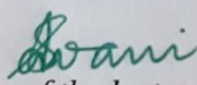


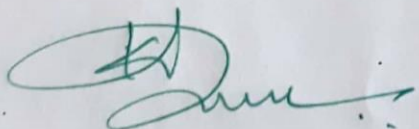
Department of Physics
ANNUAL REPORT 15-16

KSN Government Degree College for Women, Anantapuram
DEPARTMENT OF PHYSICS

ACTION PLAN 15-16

S.NO	NAME OF THE EVENT	TENTATIVE DATES
1	Bridge Course to I YEAR Students	June '15
2	Field Trip to District Science Museum to I YEAR Students	August '15
3	Career Guidance – II & III B.Sc., Students	August '15
4	Student Seminar - Each paper atleast 2 students	October '15
5	Extension Lecture to all the B.Sc., students	October '15
6	Quiz program in Physics – II year Students	November '15
7	Student study Projects	December '15
8	Remedial Coaching for Slow Learners	December '15
9	PG Entrance Exam Coaching	Jan '16
10	National Science Day Celebration	Feb '16
11	Down loaded VIDEOS of the Syllabus related topics	Atleast 2 videos for Each paper


Signature of the lecturer In Charge



Department of Physics
ANNUAL REPORT 15-16

DATE:14-08-2014

Career Guidance

**S. Pavani, Lecturer
in Physics**

By Alumnae- D . Haseena Begum, P. Eswari 2013-15

Activity No:2 Career Guidance

Dated: 15-08-2015

A “ Career Guidance” programme has been organized in the department. The invitees are the Alumni Students of MPCs group who joined RDT professional school and learning Germany.

The members are D. Haseena Begum, P. Eswari, M. Divya Vani, M. Sujatha.

The members talked to the I & II B.Sc students regarding the process to join the professional school. They also told the students how important it was for them to be good at English in the graduation level.

The spoke that the main motto of conducting various activities is to remove stage fear from the students. They also adviced to participate in seminars, peer teachings, NSS, NCC, Red Ribbon Club activities to build up courage among themselves to face the society after graduation.



The alumni interacting with the students



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CamScanner

08-09-15

Student Seminars

Nano Particles

V.Meenakshi(III MPCs)

**S. Pavani,
Lecturer in
Physics**

Department of Physics
ANNUAL REPORT 15-16

STUDENT SEMINAR
DEPARTMENT OF PHYSICS

CLASS : III B.Sc. (MPCs)
DATE : 8/7/2015
NAME OF THE STUDENT : V. Meenakshi
NAME OF THE TOPIC : Physics Paper – IV – NanoMaterials



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CamScanner

Class : III B.Sc. (M.P.Cs) Name : V. Meenakshi
Subject : Physics - IV Date : 8/7/15

Nanoparticles :-

1. These are the particles that have size approximately between 1nm and 100nm.
2. In nanotechnology, a particle is defined as a small object that behaves a whole unit with respect to its transport and properties.
3. They are available in different forms such as clusters, colloids, metal and semiconductor nanoparticles, quantum dots etc.
4. This is typically because nanoparticle have a greater surface area per weight than larger particles.
5. Nanoparticles may exhibit size-related properties, which differ from those observed in bulk materials.



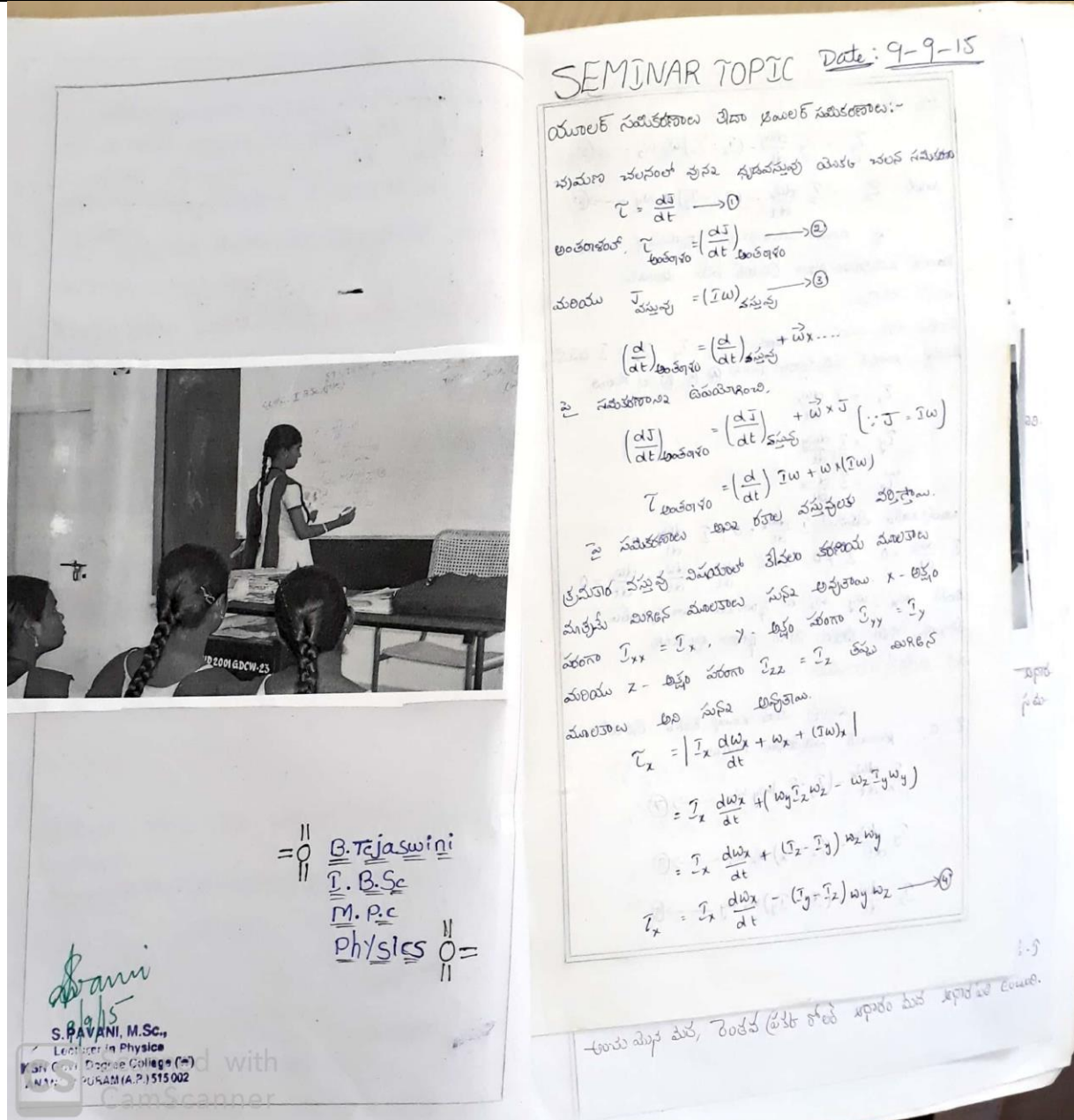
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Department of Physics
ANNUAL REPORT 15-16

09-09-15
Euler Equations

Student Seminars
B.Tejaswini (I MPC)

T. Syamala –
Guest Faculty in
Physics



SEMINAR TOPIC Date: 9-9-15

యూలర్ సమీకరణాలు వీటిని యూలర్ సమీకరణాలు:-

పునరావృత చలనంలో వృత్త స్థిరమవుతుంది యొక్క చలన సమీకరణం

$$\vec{L} = \frac{d\vec{J}}{dt} \rightarrow 0$$

అంతానందు, $\vec{L} = \left(\frac{d\vec{J}}{dt} \right)_{అంతానందు} \rightarrow 0$

మరియు $\vec{J} = (I\omega) \rightarrow 0$

$$\left(\frac{d}{dt} \right)_{అంతానందు} = \left(\frac{d}{dt} \right)_{అంతానందు} + \vec{\omega} \times \dots$$

2. సమీకరణం ఇవ్వబడింది.

$$\left(\frac{d\vec{J}}{dt} \right)_{అంతానందు} = \left(\frac{d\vec{J}}{dt} \right)_{అంతానందు} + \vec{\omega} \times \vec{J} \quad (\because \vec{J} = I\omega)$$

$$\vec{L} = \left(\frac{d}{dt} \right) I\omega + \omega \times (I\omega)$$

3. సమీకరణం ఇది రూపం వస్తువులకు వర్తిస్తుంది.

క్రమంగా వస్తువు వివిధ రకాల వీటిని కలిగి ఉంటుంది మరియు మూలకాలు మార్చుకుంటున్నాయి మరియు సున్నా అవుతుంది $x - \theta$ అక్షం

మరియు $I_{xx} = I_x$, y - అక్షం సున్నా $I_{yy} = I_y$

మరియు z - అక్షం సున్నా $I_{zz} = I_z$ కనుక మూలకం

మూలకాలు అవి సున్నా అవుతుంది.

$$\vec{L}_x = \left[I_x \frac{d\omega_x}{dt} + \omega_x + (I\omega)_x \right]$$

$$= I_x \frac{d\omega_x}{dt} + 4(\omega_y I_{yz} \omega_z - \omega_z I_{yz} \omega_y)$$

$$= I_x \frac{d\omega_x}{dt} + (I_z - I_y) \omega_z \omega_y$$

$$\vec{L}_x = I_x \frac{d\omega_x}{dt} - (I_y - I_z) \omega_y \omega_z \rightarrow 0$$

అందువల్ల మేము, రెండవ ప్రతిభ కోసం ఇప్పుడు మేము ఇప్పుడు కూర్చుంటున్నాము.

B. Tejaswini
T. B. Sc
M. P. C
Physics

S. PAVANI, M.Sc.,
Lecturer in Physics
KSN Government Degree College (W)
ANANTHAPURAM (A.P.) 515 002

Date: 12-9-2015
INSPIRE 2015 EXHIBITION by I MPCs, MPC

S. Pavani,
Lecturer in
Physics

Department of Physics
ANNUAL REPORT 15-16

Students



Students of I B.Sc.,(MPCs & MECs) at the entrance of the Science Exhibition

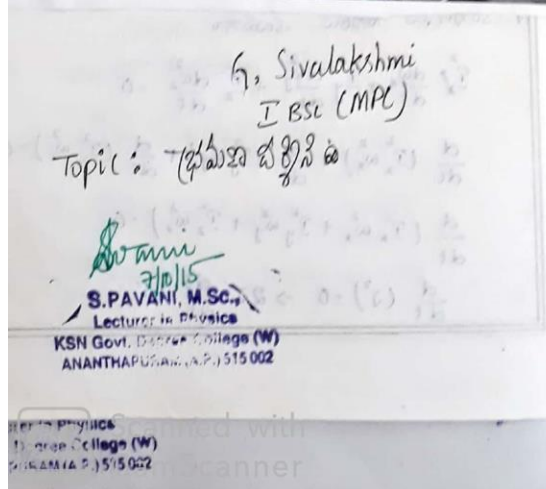


Students listening to the demonstration of the exhibited one



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CamScanner

T. Syamala – Guest
Faculty in Physics

[illegible]

Department of Physics
ANNUAL REPORT 15-16

07-10-15

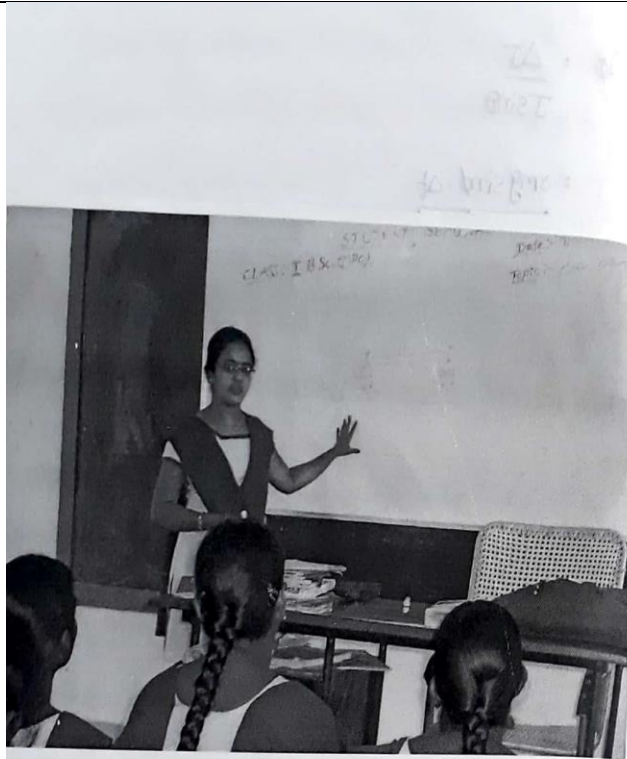
Beams-Classification
MPC)

Student Seminars

H.Lakshmi (I

T. Syamala – Guest

Faculty in Physics



H. Lakshmi
I B.Sc (M.P.C)
physics.

Syami
7/10/15

P. PAVANI, M.Sc.,
Lecturer in Physics
Govt. Degree College (W)
Ananthapuramu (A.P.) 515 002

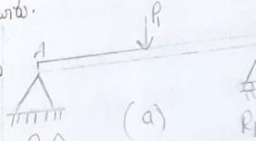
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SEMINAR
TOPIC

దండం అంటే ఏమిటి? దండంలో రకాలను వివరించండి?

దండం :- దీని అర్థానికి బలంగా పనిచేసే బలాలను సహజంగానే
రాక సమీకరణం దండం అని అంటారు.

సాధారణంగా ఈ దండం ఏకగ్రీవ మధ్యస్థ
క్షణ ప్రయోగం, మందలతో కలిగిన ఎ
మీద పాదాన్ని క్షణం అంటారు. ఈ దండం R_d
ను ఇప్పుడు సమీకరణం వివరించాలి
గీతలు.



ఈ దండానికి, క్షణం మధ్య గల భేదం (సమీకరణం) బలం
పని అంటారు. క్షణం మధ్య (సమీకరణం) బలం బలం లోని క్షణం అర్థానికి
అంటారు అంటారు. అది దండం అనే బలం బలం అంటారు.

దండాలను 3 రకాలుగా వర్గీకరిస్తారు.

అవి.

1. సరళ దండం
2. క్రాంతి లోత దండం
3. ముందుకు మార్చుకు వచ్చిన దండం

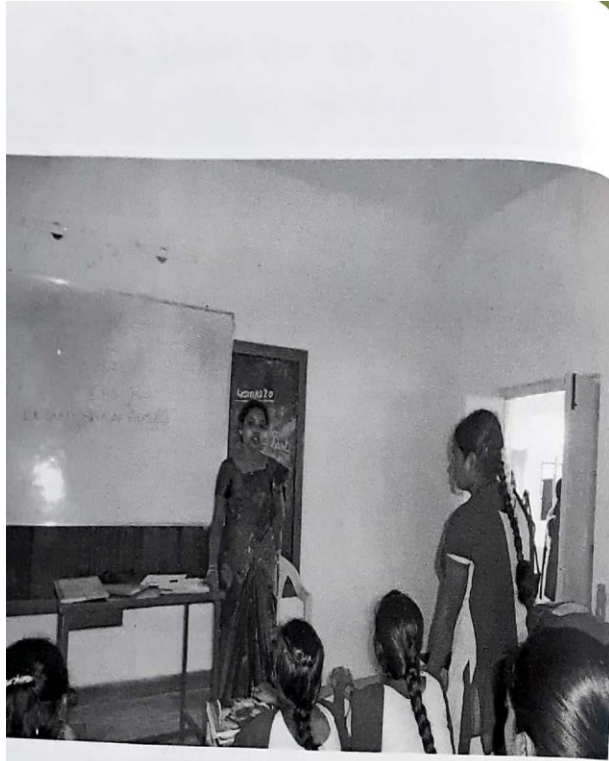
సరళ దండం :- ఇది ముందుకు మార్చుకు వచ్చిన దండం అంటారు. అది (మీద) క
మీద పాదాన్ని క్షణం అంటారు. ఇది దండం అంటారు.

Department of Physics
ANNUAL REPORT 15-16

12-10-2015

QUIZ

T. Syamala – Guest Faculty
in Physics



QUIZ

I BSc (M.P.C)

Dept. of Physics.

12/10/15

1. కిరణాలను కనుగొన్నవారు?
రెండవ వారిని సంగత విద్యార్థినిని పోస్ట్ (క్రీ. 1711)
2. లైబ్రరీను కనుగొన్నవారు?
పి. బె. థామస్
3. క్లౌడీయస్ కనుగొన్నవారు?
పి. గెడ్డెన్
4. న్యూటన్ కనుగొన్నవారు?
కేప్లర్ (1609)
5. భారతదేశం మొదటి నాణా (ప్రయోగించిన రూపం)?
బ్రిటిష్ 1975
6. I.A.M.U ప్రమాణాలు?
931 MeV
7. హెన్రీ ప్రయోగంలో $\mu_0 = 4\pi \times 10^{-7}$ హెన్రీ/మీటర్
8. ప్రతి నిర్దిష్ట గురుత్వ (n) యొక్క ప్రమాణాలు ఏమిటి?
డైన్/గ్రా.మీ/సెం.మీ
9. హెన్రీ ప్రమాణాలు?
మెటర్/సెం.మీ
10. నిత్య సాంధ్యత ఎంత? హెన్రీ ప్రమాణాలు ఏమిటి?
 $d = 1 \text{ గ్రా/సెం.మీ}$
11. రాకెట్ కనుగొన్న వా ఎవరు? మన భారతదేశ ప్రమాణాలు ఏమిటి?
నాసా మాజీ గవర్నర్ నియమం.
12. లైబ్రరీ కేంద్రాలను ఏర్పాటుచేసిన సమయం ఏమిటి?
సంవత్సరం విద్యార్థులు

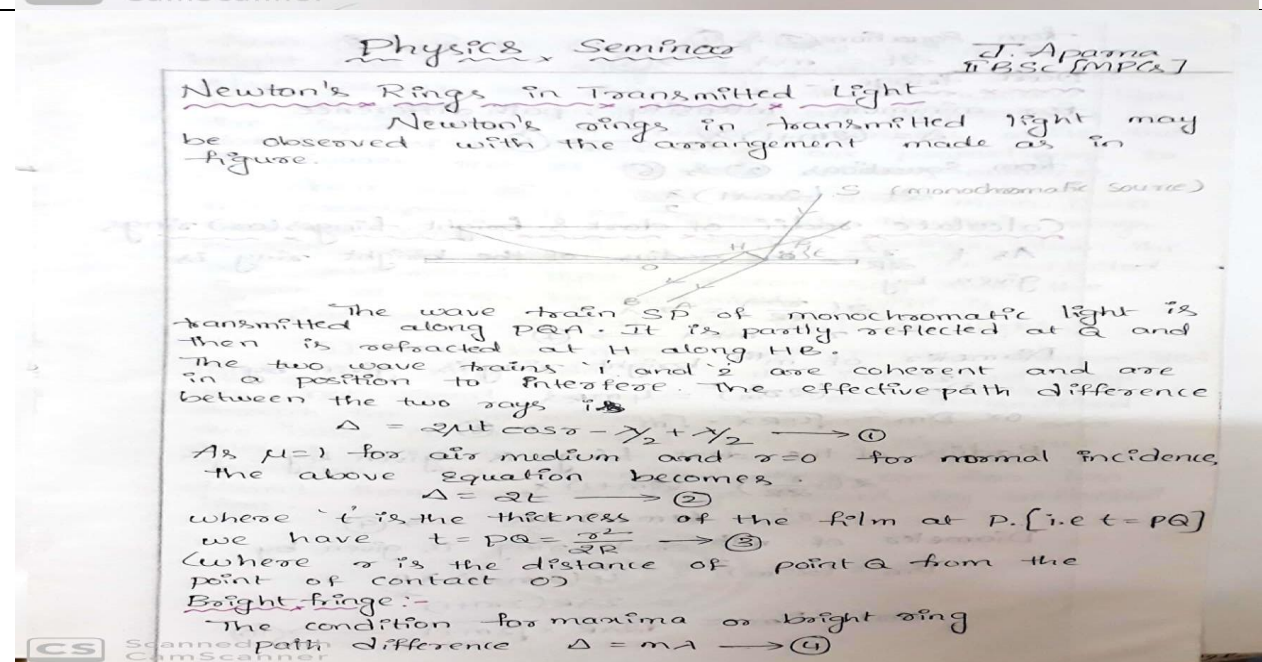
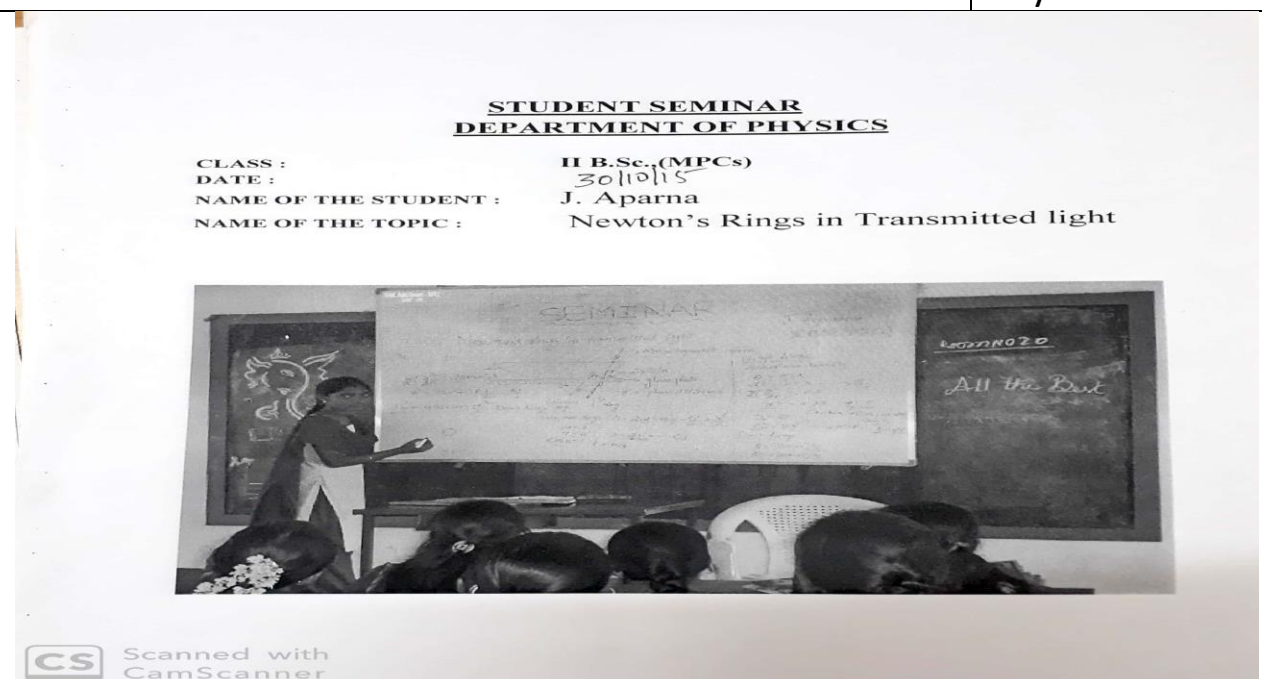
Department of Physics
ANNUAL REPORT 15-16

30-10-15

Student Seminars

Newton's Rings In Transmitted Light J.Aparna(IIMPCs)

S. Pavani,
Lecturer in
Physics



Department of Physics
ANNUAL REPORT 15-16

12-11-15	Student Seminars	S. Pavani, Lecturer in Physics
Application Of Laser		G.Chandrakala(II MPCs)

K.S.N. Government Degree College(W), Ananthapuramu

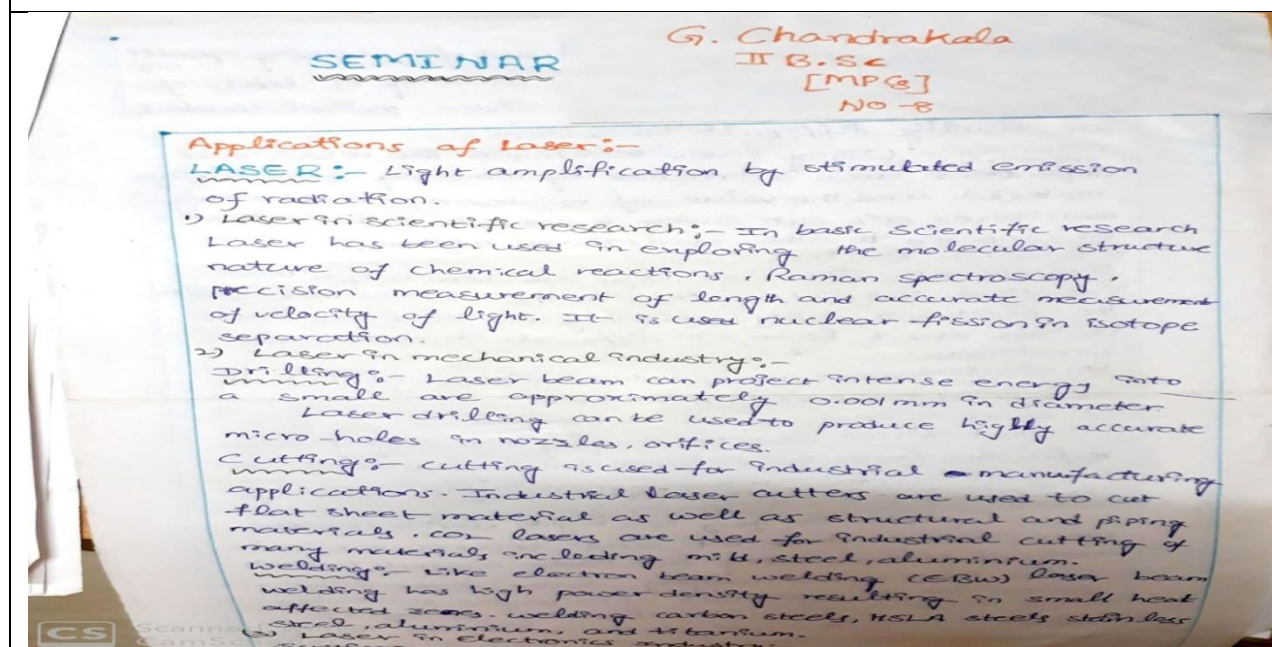
Department of Physics

Activity No:
Seminar

Dated: 12-11-2015

Name of the Student: G. Chandrakala II B.Sc., (MPCs)

Topic: Applications of LASER



Department of Physics
ANNUAL REPORT 15-16

Date:14-11-2015

Field Visit

Department Of Physics

K.S.N. Government Degree College(W), Ananthapuramu

Department of Physics

Activity No : Field Trip

Visit Science Museum

The students of I B.Sc., are taken to the “**Science Museum**” on JNTU Road, Ananthapuramu on 14-11-2015 by Kum. S. Pavani, Lecturer In Physics.

The Assistant Rahamathulla explained some projects involving basic physics principles such as conversion of mechanical energy in to light energy.

- ◆ The importance of open circuit and close circuit.
- ◆ A proclainer model based on Archemedics principle
- ◆ The set up of Coupled Oscillations having ten different bobs of different lengths
- ◆ The structure of human skeleton
- ◆ The old models of Radio etc.,



Students at the entrance of the Science Museum along with Kum. S. Pavani, Lecturer in Physics



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Department of Physics
ANNUAL REPORT 15-16

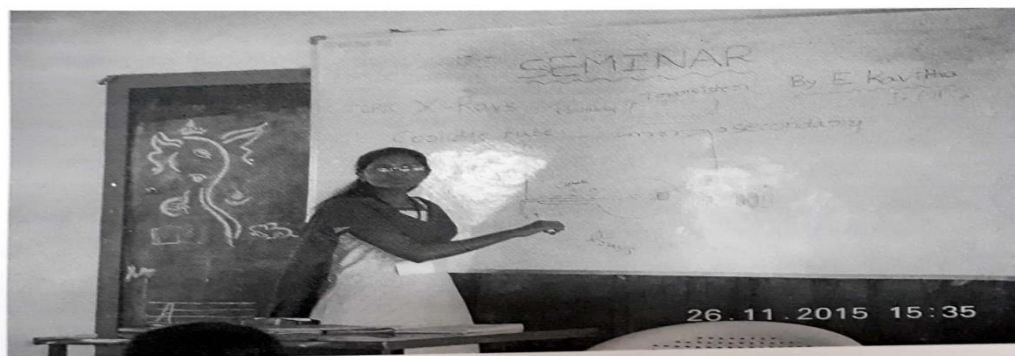
26-11-15
X-Rays-Properties

Student Seminars
E.Kavitha(II MPCs)

S. Pavani, Lecturer in
Physics

STUDENT SEMINAR
DEPARTMENT OF PHYSICS

CLASS : II B.Sc.,(MPCs)
DATE : 26-11-2015
NAME OF THE STUDENT : E. Kavitha
NAME OF THE TOPIC : X- Rays



S. PAVANI
24/11/15
S. PAVANI, M.Sc.,
Lecturer in Physics
KSN Govt. Degree College (W)
ANANTHAPURAM (A.P.) 515 007



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Topic:- X-Rays

Date:- 26th Nov 2015

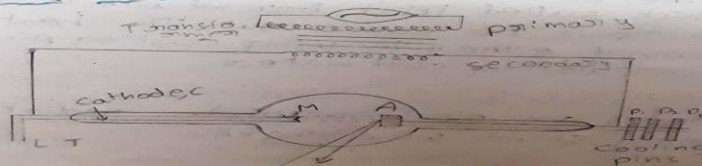
X-rays were discovered by the Scientist prof. Rontgen in the year 1885.

X-rays are electromagnetic radiations like light rays but of very short wavelength of the order $0.001 \text{ \AA}^{\circ}$ to $100 \text{ \AA}^{\circ}$.

$1 \text{ \AA}^{\circ} = 10^{-10} \text{ metre}$.

X-rays are produced when the high speed electrons strike the anode on the target and are absorbed by the target of heavy elements such as tungsten, molybdenum and platinum. In other words it is the sudden stopping of the accelerated beam of electrons by the target which gives rise to X-rays. The apparatus producing X-rays is called as X-ray tube.

Modern X-ray tube or Coolidge Tube:-



Department of Physics
ANNUAL REPORT 15-16

18-12-15

De Broglie Wavelength

Student Seminar

J.K.Pooja(II MPCs)

S. Pavani, Lecturer in

Physics

STUDENT SEMINAR
DEPARTMENT OF PHYSICS

CLASS :

III B.Sc.(MPCs)

DATE :

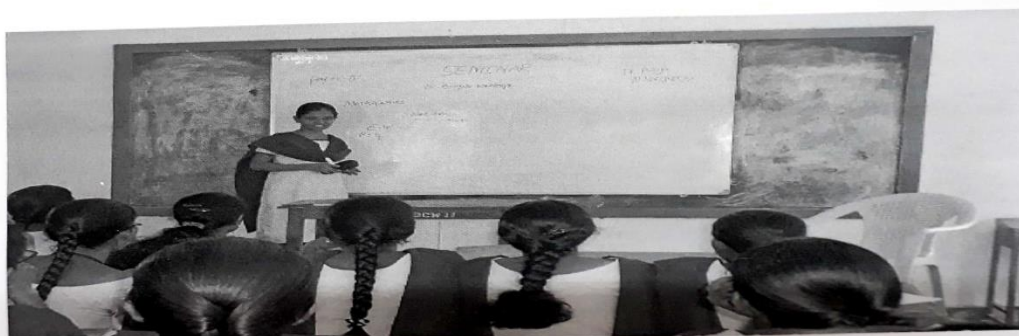
18/12/15

NAME OF THE STUDENT :

J.K. Pooja

NAME OF THE TOPIC :

Physics Paper – IV - De Broglie Wavelength



Principal
A.S.N. Govt. Degree College
for Women
ANANTHAPURAMU

SEMINAR

SUBJECT : Physics – IV

Name : J.K. pooja

TOPIC : DEBROGLIE WAVELENGTH

CLASS : III BSc(MPCs)

DEBROGLIE WAVELENGTH

The dual nature of radiation prompted Louis de Broglie to extend it to matter in 1924. He felt that nature is symmetrical and matter also should have particle nature and wave nature like light. He said if light can act like wave sometimes and like a particle at some other times. The following considerations lead to de Broglie to postulate that matter also behaves like wave.

(i) matter and radiation are the two fundamental forms in nature. These two must be symmetric. As radiation has both particle and wave nature, matter should also have the same dual nature.

(ii) The similarity between mechanics and optics related to the fundamental particles including matter, momentum, energy.



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In mechanics maupertus least action principle

Department of Physics
ANNUAL REPORT 15-16

22-12-2015

QUIZ

Department Of Physics

GOVT COLLEGE FOR MEN :: ANANTAPUR

DEPARTMENT OF PHYSICS

=====

DRC Sponsored

District Level Quiz Programme in Physical Science

The Department of Physics, Govt College for Men, Anantapur is organising a District Level Quiz Programme in Physical Sciences on 22-12-2015 (Tuesday), which is being sponsored by the District Resource Centre (DRC), Govt College for Men, Anantapur.

1. Students of B.Sc. from Govt Degree Colleges in the District are only eligible to participate in the Quiz Competition.
2. Only Two Students of B.Sc from each college are to be participated in the event.
3. The questions in the Quiz will be framed in Physical Sciences (Physics and Chemistry) and is of the Standard that is expected of SSC level and General Science in any Competitive Examination.
4. Quiz Programme will commence exactly at 10.30 AM in Room No:13 (Physics Dept).
5. The participating students have to attend the Programme with their Identity Cards and an authorisation letter from their Principal.
6. The working lunch will be provided to all the out-station participants and they will also be paid to and fro travelling allowance.
7. Cash Prizes will be given to those standing First, Second and Third in the Quiz competitions.
8. For further information and details, please contact Dr.M.Ravi Kumar, Reader & In-charge of Dept of Physics, Govt College for Men, Anantapur (Mobile:9440221228)

Venue: Room No.13 (Physics Gallery)

Date: 22-12-2015

Time: 10.30 AM



Handwritten signature and date:
16/12/15

Department of Physics
ANNUAL REPORT 15-16

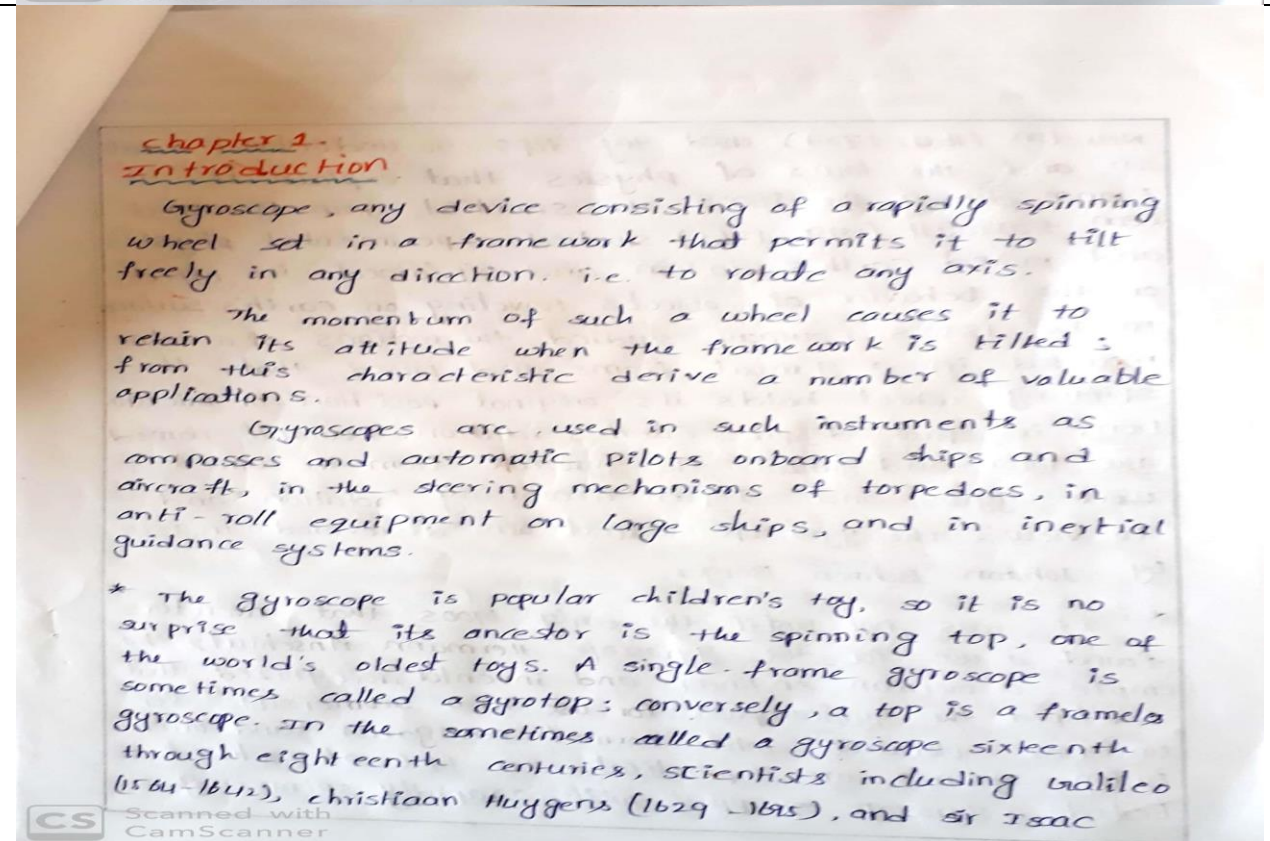
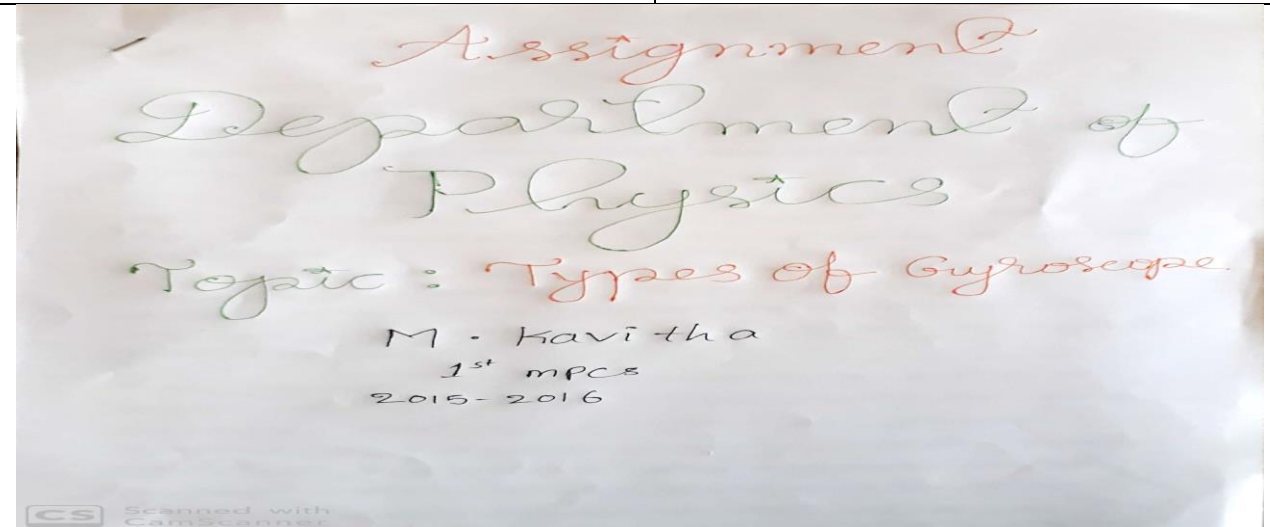
Visual Round-3 5 Indian Scientists Pictures						
Group	Score					
A	B	C	D	E	F	
nd-1-1+1	1	-	-	-	1	0+1
nd-2-1+1	0+1+1	-	-	-	1	1
	3	3			2	5
nd-3-1	2	4	1	6	5	
	1	1		1	1	
	4					
→ Nobel prize winner in physics - 2014 2013						
"A" Group winners						
1.	V. Dhanalakshmi					
2.	K. Latha					
3.	S.B. Geetha					
4.	U. Varaja Kumari					
5.	C. Yasmin Begum					
6.	P. Parvathi					
Physics Quiz for II B Sc [MPCs]						
Marks						
"A" Group						
1)	V. Dhanalakshmi					
2)	K. Latha					
3)	S.B. Geetha					
4)	U. Varaja Kumari					
5)	C. Yasmin Begum					
6)	P. Parvathi					
"B" Group						
1)	D. Geetha					
2)	M. Saravathi					
3)	G. Sreetha					
4)	G. Parashanna Lakshmi					
5)	G. Mounika					
6)	M.B. Aparna					
"C" Group						
1)	N.H. Ramadevi					
2)	K. Prameela					
3)	K. Subhadra					
4)	G. Anusha					
5)	V. Meenakshi					
6)	B. Varalakshmi					
"D" Group						
1)	P. Sailakshmi					
2)	V. Prasanthi					
3)	B. Saisirisha					
4)	C. Manjula					

Department of Physics
ANNUAL REPORT 15-16

Assignments M. Kavitha(IMPCs)

Department Of Physics

Types Of Gyroscope



Department of Physics
ANNUAL REPORT 15-16

Assignments

L.Anitha(III MPCs)

Department Of Physics

Elementary particles

Department of physics
Assignment [2015-16]
Topic : Elementary particles
→ L. Anitha Kurnasi
III BSc (MPCs)

Elementary particles :

one of the primary goals in modern physics is to answer the question "what is the universe made of?" often that question reduces to "what is matter and what holds it together?" This continues the line of investigation started by Democritus, Dalton and Rutherford.

Modern physics speaks of fundamental building blocks of nature, where fundamental takes on a reductionist meaning of simple and structureless. Many of the particles we have discussed so far appear simple in their properties. All electrons have the exact same characteristics (mass, charge, etc), so we call an electron fundamental because they are all non-unique.

The search for the origin of matter means the understanding of elementary particles. And with the advent of holism, the understanding of elementary particles requires an understanding of not only their characteristics, but how they interact and relate to other particles and forces of nature, the field of physics called particle physics.

The elementary particles as shown in the

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Assignments

D.Geetha(III MPCs)

Department Of Physics

Elementary particles

Department of Physics
: - ASSIGNMENT :
"ELEMENTARY PARTICLES" :- D. Geetha (2015-16)

A fermion name coined by Paul Dirac from the surname of Enrico Fermi is any particle characterized by Fermi-Dirac statistics and obeying the Pauli exclusion principle. Fermions differ from bosons which obey Bose-Einstein statistics.

In particle physics, an elementary particle or fundamental particle is a particle whose substructure is unknown, thus it is unknown whether it is composed of other particles. Elementary particles include the fundamental fermions like quarks, leptons, antiquarks & antileptons which generally are "matter particles" & antimatter particles as well as the fundamental bosons like gauge bosons and Higgs boson, which generally are force particles that mediate interactions among fermions. A particle containing two or more elementary particles is a composite particle.

Diagram illustrating the Pauli exclusion principle for fermions and the lack thereof for bosons. The top row shows six fermions, each represented by a circle with a vertical line and an arrow pointing up or down, indicating their spin. The bottom row shows six bosons, each represented by a circle with a vertical line and an arrow pointing up, indicating their spin. Labels 'fermions' and 'Bosons' are placed to the right of their respective rows.

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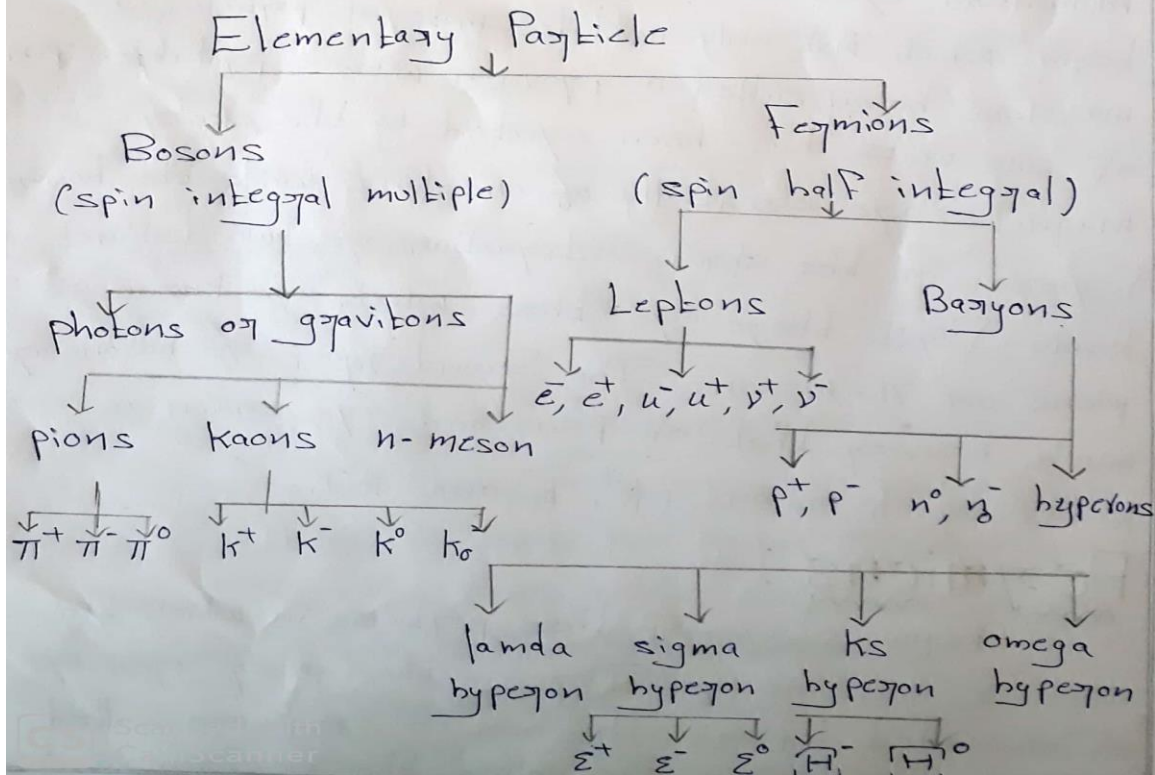
Assignments

V.Dhanalakshmi(III MPCs)

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Elementary particles

KSN Govt Degree College (W)
Department of Physics
Assignment
- V. Dhanalakshmi
[2015-16]
Topic: Elementary particles



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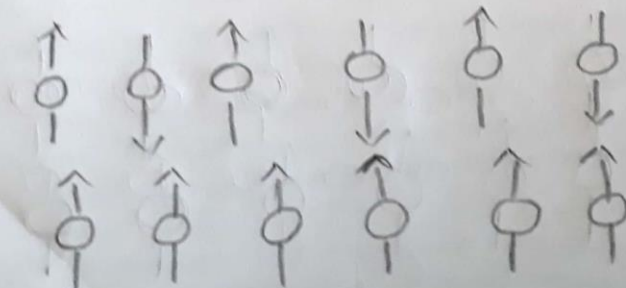
Assignments G.Sravana Sandhya (IIIMPCs)
Elementary particles

Department Of Physics

ASSIGNMENT
DEPARTMENT OF PHYSICS
"Elementary particles:-" G. Sravana Sandhya.

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