Cs) and B.Com (General) courses. In 1998, B.C.A course & B.Sc (M.S.Cs) were introduced. Keeping in pace with the emerging needs of the society, additional course of B.Com (Res) was added in 1999. Seeing the aptitude for research in Biology, the courses were again streamlined in 2003 with the introduction of Biotechnology (B.B.C). To bridge the gap of previous value based education and the present day job oriented education, a Post Graduate course of M.C.A was installed into College academics in 2003.

During the Academic year 2007-2008,

to be in par with the professionalism, M.B.A course was introduced and the college grew to the heights of excellence in educational ladder and thus reached the status of Post Graduate College.

In the present day of Commercialization of Education., though the college is encircled with many corporate colleges, still it has a strength of 900 students and 35 experienced, competent teaching Staff and 10 non teaching Staff, both at UG and PG levels. As the college is away from hustle & bustle of City, a serene and calm environment prevails in the campus.

About the Department:

The department of Physics was established in the year 1997 with B.Sc Mathematics, Physics and computer science with intake 30 students. Later it was enhanced to 50 students as intake in the academic year 2013. The course B.Sc Mathematics, Physics and Chemistry was introduced in the academic year 2003-2004 with intake of 60 students. In the academic year 2019-2020 additional section Mathematics, Physics and Computer Science with intake 50 students

has granted by APSICHE, affiliated to Acharya Nagarjuna University.

The Department has dedicated, experienced and well qualified faculty members who continually update the knowledge on global trends. Teaching is a noble profession that shapes the character, caliber and future of an individual to develop a broad, deep and rigorous knowledge of the quantitative problems that govern the natural world. In this connection, the department of physics organizes various curricular and co-curricular activities like seminars workshops, quiz and PowerPoint presentation etc.

Objectives:

1. Generating energy that produces no greenhouse gas emissions from fossil fuels and reduces some types of air pollution.
2. Diversifying energy supply and reducing dependence on imported fuels.
3. Creating economic development and jobs in manufacturing, installation, and more.

Major Topics to be covered:

- 1.Types of renewable energy sources.
- 2.Application of Solar Energy in daily life to generate power.
- 3.Scope of Renewable Energy.

Resource Person:

Dr. P. Michael Vinay Teja,
Associate professor, Department of
Physics, A.C. College, Guntur.

Registration Fee Details:

Registration is completely free of cost.

Who can register

Students Only

Chief Patron:

Rev. Dr. Sr. Fatima Rani. P
B.Sc., B.Ed., MA(Litt.), M. Phill., Ph.D.
Principle & Correspondent
St. Ann's College for Women.

Seminar Convener:

Mr. Ch.Rama Rao
HOD, Department of Physics,
St. Ann's College for Women.

Organizing Committee:

Miss. G. Santha Kumari
Lecturer,
Department of Physics.

Students committee:

- 1.A.Sravani (III MPCs)
2. N. Asha (III MPCs)
3. G.Usha Rani(III MPC)
4. B.Remya (III MPCs)
5. S.Veda Phani Sri (III MPCs)
6. Sd.Suhana (III MPC)
7. B.Sravanthi (II MPCs)
8. P. Divya (II MPCs)

*"We Request the Honor of your
Presence"*

The effective Presentation of Dr. P. Michael Vinay Teja, Associate professor, Department of Physics, A.C. College, Guntur, attracted the attention of the students on the topic "Renewable Energy" on 28th April, 2022.



Seminar on renewable energy by Dr. P. Michael Vinay Teja





ST.ANN'S COLLEGE FOR WOMEN

GORANTLA, GUNTUR-522034.

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Mr./Mrs./Miss P Anjel
of III - MPCs has participated in the Seminar on
"RENEWABLE ENERGY" organized by the Department of Physics on 28th April, 2022 held
at Seminar Hall, St. Ann's College For Women.

Ch. Anjali
Convener

Dr. Sr. Fathima Rani. P
Dr. Sr. Fathima Rani. P
Principal

PRINCIPAL
St. Ann's College for Women,
Gorantla, Guntur-522 034.



ST.ANN'S COLLEGE FOR WOMEN

GORANTLA, GUNTUR-522034.

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Mr./Mrs./Miss Y. Bhargavi
of III - MPCs has participated in the Seminar on
"RENEWABLE ENERGY" organized by the Department of Physics on 28th April, 2022 held
at Seminar Hall, St. Ann's College For Women.

Ch. Anjali
Convener

Dr. Sr. Fathima Rani. P
Dr. Sr. Fathima Rani. P
Principal

PRINCIPAL
St. Ann's College for Women,
Gorantla, Guntur-522 034.

Problem Solving

ASSIGNMENT

The department of Physics as assigned semester-wise assignments to the students of MPCs and MPC so that to improve the writing skills, to enhance practical skills and cognitive abilities in students. The department also encourage students to process course reference books more deeply for writing assignments. This helps students to improve their comprehensive learning of course subjects.

SEMESTERS- I,III, V

SNo	Program	Semester	Course	Incharge Lecturer	Assignment Topic	No. Of students submitted
1	B.Sc	I	Mechanics, Waves And Oscillations	Ch. Rama Rao	Mechanics, Waves & Oscillations- Problems	51
2	II B.Sc	III	Heat and Thermodynamics	G.Santha kumari	1.Isothermal and Adiabatic process 2. Carnot's Engine and Efficiency 3. Second law of Thermodynamics, Change in Entropy 4. Entropy, Significance of Entropy 5. Change of Entropy, Entropy 6. Thermodynamics 7. Entropy and disorder	84
3	III B.Sc	V	Low Temperature Physics & Refrigeration	Ch.Rama Rao	Joule Thomson Effect, Classification of Refrigerants, Gas Thermometer	96
4	III B.Sc	V	Solar Energy and Applications	A.Preethi	1.Spectral Distribution of Solar Radiation 2. Solar Energy and Applications 3. Zenith Angle, Air mass, Difference between Pyrheliometer and Pyranometer 4. Pyrometer- Working Principle and Direct Radiation Measurement	96

					5. Pyrheliometer - Working Principle by Diffused Radiation Measurement	
					6. Types of Solar Thermal Collectors	
					7. Flat Plate Collector	
					8. Solar Cookers and Solar Distillation	
S.N O	Program	Semester	Course	Incharge lecturer	Topic	No. of students submitted
1	I Bsc	II	Wave Optics	N. Sri Harika	Wave Optics- Problems	49
2	II Bsc	IV	Electricity, Magnetism & Electronics	Ch. Rama Rao	Electricity, Magnetism & Electronics- Problems	84
3	III Bsc	IV	Modern Physics	N. Sri Harika	Modern Physics-Problems	84
4	III B. Sc	VI	Long-term Internship			

ST. ANN'S COLLEGE FOR WOMEN

GORANTLA,
GUNTUR – 35.

DEPARTMENT OF PHYSICS

ASSIGNMENT

SEMESTER-1 PAPER- 1.

NAME OF THE STUDENT : K.RITHIKA

COURSE : BSC (MPCS)

REG NO : Y223158076

St. Ann's College for
Women

Gorantla, Guntur

Semester-1, paper-1

Ist-B.Sc

Group-Mpc's

physics Assignment

Submitted to:-

Ch. Rama Rao (Sir)
(Head of the Department)

Submitted by:-

K. Rithika

Ist Mpc's

Roll. NO - 20

1. A rocket burns 0.05 kg of fuel per second and ejects the burnt gases with a velocity of 500 m/s. Find the reaction.

$$\begin{aligned}\text{Sol: Reaction} &= \frac{dm}{dt} \times v_{\text{rel}} \\ &= 0.05 \times 5000 \\ &= 250 \text{ N}\end{aligned}$$

2. The kinetic energy of metal disc rotating at a constant speed of 5 revolutions per second is 100 joules. Find the angular momentum of the disc.

$$\text{Sol: } L = I\omega$$

$$\omega = 2\pi n$$

$$n = 2 \times 3.14 \times 5$$

$$n = 31.4 \text{ sec}^{-1}$$

$$KE = \frac{1}{2} I\omega^2$$

$$I = \left[\frac{2KE}{\omega^2} \right]$$

$$I = \frac{2 \times 100}{(31.4)^2}$$

$$I = 0.2028 \text{ kg-m}^2$$

$$L = 0.2028 \times 31.4$$

$$L = 6.368 \text{ kg-m}^2 \text{ sec}^{-1}$$

3. If the earth be one-half of its present distance from the Sun, what will be the number of days in a year?

Sol:- According to Kepler's law $\tau^2 \propto a^3$

where τ is the time period

and

$2a$ is the major axis of the orbital of the ellipse.

$$\frac{\tau_1^2}{\tau_2^2} = \frac{a_1^3}{a_2^3}$$

Here $\tau_1 = 365$ days, $a_1 = 2$

$\tau_2 = ?$, $a_2 = \frac{1}{2} \times 2$

$$\left(\frac{365}{\tau_2}\right)^2 = \left(\frac{2}{1/2}\right)^3 = 8$$

$$\tau_2^2 = \frac{(365)^2}{8}$$

$$\tau_2 = 129 \text{ days}$$

4. A rocket ship is 100 metre long on the ground. when it is in flight, its length is 99 meters to an observer on the ground. what is its speed?

Sol:- we know that

$$l = l' \sqrt{1 - \frac{v^2}{c^2}}$$

Here,

$$l' = 100 \times 100$$

$$= 10000 \text{ cm}$$

$$l = 99 \times 100$$

$$= 9900 \text{ cm}$$

$$9900 = 10000 \sqrt{\left(1 - \frac{v^2}{c^2}\right)}$$

$$\frac{99}{100} = \sqrt{\left(1 - \frac{v^2}{c^2}\right)}$$

$$\frac{99 \times 99}{100 \times 100} = 1 - \frac{v^2}{c^2}$$

$$\frac{v^2}{c^2} = 1 - \frac{99 \times 99}{100 \times 100}$$

$$\frac{v^2}{c^2} = \frac{199}{100 \times 100}$$

$$v = c \frac{\sqrt{199}}{100}$$

$$v = 3 \times 10^{10} \frac{\sqrt{199}}{100}$$

$$v = 4.23 \times 10^9 \text{ cm/sec}$$

5. The mean life of a meson is 2×10^{-8} sec. calculate the mean life of a meson moving with a velocity of $0.8c$.

Sol:- we know that

$$\Delta t' = \frac{\Delta t}{\left[1 - \frac{v^2}{c^2}\right]^{1/2}}$$

$$\Delta t' = \frac{2 \times 10^{-8}}{\left[1 - \frac{(0.8c)^2}{c^2}\right]^{1/2}}$$

$$\Delta t' = \frac{2 \times 10^{-8}}{(1 - 0.64)^{1/2}}$$

$$= \frac{2 \times 10^{-8}}{0.6}$$
$$= 3.33 \times 10^{-8} \text{ Sec.}$$

6. At what speed the mass of an object will be double of its value at rest.

Sol: We know that

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$m = 2m_0, \quad 2m_0 = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$\sqrt{1 - \frac{v^2}{c^2}} = \frac{1}{2}$$

$$1 - \frac{v^2}{c^2} = \frac{1}{4}$$

$$\frac{v^2}{c^2} = 1 - \frac{1}{4}$$

$$\frac{v^2}{c^2} = \frac{3}{4}$$

$$v = \sqrt{\left(\frac{3}{4}\right) \times 3 \times 10^{10}} \text{ cm/sec}$$

$$v = 2.6 \times 10^{10} \text{ cm/sec}$$

7. The amplitude of a second pendulum falls to half initial value in 150 sec. calculate the Q-factor.

Sol: We know that

$$a = a_0 e^{-bt}$$

$$\frac{a}{a_0} = e^{-bt}$$

$$\frac{1}{2} = e^{-150b}$$

$$\text{So, } e^{150b} = 2$$

$$150b = \log_e 2$$

$$= 2.303 \log_e 2$$

$$= 2.303 \log_{10} 2$$

$$150b = 0.6932$$

$$b = \left(\frac{0.6932}{150} \right)$$

$$b = 0.00462$$

For second pendulum, $\pi = 2$

$$\omega = 2\pi n$$

$$= \frac{2\pi}{T}$$

$$= \frac{2\pi}{2}$$

$$= \pi$$

$$T = \frac{1}{2b}$$

$$= \frac{1}{0.00924}$$

$$Q = \pi \times \omega$$

$$= \frac{\pi}{0.00924}$$

$$= \frac{3.14}{0.00924}$$

$$Q = 340 \text{ (nearly)}$$

8. A steel wire 50 cm long has mass of 5 gms. It is stretched with a tension of 400 N. Find the frequency of the wire in fundamental mode of vibration.

Sol: $v = \frac{1}{2l} \sqrt{\frac{T}{m}}$

Here $l = 50 \text{ cm} = 0.5 \text{ m}$

$$m = 5 \times 10^{-3} \text{ kg}$$

$$= 10^{-2} \text{ kg}$$

$$v = \frac{1}{2 \times 0.5} \times \sqrt{\frac{400}{10^{-2}}}$$

$$v = \frac{1}{1.0} \sqrt{4000 \times 10^2}$$

$$v = 200 \text{ Hz}$$

9. A piezo electric current crystal is has a thickness 0.002 m. If the velocity of sound wave in crystal is 5750 m/s. calculate the fundamental frequency of crystal.

Sol: $v = \frac{V}{\lambda} = \frac{V}{2t}$

$$v = \frac{5750}{2 \times 0.002}$$

$$v = \frac{5750}{0.004}$$

$$v = 1.4375 \times 10^6 \text{ Hz}$$

$$v = 1.4375 \text{ MHz}$$



CRT TRAINING

ANDHRA PRADESH STATE SKILL DEVELOPMENT CORPORATION (APSSDC)
(Department of Skills Development and Training, Govt of Andhra Pradesh)



Certificate Of Completion

Certified that

Mr./Ms. CHALLA VAISHNAVI

has successfully completed

Online Training Program on *CRT Aptitude* held from
5th Dec 2022 To 14th Dec 2022

D V Rama Koti Reddy
Executive Director
APSSDC

S Satyanarayana, IAS
M.D. & C.E.O
APSSDC

CERT.NO: ESC-Dedicated Slot-5210

ANDHRA PRADESH STATE SKILL DEVELOPMENT CORPORATION (APSSDC)
(Department of Skills Development and Training, Govt of Andhra Pradesh)



Certificate Of Completion

Certified that

Mr./Ms. BALIJEPELLI REMYA

has successfully completed

Online Training Program on *CRT Aptitude* held from
5th Dec 2022 To 14th Dec 2022

D V Rama Koti Reddy
Executive Director
APSSDC

S Satyanarayana, IAS
M.D. & C.E.O
APSSDC

CERT.NO: ESC-Dedicated Slot-5272



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