

# **GOVERNMENT DEGREE COLLEGE**

**PADERU – 531024,**

**A.S.R DISTRICT, A.P.**



## **DEPARTMENT OF BOTANY**

**GUEST LECTURE ON**

**“Plant Tissue Systems”**

**7-1-2023**



# GOVERNMENT DEGREE COLLEGE

PADERO



## DEPARTMENT OF BOTANY

GUEST LECTURE



# Government Degree College

Affiliated to Andhra University

(Upgraded to Model Degree College under RUSA 2.0)

**Paderu, Alluri Sitharama Raju - District, AP.**



Est:1985

NAAC "C" Grade

phone no: 08935 295115.

Email.ID :Paderu.jkc@gmail.com.

## NOTICE

This is to inform all staff members and students the departments of Botany will be organized a guest lecture to IInd B.Sc students by **Smt.B.kumari**, lecturer in Botany, Government Degree College women's Marripalem. Hence all the faculty members are requested to inform the IInd B.Sc students for the guest lecture on "**Plant Tissue Systems**" on 07-01-2023 at 11am.



*V. Ch*  
Signature of the principal  
Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



# Government Degree College

Affiliated to Andhra University

(Upgraded to Model Degree College under RUSA 2.0)

**Paderu, Alluri Sitharama Raju - District, AP.**



Est:1985 NAAC "C" Grade phone no: 08935 295115. Email ID :Paderu.jkc@gmail.com.

Date: 06-01-2023

From

**Dr.V. Chittabai**

M. Com., B. Ed., M. Phil., Ph.D.

Principal

Govt. Degree College

Paderu.

To

**Smt.B.kumari**

M. Sc., B. Ed.

Lecturer

Govt. Degree College Women's

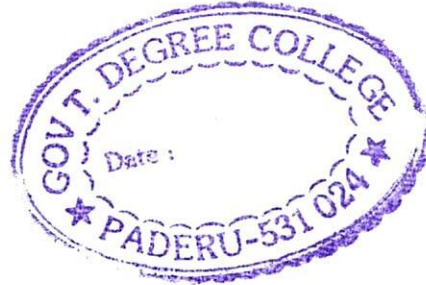
Marripalem

Respected Sir,

Sub: Requisition for permission to Guest lecture on 07-1-2023 request -Reg.

I wish to inform you that Department of Botany and is going to organized a guest lecture in Botany at Govt. Degree College, Paderu, ASR Dist. On 7<sup>th</sup> January, 2023. Hence we request you to deliver a lecture on "**Plant Tissue Systems**" to IInd B.Sc CBZ,BZH and Seed technology students.

Thanking you



With regards

*V. Chittabai*

Principal

Principal

Govt. Degree College

PADERU 531 024

Alluri Sitharama Raju-Dist.



# Government Degree College

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## DEPARTMENT OF BOTANY

### GUEST LECTURE

We, the Department of Botany organized a guest lecture for IInd B.Sc students by the resource person **Smt.B.kumari**, lecturer in Botany, Government Degree College women's Marripalem. **Smt.B.kumari** delivers a lecture on "**Plant Tissue Systems**". Clarify the doubts and explain in easy way. Eighty students attended the guest lecture from IInd B.Sc (BZH & CBZ and Seed technology). **Smt.B.kumari** motivated the students for the examination. By these guest lecture students develop their knowledge and skills.

Signature of the faculty members



Signature of the principle  
Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.

- 1.
- 2.
3. P.K.
- 4.
5. E.V. Jayalaks
6. M.A.Ry
7. G.S.
- 8.
- 9.
10. K.



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**Paderu, Alluri Sitharama Raju - District, AP.**



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## ATTENDANCE CERTIFICATE

This is to certify that, **Smt.B.kumari** lecturer in Botany, Government Degree College womens Araku Valley, has delivered a guest lecture on "**Plant Tissue Systems**" to IInd B.Sc BZH ,CBZ and Seed technology students at Government Degree College, Paderu, A.S.R district on 7-1-23 at 11am..



Signature of the Principal

**Principal**

Govt. Degree College

PADERU 534 024

Alluri Sitharama Raju-Dist.



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## DEPARTMENT OF BOTANY

### GUEST LECTURE



Guest Lecture on "Plant Tissue Systems" delivered by Smt.B.Kumari, lecturer in Botany, Government Degree College Womens, Marripalem.



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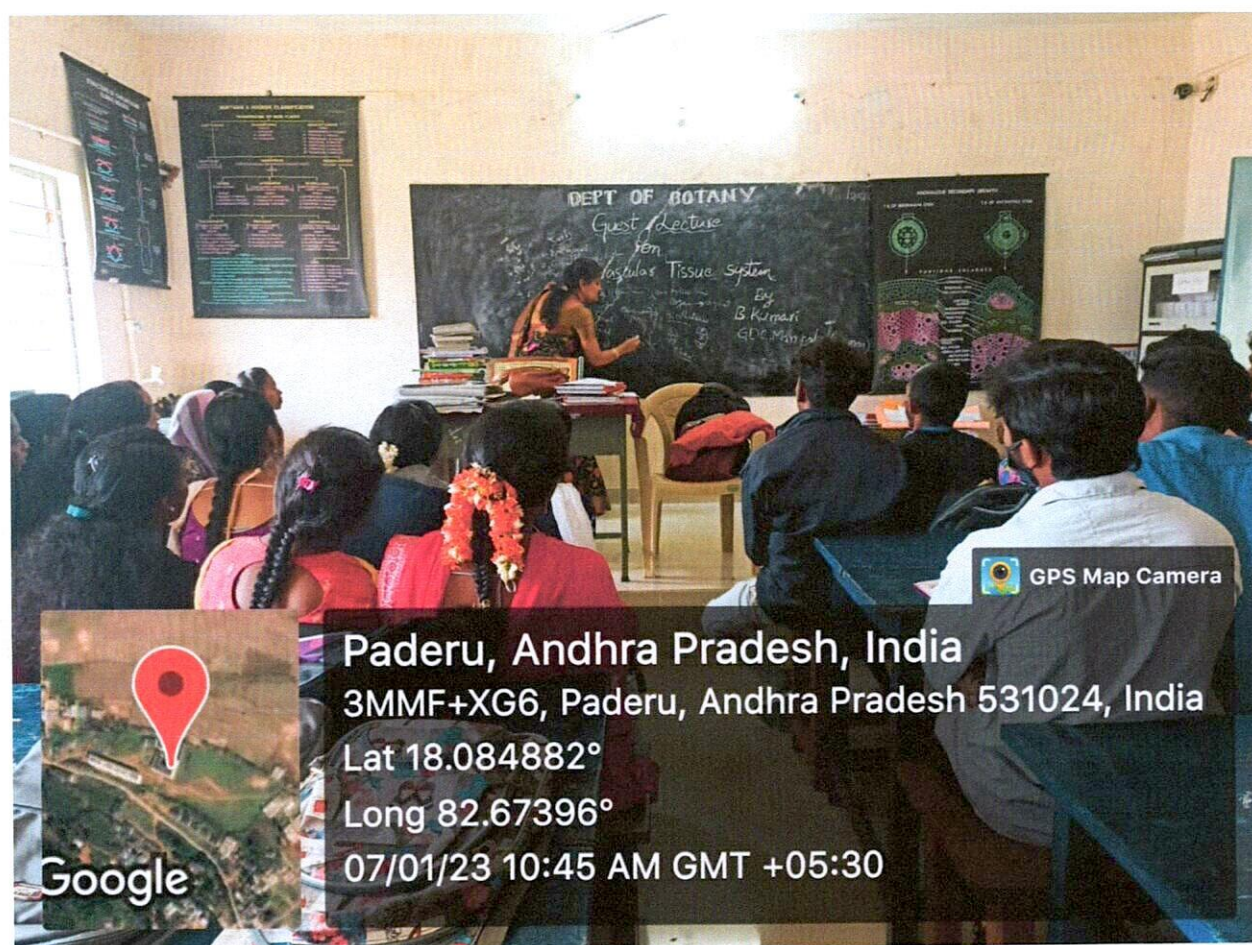
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## DEPARTMENT OF BOTANY

### GUEST LECTURE



Paderu, Andhra Pradesh, India  
3MMF+XG6, Paderu, Andhra Pradesh 531024, India  
Lat 18.084882°  
Long 82.67396°  
07/01/23 10:45 AM GMT +05:30

Guest Lecture on "Plant Tissue Systems" delivered by **Smt.B.Kumari**, lecturer in Botany, Government Degree College Womens, Marripalem.



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## DEPARTMENT OF BOTANY

### REPORT ON GUEST LECTURE

#### TOPIC SYNOPSIS

#### Introduction to Plant Tissue Systems

- **Definition and Overview:** Briefly define what plant tissues are and their role in plant physiology.
- **Types of Plant Cells:** Introduction to the basic types of plant cells (parenchyma, collenchyma, and sclerenchyma) that make up these tissues.

#### The Three Main Plant Tissue Systems

##### 1. Dermal Tissue System

- **Function:** Protection from physical damage and pathogens, prevention of water loss.
- **Components:** Epidermis, cuticle, stomata, trichomes.
- **Significance in Nature:** Discuss how the dermal system adapts to different environments (e.g., thick cuticles in desert plants).

##### 2. Vascular Tissue System

- **Function:** Transport of water, nutrients, and sugars throughout the plant.
- **Components:** Xylem (water transport) and phloem (nutrient/sugar transport).
- **Significance in Agriculture and Forestry:** Importance in plant growth, crop yield, and wood production.

##### 3. Ground Tissue System

- **Function:** Photosynthesis, storage, and support.
- **Components:** Parenchyma, collenchyma, and sclerenchyma cells.
- **Significance in Food Production and Storage:** Role in storing carbohydrates and other nutrients.

## Uses and Applications of Plant Tissue Systems

### 1. Agriculture

- **Improving Crop Yields:** Understanding plant tissue systems helps in genetically engineering crops for better resistance to pests and diseases, improved water and nutrient transport, and enhanced photosynthesis efficiency.
- **Soil Conservation:** Role of root systems (part of the vascular system) in preventing soil erosion.

### 2. Horticulture

- **Grafting and Propagation:** Knowledge of vascular tissue is crucial in successful grafting practices, allowing for the propagation of plants with desirable traits.

### 3. Forestry

- **Wood Quality and Production:** The structure and composition of vascular tissues, especially xylem, determine wood strength, texture, and water content, affecting its utility in construction, paper, and furniture industries.

### 4. Environmental Conservation

- **Carbon Sequestration:** Plants, through photosynthesis (primarily in the ground tissue), play a crucial role in capturing atmospheric CO<sub>2</sub>, a greenhouse gas, thereby mitigating climate change.
- **Habitat and Biodiversity:** Plant tissue systems support diverse life forms by providing food, shelter, and ecosystem services.

### 5. Biotechnology

- **Pharmaceuticals and Nutraceuticals:** Many plants synthesize valuable secondary metabolites (in various tissue systems) that are used in drugs, supplements, and natural health products.
- **Bioengineering:** Engineering plant tissues for producing biofuels, bioplastics, and other sustainable materials.

## Conclusion

- Summarize the critical roles of plant tissue systems in nature and their significance to humans.
- **Future Directions:** Highlight ongoing research and potential future applications in improving sustainable agriculture practices, conservation efforts, and biotechnological advancements.
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By covering these points, your lecture will provide a comprehensive overview of plant tissue systems and their vast implications in ecology, agriculture, and various industries, emphasizing the importance of plants beyond their basic biological functions.



# Government Degree College

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**Paderu, Visakhapatnam - District, AP.**

Est: 1969 NAAC "C" Grade phone no: 08935 250013 Email.ID :Paderu.jkc@gmail.com.




DATE: 24-11-2022

## CERTIFICATE OF APPRECIATION

This is certified that **Smt.B.kumari** lecturer in Botany, Government Degree College Womens, Marripalem has delivered guest lecture on "**Plant Tissue Systems**" for B.sc IInd CBZ,BZH and Seed technology students at Govt. Degree College, Paderu on 07-1-23 at 11.00 am which is organized by Department of Botany.



  
Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



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Paderu, Alluri Sitharama Raju - District, AP.



Est:1985

NAAC "C" Grade

phone no: 08935 295115.

Email.ID :Paderu.jkc@gmail.com.

## Attendance Sheet

Name of the Activity: GUEST LECTURE.

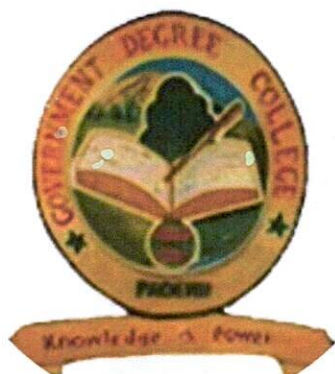
Date: 27-11-2022

Time: 11:00 am

Sl.No	Name of the Student	Class	Signature
1.	L. Jay Kiran	C.B.2	L. Jay Kiran
2.	Ch. Sarojini devi	II <sup>nd</sup> BSc (CBZ)	Ch. Sarojini devi
3.	K. Swetha	III <sup>rd</sup> BSc (CBZ)	K. Swetha
4.	P. Laxmi prasanna kumari	II <sup>nd</sup> BSc (CBZ)	P. Laxmi prasanna kumari
5.	M. Lalitha	III <sup>rd</sup> BSc (CBZ)	M. Lalitha
6.	K. Veena	III <sup>rd</sup> BSc (CBZ)	K. Veena
7.	S. Vamsi Kiran	II <sup>nd</sup> BSc (CBZ)	S. Vamsi Kiran
8.	K. Divya	II <sup>nd</sup> BSc (CBZ)	K. Divya
9.	M. Anitha	II <sup>nd</sup> BSc (CBZ)	M. Anitha
10.	R. Sandhyaarani	II <sup>nd</sup> BSc (CBZ)	R. Sandhyaarani
11.	N. Konda Thalli	II <sup>nd</sup> BSc (CBZ)	N. Konda Thalli
12.	G. Devi	II <sup>nd</sup> BSc (CBZ)	G. Devi
13.	P. Swathi	II <sup>nd</sup> B.Sc (CBZ)	P. Swathi
14.	V. Sangeetha	III <sup>rd</sup> B.Sc (CBZ)	V. Sangeetha
15.	P. Madhuri	II <sup>nd</sup> CBZ	P. Madhuri
16.	M. Bhavanga	II <sup>nd</sup> CBZ	M. Bhavanga
17.	V. Akanksha Vaasha priya	II <sup>nd</sup> BSc CBZ	V. A.V.priya
18.	P. Kalaravathi	III <sup>rd</sup> B.Sc CBZ	P. Kalaravathi
19.	X. Vinod kumar	II <sup>nd</sup> B.Sc CBZ	X. Vinod kumar
20.	P. Chandu	III <sup>rd</sup> BSc - CBZ	P. Chandu
21.	K. Kesava Rao	III <sup>rd</sup> BSc CBZ	K. Kesava Rao
22.	G. Anji	II <sup>nd</sup> BSc CBZ	G. Anji
23.	G. maudha Joseph varma	II <sup>nd</sup> BSc (C.BZ)	G. maudha Joseph varma
24.	D. Sudheer Kumar	III <sup>rd</sup> BSc (CBZ)	D. Sudheer Kumar
25.	R. Harika	3 <sup>rd</sup> (CBZ)	R. Harika
26.	K. Lavanya	III <sup>rd</sup> BSc (CBZ)	K. Lavanya
27.	G. Saritha	II <sup>nd</sup> B.Sc (CBZ)	G. Saritha
28.	T. Kanthi Babu naidu	II <sup>nd</sup> BSc (CBZ)	T. Kanthi Babu naidu
29.	V. Sumanth	III <sup>rd</sup> BSc (CBZ)	V. Sumanth
30.	P. Paramesh	III <sup>rd</sup> BSc (CBZ)	P. Paramesh
31.	K. Jagadeesh Naidu	II <sup>nd</sup> BSc (CBZ)	K. Jagadeesh Naidu
32.	R. Ravi Varma	III <sup>rd</sup> BSc (CBZ)	R. Ravi Varma
33.	S. Divya Bharathi	II <sup>nd</sup> BSc (CBZ)	S. Divya Bharathi
34.	K. Monika	II <sup>nd</sup> BSc (CBZ)	K. Monika
35.	G. Chandha Sekar	III <sup>rd</sup> BSc (CBZ)	G. Chandha Sekar

# **GOVERNMENT DEGREE COLLEGE**

**PADERU – 531024,  
A.S.R DISTRICT, A.P.**



## **DEPARTMENT OF BOTANY**

**GUEST LECTURE ON**

**08-09-2021**

# GOVERNMENT DEGREE COLLEGE

PADERU



## DEPARTMENT OF BOTANY

### GUEST LECTURE



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Paderu, Alluri Sitharama Raju -District,AP.



Est:1985 NAAC "C" Grade phone no: 08935 295115. Email.ID :Paderu.jkc@gmail.com.

## NOTICE

This is to inform all staff members and students the departments of Botany will be organized a guest lecture to IInd B.Sc students by **Dr.D.Appa Rao**, lecturer in Botany, Dr.V.S.Krishna College, Visakhapatnam. Hence all the faculty members are requested to inform the B.Sc CBZ, BZH and Seed technology students should participate the guest lecture on "**Krebs cycle**" 08-09-2021 at 11.00am.



Signature of the principal

Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



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Paderu, Alluri Sitharama Raju -District,AP.



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## NOTICE

This is to inform all staff members and students the departments of Botany will be organized a guest lecture to IInd B.Sc students by Dr.D.Apparao, lecturer in Botany, Dr.V.S KRISHNA GOVERNMENT DEGREE COLLEGE & PG COLLEGE. Hence all the faculty members are requested to inform the B.Sc students to participate the guest lecture on "Krebs cycle" at 08-09-2021.



Signature of the principal

Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



# Government Degree College

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Paderu, Alluri Sitharama Raju -District,AP.



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Principal

Date: 06-09-2021

To

The Principal

Dr.D.Apparao

Dr.V.S. KRISHNA GOVT. DEGREE COLLEGE

Vishakhapatnam.

Respected Sir,

Sub: Requisition for permission to guest lecture on 08-09-2021 request -Reg.

I wish to inform you that department of Botany is going to conduct guest lecturer in Botany at Government Degree College, Paderu, A.S.R Dist. on 08-09-2021. Hence I request you Dr.D.Apparao, lecturer in Botany to deliver a lecture to IInd B.Sc CBZ,BZH and Seed technology students. Kindly receive and grant the required permission to the above mentioned.

Thanking you sir

With regards



*V. Chittabai*  
(V.Chittabai)  
Principal  
Govt. Degree College  
PRINCIPAL  
PADERU-531 024  
Alluri Sitharama Raju-Dist.





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**Paderu, Alluri Sitharama Raju -District, AP.**



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## ATTENDANCE CERTIFICATE

This is to certify that **Dr.D.Apparao**, lecturer in Botany, Dr.V.S.Krishna Govt. Degree College & PG College, has delivered a guest lecture on "**Respiration**" in Plant Physiology to IInd B.Sc students (BZH,CBZ and Seed technology) at Government Degree College Paderu, A.S.R.District at 08-09-2021.



*V. Ch*  
Signature of the principal  
Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



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## REPORT ON GUEST LECTURE

### TOPIC SYNOPSIS

#### 1. Introduction to Plant Respiration:

- Define plant respiration: The metabolic process by which plants release energy from organic compounds to fuel cellular activities.
- Highlight its significance: Essential for growth, development, and maintenance of plant cells and tissues.

#### 2. Comparison with Animal Respiration:

- Briefly contrast plant respiration with animal respiration.
- Emphasize differences in the organelles involved (mitochondria in both, but chloroplasts in plants), and the gas exchange processes (photosynthesis vs. inhalation/exhalation).

#### 3. Biochemical Pathways Involved:

- Glycolysis: Breakdown of glucose into pyruvate in the cytoplasm, yielding a small amount of ATP.
- Citric Acid Cycle (Krebs cycle): Occurs in the mitochondria, further breakdown of pyruvate into carbon dioxide, generating more ATP and electron carriers (NADH and FADH<sub>2</sub>).
- Electron Transport Chain (ETC): Series of protein complexes in the inner mitochondrial membrane that transfer electrons from NADH and FADH<sub>2</sub>, driving the production of ATP via oxidative phosphorylation.

#### 4. Aerobic vs. Anaerobic Respiration:

- Aerobic respiration: Occurs in the presence of oxygen, yielding a high amount of ATP.
- Anaerobic respiration: Takes place in the absence of oxygen, leading to the production of ATP through fermentation pathways, such as alcoholic fermentation or lactic acid fermentation.

#### 5. Role of Oxygen and Carbon Dioxide:

- Oxygen: Required as the final electron acceptor in the electron transport chain to generate ATP.
- Carbon dioxide: Produced as a byproduct of the citric acid cycle and released during respiration.

#### 6. Factors Affecting Plant Respiration:

- Temperature: Respiration rates generally increase with temperature up to a certain point, beyond which enzymatic activity may decline due to heat stress.
- Oxygen availability: Adequate oxygen is crucial for aerobic respiration to proceed efficiently.
- Substrate availability: Availability of substrates such as glucose affects the rate of respiration.

#### 7. Conclusion:

- Recap key points discussed.
- Highlight the importance of continued research in understanding plant respiration for sustainable agriculture and environmental conservation.

Ensure that your lecture is engaging by incorporating visual aids like diagrams, charts, and videos where appropriate, and encourage interaction with the audience to enhance understanding and retention of the material.



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## DEPARTMENT OF BOTANY

### GUEST LECTURE



Guest Lecture on **Dr.D.Apparao**, lecturer in Botany, Dr.V.S.Krishna Govt. Degree College & PG College Govt. has delivered a guest lecture on "**Respiration**" in Plant Physiology.



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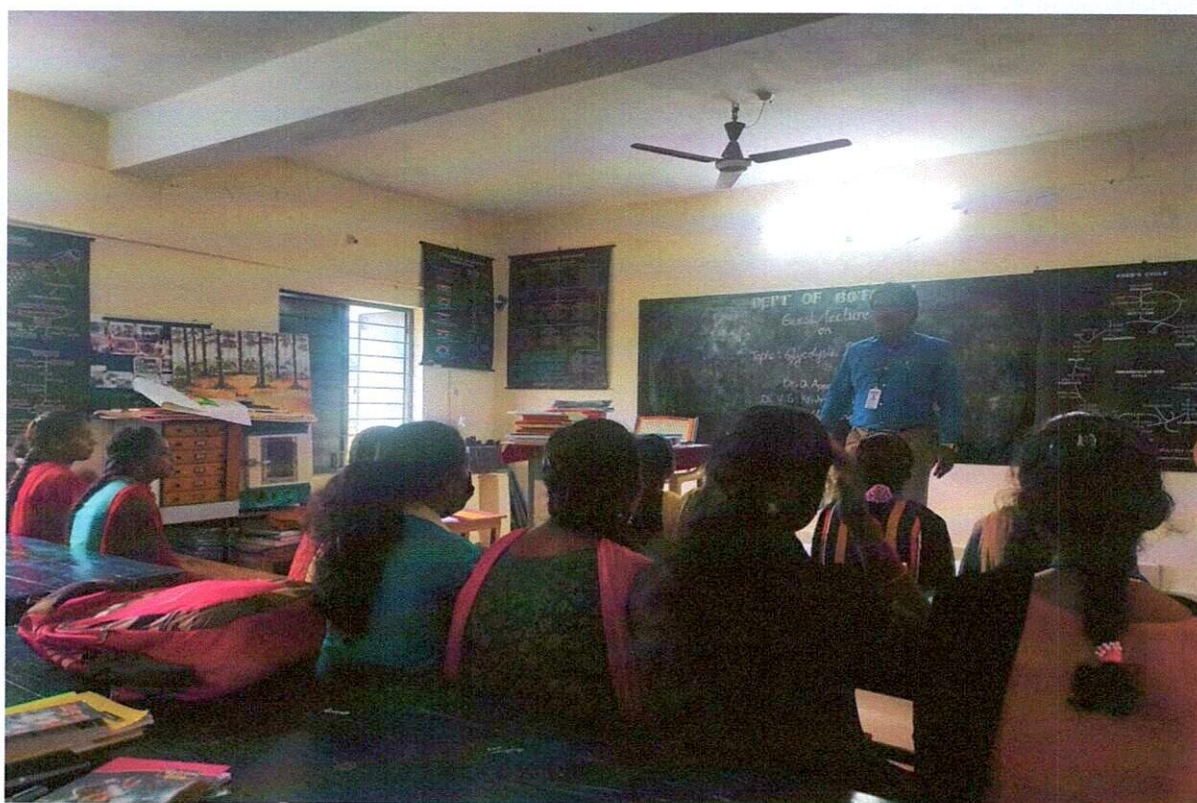
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## DEPARTMENT OF BOTANY

### GUEST LECTURE



Guest Lecture on **Dr.D.Apparao**, lecturer in Botany, Dr.V.S.Krishna Govt. Degree College & PG College Govt. has delivered a guest lecture on "**Respiration**" in Plant Physiology.



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**Paderu, Visakhapatnam -District, AP.**

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Date: 08-09-2021

## DEPARTMENT OF BOTANY

### CERTIFICATE OF APPRECIATION

This is certified that **Dr.D.Apparao** lecturer in Botany, Dr.V.S.Krishna Govt. Degree College & PG College has delivered a guest lecture on "**KREBS CYCLE**" in Plant Physiology for B.sc students at Govt. Degree College, Paderu on 08-09-2021 at 11.00 am which is organized by Department of Botany.



*V. S. Krishna*  
Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



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## Attendance Sheet

Name of the Activity: GUEST LECTURE.

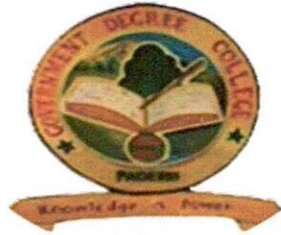
Date: 08-09-2021.

Time: 11.00 am.

Sl.No	Name of the Student	Class	Signature
1	S.J. Dandasa	2nd B.Sc (Seed Tech)	S.J. Dandasa
2	D. Neelima	2nd B.Sc (Seed Tech)	D. Neelima
3	M. Anilka	2nd B.Sc. (Seed) Tech	M. Anilka
4	B. Devaki	2nd B.Sc (Seed) Tech	B. Devaki
5	S. Dhamodhar padal	2nd B.Sc. (seed tech)	S. Dhamodhar padal
6	S. Venkata Prasad	2nd B.Sc (Seed Tech)	S. Venkata Prasad
7	C. Nandhoo Swara Rao	2nd BSC seed tech	C. Nandhoo Swara Rao.
8	Korra Vishnu	2nd BSC Seed Tech	Korra Vishnu
9	Ulli Pratheep	2nd B.Sc seed Tech	U. Pratheep
10	M. Bhimo	2nd BSC Seed Tech	M. Bhimo
11	K. Lavanya Kumari	2nd BSC seed Tech	K. Lavanya Kumari
12	B.M.Ch. Akhil	2nd BSC seed tech	B.M.Ch. Akhil
13	KOTHALA PARAMESWARI	3rd BSC BZH	Parameswari
14	B. Suathi	3rd BSC BZH	B. Suathi
15	K. Rahela Jyothi	3rd BSC BZH	K. Rahela Jyothi
16	G. Swapna	3rd BSC (BZH)	G. Swapna
17	Ganta. Ganesh	3rd BSC (BZH)	G. Ganesh
18	K. Vamsi Krishna padal	3rd BSC (BZH)	K.V.K. padal
19	Gabu. Sridevi	3rd BSC (BZH)	G. Sridevi
20	MURKI. SURESH KUMAR	3rd BSC (BZH)	M. Suresh Kumar
21	Morti vijayalaxmi	3rd BSC (BZH)	M. vijayalaxmi
22	A. Rajendra Prasad	3rd BSC (BZH)	A. Rajendra Prasad
23	R. Mahesh Babu	3rd BSC (BZH)	R. Mahesh Babu
24	S. Shilpa	3rd BSC (BZH)	S. Shilpa
25	P. Anand	3rd BSC (BZH)	P. Anand
26	PUSAPATI UPENDRA RAO	3rd BSC (BZH)	P. Upendra Rao
27	Vankar. Pawan	3rd BSC (BZH)	P. Vankar
28	Pangi. Venkatesh	3rd BSC (BZH)	P. Venkatesh
29	KORRA. MEENA KUMARI	3rd BSC (BZH)	K. Meena Kumari
30	Sodari. Rama Raju	3rd BSC (BZH)	S. Rama Raju
31	V. Shivaji	3rd BSC Seed Tech	V. Shivaji
32	G. Anurag	3rd BSC Seed Tech	G. Anurag
33	K. Anand	3rd B.Sc seed	K. Anand
34	P. Pushpanjali	3rd B.Sc seed	P. Pushpanjali
35	P. Kiran Kumar	3rd B.Sc Seed	P. Kiran Kumar

# GOVERNMENT DEGREE COLLEGE

PADERU – 531024,  
A.S.R DISTRICT, A.P.



## DEPARTMENT OF BOTANY

**GUEST LECTURE ON**

**“Function of Chromosomes”**

**24-11-2022**



# GOVERNMENT DEGREE COLLEGE

PADERU



## DEPARTMENT OF BOTANY

GUEST LECTURE



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Est:1985

NAAC "C" Grade

phone no: 08935 295115.

Email.ID :Paderu.jkc@gmail.com.

## NOTICE

This is to inform all staff members and students the departments of Botany will be organized a guest lecture to B.Sc students by **G.R.N.S.Sujatha**, lecturer in Botany, Government Degree College womens Araku Valley. Hence all the faculty members are requested to inform the B.Sc CBZ, BZH and Seed technology students for the guest lecture on "**Function of Chromosomes**" 24-11-2022 at 11.00am.



Signature of the principal

Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



# Government Degree College

Affiliated to Andhra University

(Upgraded to Model Degree College under RUSA 2.0)

**Paderu, Alluri Sitharama Raju - District, AP.**



Est:1985 NAAC "C" Grade phone no: 08935 295115. Email.ID :Paderu.jkc@gmail.com.

Date: 20-11-2022

From	To
<b>Dr.V. Chittabai</b>	G.R.N.S.Sujatha
M. Com., B. Ed., M. Phil., Ph.D.	M. Sc., B. Ed.
Principal	Lecturer
Govt. Degree College	Govt. Degree College,
Paderu.	Araku, A.S.R Dist.

Respected Sir,

Sub: Requisition for permission to Guest lecture on 24-11-2022 request -Reg.

I wish to inform you that Department of Botany and is going to organized a guest lecture in Botany at Govt. Degree College, Paderu, ASR Dist. On 24<sup>th</sup> November 2022. Hence we request you to deliver a lecture on "**Function of Chromosomes**" for B.Sc CBZ/BZH and Seed technology students.

Thanking you



With regards

*V. Chittabai*  
Principal

Govt. Degree College  
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## DEPARTMENT OF BOTANY

### GUEST LECTURE

We, the Department of Botany organized a guest lecture for B.Sc students by the resource person **G.R.N.S.Sujatha**, lecturer in Botany, Government Degree College womens Araku Valley. **G.R.N.S.Sujatha** delivers a lecture on Structure and Function of Chromosomes. Clarify the doubts and explain the steps in easy way. One hundred and twenty (120) students attended the guest lecture from B.Sc (BZH & CBZ and Seed technology). Smt.Sujatha motivated the B.Sc students to learn more knowledge. By these guest lecture students develop their knowledge and skills.

Signature of the faculty members

- 1.
- 2.
- 3.
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- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.



Principal  
Govt. Degree College  
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## ATTENDANCE CERTIFICATE

This is to certify that, **G.R.N.S.Sujatha** lecturer in Botany, Government Degree College womens Araku Valley, has delivered a guest lecture on "**Function of Chromosomes**" to B.Sc students (BZH & CBZ) at Government Degree College, Paderu, A.S.R district.



*V. Ch*  
Signature of the Principal  
Govt. Degree College  
PADERU 534 024  
Alluri Sitharama Raju-Dist.



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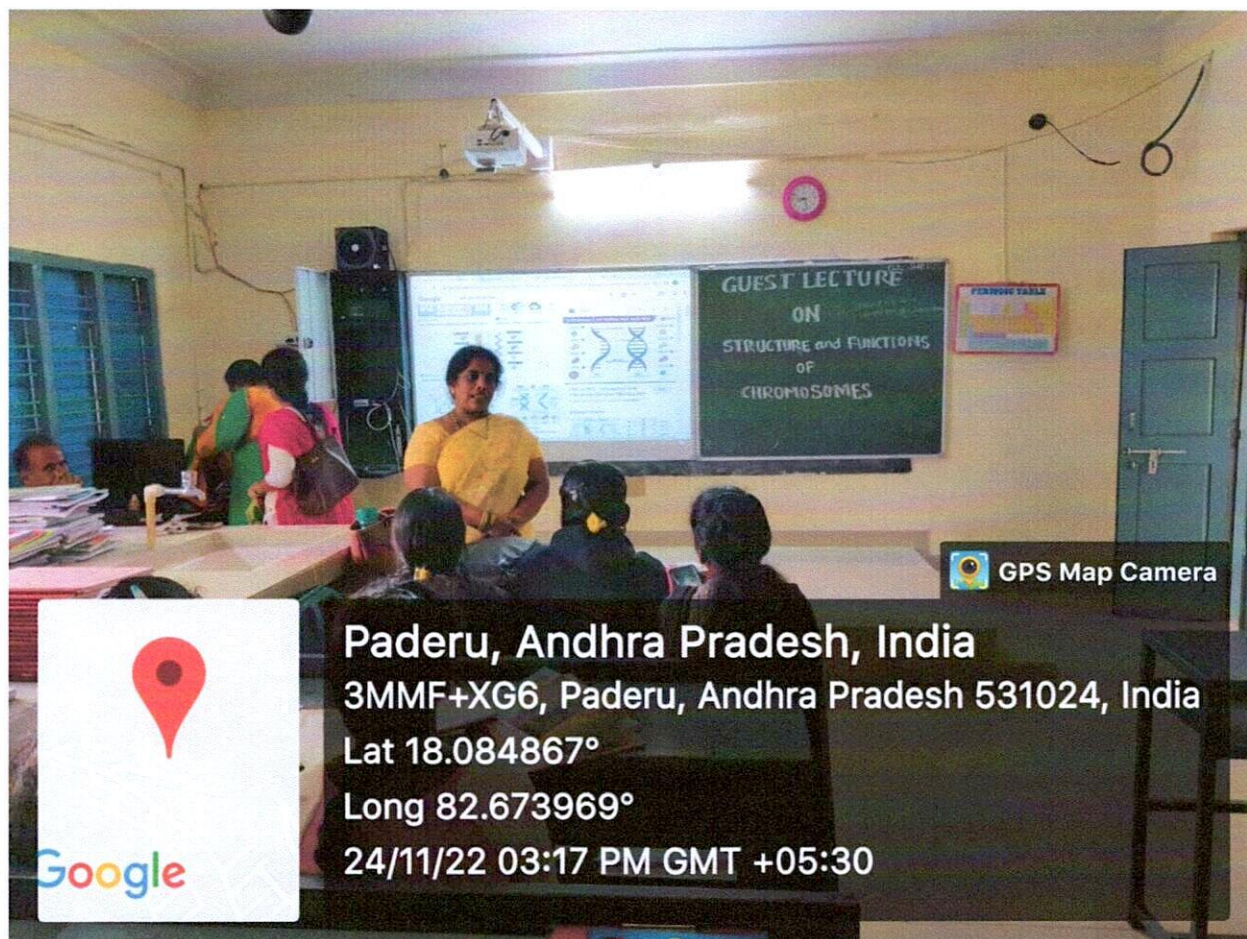
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## DEPARTMENT OF BOTANY GUEST LECTURE



Paderu, Andhra Pradesh, India

3MMF+XG6, Paderu, Andhra Pradesh 531024, India

Lat 18.084867°

Long 82.673969°

24/11/22 03:17 PM GMT +05:30

Guest Lecture on Function of Chromosomes delivered by Smt. **G.R.N.S. Sujatha** lecturer in Botany, Government Degree College Womens, Araku Valley.



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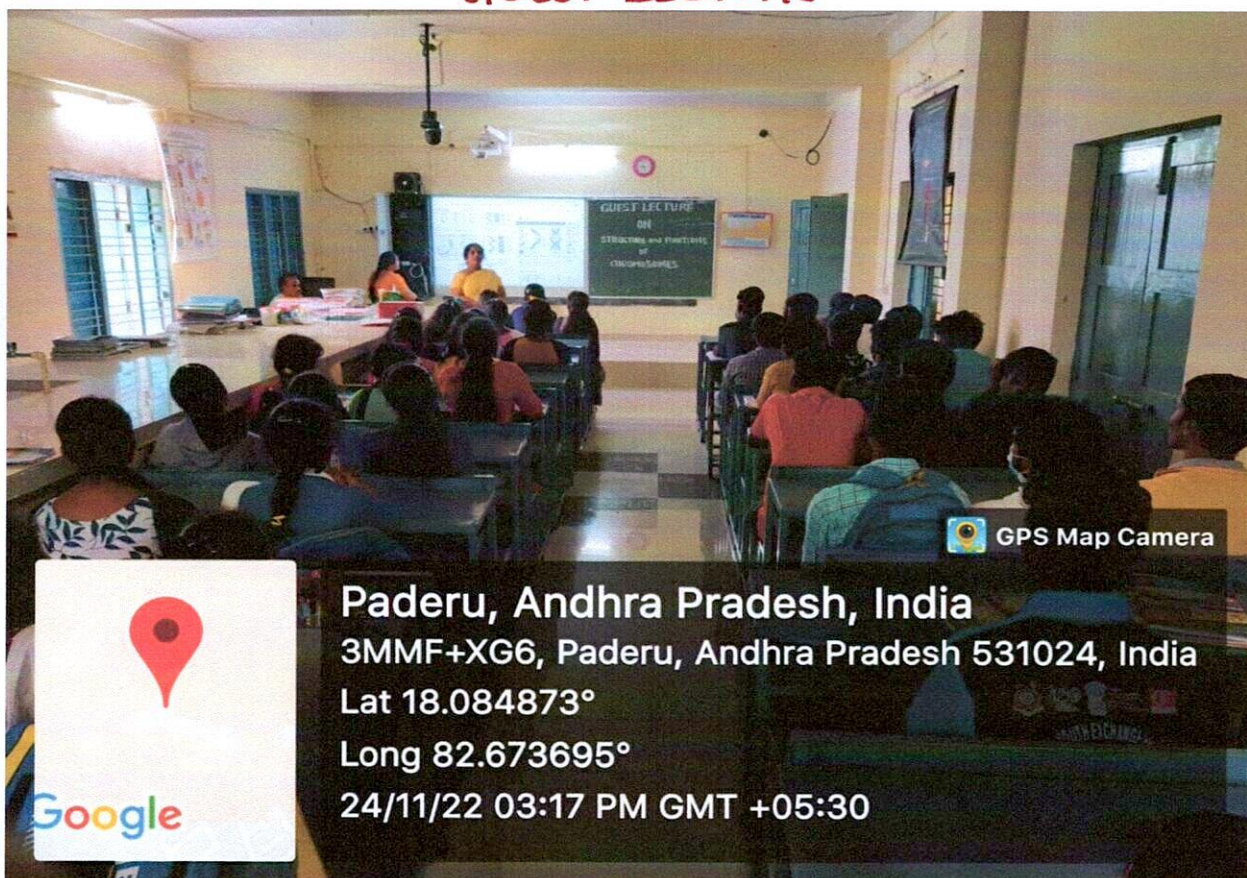
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## DEPARTMENT OF BOTANY GUEST LECTURE



Guest Lecture on Function of Chromosomes delivered by Smt.G.R.N.S. Sujatha lecturer in Botany, Government Degree College Womens, Araku Valley.



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## REPORT ON GUEST LECTURE

### TOPIC SYNOPSIS

Title: Understanding Chromosomes: The Blueprint of Life

#### **I. Introduction**

A. Greet the audience and introduce the topic of chromosomes. B. Provide a brief overview of the significance of chromosomes in genetics and heredity.

II. Definition: Chromosomes are thread-like structures made of DNA and proteins found in the nucleus of cells.

B. Explain the structure of chromosomes, including centromeres, telomeres, and chromatin.

C. Mention the different types of chromosomes: autosomes and sex chromosomes.

#### **III. Functions of Chromosomes**

A. Transmission of genetic information during cell division.

B. Regulation of gene expression and cellular processes. C. Importance in inheritance and genetic diversity.

#### **IV. Human Chromosomes**

A. Overview of the human karyotype: 23 pairs of chromosomes (46 total), including 22 pairs of autosomes and 1 pair of sex chromosomes.

B. Discussion on the differences between male (XY) and female (XX) sex chromosomes.

C. Mention common chromosomal abnormalities such as trisomy 21 (Down syndrome) and Turner syndrome.

#### **V. Chromosomes and Disease**

A. Explain how chromosomal abnormalities can lead to genetic disorders.

B. Discuss the role of chromosomes in cancer, including chromosomal mutations and chromosomal instability.

C. Highlight the importance of chromosomal analysis in diagnosing genetic diseases.



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## VI. Chromosomes and Evolution

- A. Explore the evolutionary significance of chromosomes.
- B. Discuss chromosomal rearrangements and their role in speciation.
- C. Mention examples of chromosomal evolution in different species.

## VII. Recent Advances and Future Directions

- A. Briefly mention recent developments in chromosome research, such as CRISPR-Cas9 technology and chromosome editing.
- B. Discuss potential future applications and implications of chromosome research.

## Conclusion

- A. Summarize key points discussed during the lecture.
- B. Invite questions from the audience.

Thank the audience for their participation and interest in the topic.

- B. Encourage further exploration of chromosomes and genetics.

This outline provides a structured approach to cover the fundamental aspects of chromosomes, their significance in biology, and their implications in various fields such as genetics, medicine, and evolution. Depending on the audience and time constraints, the lecture can be adjusted to delve deeper into specific topics or include more interactive elements such as case studies or demonstrations.



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**Paderu, Visakhapatnam -District, AP.**

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## DEPARTMENT OF BOTANY

DATE: 24-11-2022

### CERTIFICATE OF APPRECIATION

This is certified that Smt.**G.R.N.S.Sujatha** lecturer in Botany, Government Degree College Womens, Araku Valley has delivered guest lecture on "**Function of Chromosomes**" for B.sc students at Govt. Degree College, Paderu on 24-11-2022 at 11.00 am which is organized by Department of Botany.



*V. Ch*

Principal

Principal

Govt. Degree College

PADERU 534 024

Alluri Sitharama Raju-Dist.



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NAAC "C" Grade

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Email.ID :Paderu.jkc@gmail.com.

## Attendance Sheet

Name of the Activity: GUEST LECTURE

Date: 24-11-22.

Time: 11:00 am

Sl.No	Name of the Student	Class	Signature
1.	N. Simha Chalam	IIIrd B.Sc Seed Tech	N. Simha
2.	K. Narasimha Muthy	IIIrd B.S.C. Seed Tech	K. Narasimha
3.	G. Govardhan Reddy	IIIrd B.Sc Seed Tech	G. Govardhan Reddy
4.	R. Sai Kumar	IIIrd B.Sc Seed Tech	R. Sai Kumar
5.	K. Anand	IIIrd B.Sc Seed Tech	K. Anand
6.	O. Ajay Kumar	IIIrd B.Sc Seed Tech	O. Ajay Kumar
7.	K. Srinubabu	IIIrd B.Sc Seed Tech	K. Srinubabu
8.	V. Shivaji	IIIrd B.Sc Seed Tech	V. Shivaji
9.	P. Kiran Kumar	IIIrd B.S.C (Seed)	P. Kiran Kumar
10.	M. Gopi	IIIrd B.Sc Seed Tech	M. Gopi
11.	K. Siva	IIIrd B.Sc Seed Tech	K. Siva
12.	K. Hariharan	IIIrd B.Sc Seed Tech	K. Hariharan
13.	Sk. Salma Begam	IIIrd B.Sc (B2H)	Sk. Salma
14.	Sk. Nagar Beebi	IIIrd B.Sc (B2H)	Sk. Nagar Beebi
15.	V. Bhaskar Reddy	IIIrd B.Sc (B2H)	V. Bhaskar Reddy
16.	K. Chandini	IIIrd B.Sc (B2H)	K. Chandini
17.	P. Dhana Lakshmi	IIIrd B.Sc (B2H)	P. Dhana Lakshmi
18.	G. Sridevi	IIIrd B.Sc (B2H)	G. Sridevi
19.	B. Simhadri	IIIrd B.Sc (B2H)	B. Simhadri
20.	B. Swathi	IIIrd B.Sc (B2H)	B. Swathi
21.	K. Deepthi Rasanthi	IIIrd B.Sc (B2H)	K. Deepthi Rasanthi
22.	A. Rajendra Prasad	IIIrd B.Sc (B2H)	A. Rajendra Prasad
23.	B. Mahesh Babu	IIIrd B.Sc (B2H)	B. Mahesh Babu
24.	G. Rajeev	IIIrd B.Sc (B2H)	G. Rajeev
25.	MANUJURU. PRASANTH KUMA	IIIrd B.Sc (B2H)	M. Prasanth Kumar
26.	M. Vijaya Laxmi	IIIrd B.Sc (B2H)	M. Vijaya Laxmi
27.	G. Balakrishna	IIIrd B.Sc (B2H)	G. Balakrishna
28.	B. Ravichandru	IIIrd B.Sc (B2H)	B. Ravichandru
29.	G. Sridevi	IIIrd B.Sc (B2H)	G. Sridevi
30.	M. Suresh Kumar	IIIrd B.Sc B2H	M. Suresh Kumar
31.	R. Kevala	IIIrd B.Sc B2H	R. Kevala
32.	M. Bhim	IIIrd B.Sc Seed Tech	M. Bhim
33.	R.M.Ch. Anhil	IIIrd B.Sc Seed Tech	R.M.Ch. Anhil
34.	K. Saranya Kumar	IIIrd B.Sc Seed Tech	K. Saranya Kumar
	R. Vishnu	IIIrd B.Sc Seed Tech	R. Vishnu