

# Andhra Christian College, Guntur

(Day, Evening & P.G.)

## NOTICE

Date: 19-08-2022

All the B. Sc., Mathematics students are hereby informed to attend a seminar on "Group Theory: Kernel of a Homomorphism, Fundamental Theorem of Homomorphisms and its Applications" to be conducted on 22-08-2022. Mr. S. M. Subhani, Head, Department of Mathematics, St. Ann's Degree College for Women, Guntur will be the Resource Person for this seminar.

Venue: Dept. of Mathematics

Time : 4.00 p.m.

*B. Subhani*  
19/08/22

Head

Department of Mathematics

Dr. B. VIJAYA KUMAR  
Department of Mathematics  
Andhra Christian College, GUNTUR

*S. M. Subhani*  
Principal

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2. The Office Manager



# Andhra Christian College::Guntur

## Department of Mathematics

### Seminar Report on "Group Theory: Kernel of a Homomorphism, Fundamental Theorem of Homomorphisms and its Applications"

#### Introduction

The Department of Mathematics, Andhra Christian College, Guntur, organized a seminar on "Group Theory: Kernel of a Homomorphism, Fundamental Theorem of Homomorphisms and its Applications" on 22-08-2022. The seminar was graced by the presence of Mr. S. M. Subhani, Head, Department of Mathematics, St. Ann's Degree College for Women, Gorantla, Guntur, who served as the resource person.

#### Objectives of the Seminar

The seminar aimed to provide an in-depth understanding of the concepts of group theory, specifically focusing on:

1. The kernel of a homomorphism.
2. The fundamental theorem of homomorphisms.
3. Applications of these concepts in various mathematical and real-world contexts.

#### Seminar Proceedings

##### Opening Remarks

The seminar commenced with an introductory speech by the Head of the Department Dr. B. Vijaya Kumar. The speaker welcomed Mr. S. M. Subhani and highlighted his significant contributions to the field of Mathematics and his extensive experience in teaching.

Mr. S. M. Subhani began his presentation by defining a homomorphism between two groups, emphasizing the structure-preserving nature of these functions. He then introduced the concept of the kernel of a homomorphism, which is the set of elements in the domain that map to the identity element in the codomain.

##### Key Points Covered:

- Definition of a homomorphism.
- Definition and properties of the kernel of a homomorphism.
- Examples illustrating the calculation of kernels.
- The significance of the kernel in understanding the structure of groups.

After that he delved into the fundamental theorem of homomorphisms, also known as the first isomorphism theorem. He explained how this theorem provides a powerful tool for understanding the relationship between different groups.

**Key Points Covered:**

- Statement and proof of the fundamental theorem of homomorphisms.
- Examples demonstrating the application of the theorem.
- The role of normal subgroups and quotient groups in the theorem.
- How the theorem aids in the classification of groups.

After that he focused on the applications of the kernel of a homomorphism and the fundamental theorem of homomorphisms. Mr. Subhani discussed how these concepts are utilized in various areas of Mathematics and other disciplines.

**Key Points Covered:**

- Applications in solving polynomial equations.
- Use in cryptography and coding theory.
- Applications in symmetry and physics.
- Real-world problems where group theory plays a crucial role.

**Interactive Session**

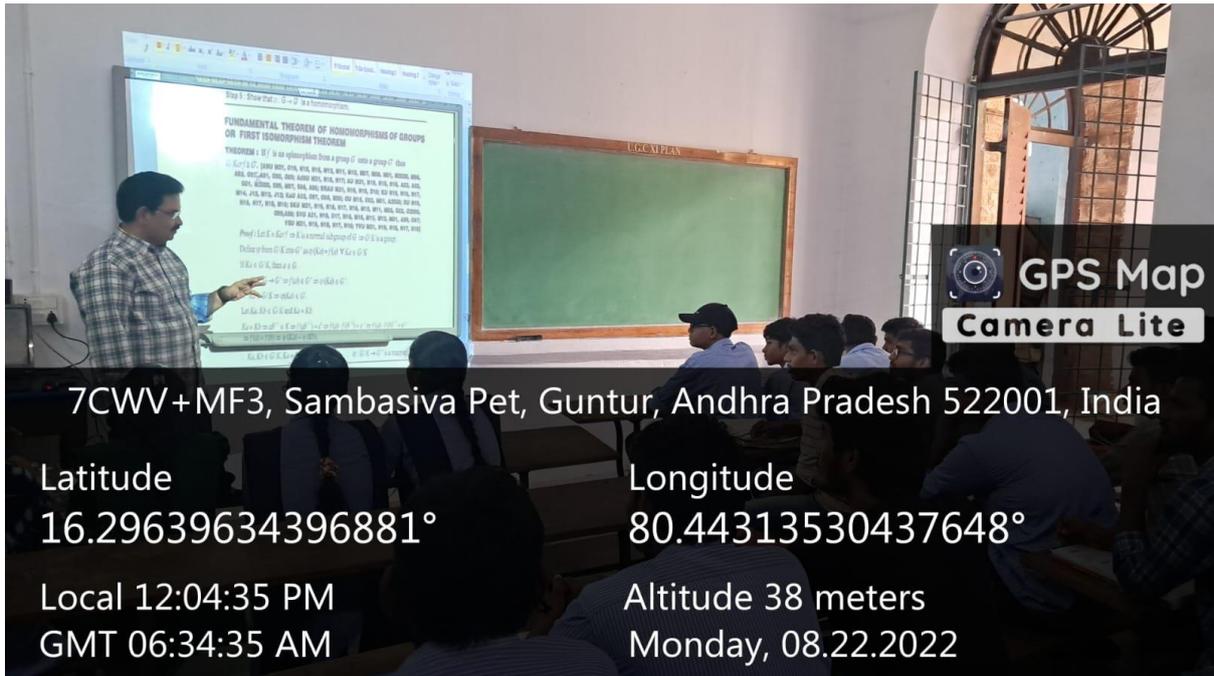
The seminar also included an interactive session where participants had the opportunity to ask questions and discuss their doubts with Mr. Subhani. This session was highly engaging and provided additional clarity on the topics discussed.

**Conclusion**

The seminar concluded with a vote of thanks by one of the participants. The participants expressed their appreciation for Mr. S. M. Subhani's insightful presentations and his ability to explain complex concepts in an accessible manner. The seminar was a great success, significantly enhancing the participants' understanding of group theory and its applications.

**Acknowledgements**

The Department of Mathematics, Andhra Christian College, Guntur, extends its heartfelt gratitude to Mr. S. M. Subhani for his valuable contribution to the seminar. Special thanks to the faculty members, and students for their active participation and support.



7CWV+MF3, Sambasiva Pet, Guntur, Andhra Pradesh 522001, India

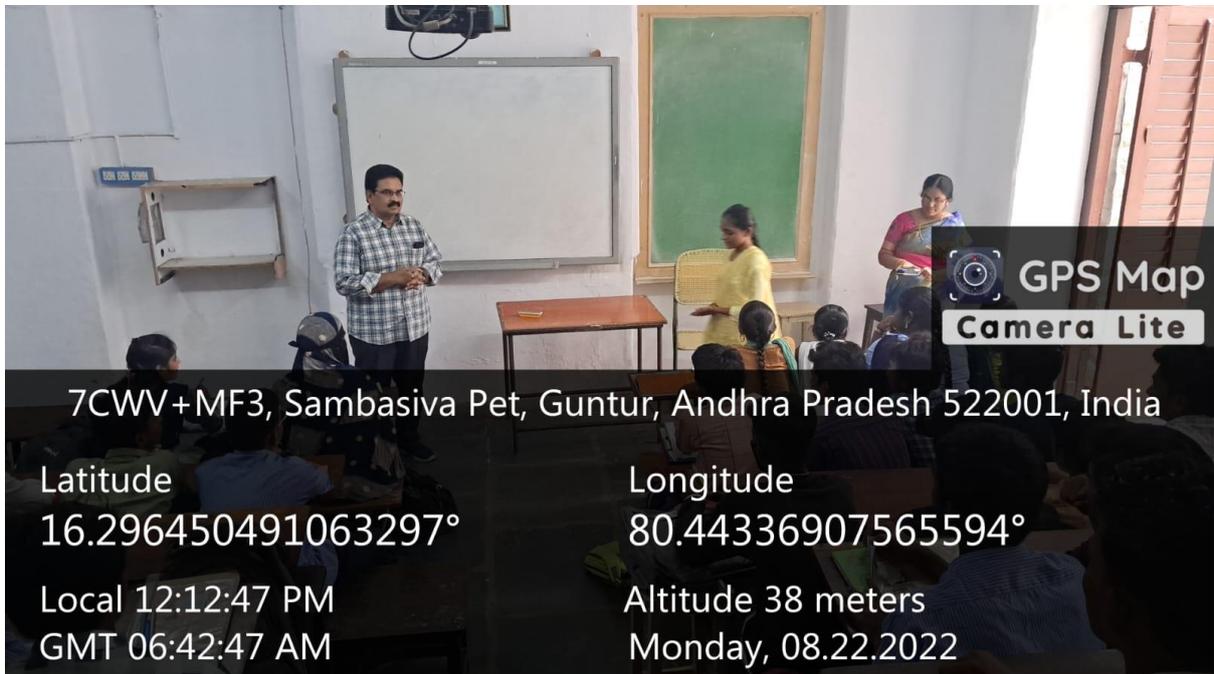
Latitude  
16.29639634396881°

Longitude  
80.44313530437648°

Local 12:04:35 PM  
GMT 06:34:35 AM

Altitude 38 meters  
Monday, 08.22.2022

**Mr. S. M. Subhani, Resource Person for the Seminar, with Participants**



7CWV+MF3, Sambasiva Pet, Guntur, Andhra Pradesh 522001, India

Latitude  
16.296450491063297°

Longitude  
80.44336907565594°

Local 12:12:47 PM  
GMT 06:42:47 AM

Altitude 38 meters  
Monday, 08.22.2022

**The seminar concluded with a vote of thanks by one of the participants**

### List of Students

S. No.	Name of the Student	Class & Group	Roll.No	Signature
1	K.Hemanth	I B. Sc., MPC	602	K. Hemanth
2	M.RaviTeja	I B. Sc., MPC	603	M. Ravi Teja.
3	Sk.Shahina Begum	I B. Sc., MPC	604	Sk. Shahina Begum
4	S.Rani	I B. Sc., MPC	605	S. Rani
5	A.Ravi Teja	I B. Sc., MPC	606	A. Ravi Teja.
6	M.Keethi	I B. Sc., MPC	609	M. Keethi
7	D.Yesu Babu	I B. Sc., MPC	610	D. Yesu Babu
8	E.Srikanth	I B. Sc., MPC	611	E. Srikanth
9	J.Haveela	I B. Sc., MPC	612	J. Haveela
10	P.Madhavi	I B. Sc., MPC	613	P. Madhavi
11	K.Sailaja	I B. Sc., MPCComp.	614	K. Sailaja
12	T.Venkata Rao	I B. Sc., MPCComp.	1402	T. Venkata Rao
13	A.Gopi Chand	I B. Sc., MPCComp.	1403	A. Gopi Chand
14	D.Tagore	I B. Sc., MPCComp.	1404	D. Tagore
15	B.Sandhya Rani	I B. Sc., MPCComp.	1405	B. Sandhya Rani
16	Sk.Nazeera	II B. Sc., MPC	601	Sk. Nazeera
17	Y.Naga Bhargav	II B. Sc., MPC	604	Y. Naga Bhargav.
18	Sk.Naseema	II B. Sc., MPC	606	Sk. Naseema
19	K.Madhu Kumar	II B. Sc., MPC	607	K. Madhu Kumar
20	T.Jeeva Saranu	II B. Sc., MPC	608	T. Jeeva Saranu
21	Md.Sultan Sareef	II B. Sc., MPC	609	Md. Sultan Sareef
22	B.Prasanna Babu	II B. Sc., MPC	610	B. Prasanna Babu.
23.	B.Shyam Kumar	III B.Sc.,MPC	601	B. Shyam Kumar
24.	B. Naveen Kumar	III B.Sc.,MPC	602	B. Naveen Kumar
25.	S. Revanth Siva	III B.Sc.,MPC	609	S. Revanth Siva

26.	K. Chaitanya	III B.Sc.,MPC	623	K.chaitanya
27.	P.Thamas	III B.Sc.,MPCComp.,	1401	P.Thamas
28.	K.Guravaiah	III B.Sc.,MPCComp	1402	K. Guravaiah
29.	K. Vyshnavi	III B.Sc.,MPCComp	1417	K. Vyshnavi
30.	P.Sameera	III B.Sc.,MPCComp	1408	P.Sameera
31.	A.Ravi Kumar	III B.Sc.,MPCComp	1409	A.Ravi Kumar
32.	D.Durga Rao	III B.Sc.,MPCComp	1418	D. Durga Rao
33.	K.John Wesly	III B.Sc.,MPCComp	1423	K. John wesly
34.	M.Gopi Chand	III B.Sc.,MPCComp	1424	M.Gopi Chand
35.	V.Pushparajy	III B.Sc.,MPCComp	1425	V.Pushparajy
35.	D.Harshini	III B.Sc.,MPCComp	1410	D.Harshini
36.	V.Mahesh Babu	III B.Sc.,MPCComp	1419	V. mahesh Babu
37.	G.Srinu	III B.Sc.,MPCComp	1420	G. Srinu
38.	Y.Prem Kumar	III B.Sc.,MPC	625	Y.premkumar
39.	R.Sai Kumar	III B.Sc.,MPC	626	R.Sai Kumar
40.	V.Ganesh	III B.Sc.,MPC	627	V. Ganesh

*Dr. S. Fatema Rani P*

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**GORANTLA, GUNTUR-522 034**

*[Signature]*  
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# Andhra Christian College::Guntur

## Department of Mathematics

### Seminar Report on "Sequences and Their Applications"

#### Introduction

The Department of Mathematics, Andhra Christian College, Guntur, organized a seminar on the topic "Sequences and Their Applications" on 15-11-2022. The seminar was aimed at the B.Sc. Mathematics students and featured Ms. L. Mary Anusha, Lecturer in Mathematics, St. Ann's Degree College for Women, Gorantla, Guntur, as the resource person. The seminar was coordinated by Dr. B. Vijaya Kumar, Head of the Department, along with faculty members Dr. J. M. Pradeep, Senior Lecturer, Mr. R. Vijaya Daniel, Lecturer, and Mrs. G. Santhi Priya Ranjani, Lecturer.

#### Objectives of the Seminar

The seminar had the following objectives:

1. To introduce students to the concept of sequences and their fundamental properties.
2. To explore various applications of sequences in different fields of Mathematics.
3. To enhance students' analytical and problem-solving skills through practical examples and applications of sequences.

#### Seminar Proceedings

##### Opening Remarks

The seminar began with an introductory speech by Dr. B. Vijaya Kumar, Head of the Department of Mathematics. He welcomed the faculty members, students, and the resource person, Ms. L. Mary Anusha. He emphasized the importance of understanding sequences and their applications in higher mathematics and various real-world contexts.

##### Introduction to Sequences

Ms. L. Mary Anusha commenced the session by defining sequences and explaining their significance in Mathematics. She covered the basic properties of sequences and provided several examples to illustrate these concepts.

##### Key Points Covered:

- Definition of sequences.
- Types of sequences.
- Convergence and divergence of sequences.
- Importance of sequences in mathematical analysis.

##### Applications of Sequences

Ms. Anusha focused on the applications of sequences in various fields of Mathematics and other disciplines. She highlighted how sequences are used in solving complex problems and provided practical examples.

##### Key Points Covered:

- Sequences in calculus and series.
- Applications in computer science, particularly in algorithms and data structures.
- Use of sequences in financial mathematics and economics.
- Sequences in natural sciences and engineering.

## Problem-Solving and Examples

The final session was dedicated to problem-solving and practical examples. Ms. Anusha engaged the students with interactive problems and guided them through the solutions, demonstrating the application of sequences in various contexts.

## Key Points Covered:

- Solving problems using arithmetic and geometric sequences.
- Real-world examples where sequences play a crucial role.
- Techniques for analyzing and deriving sequences.
- Encouraging students to think critically and apply sequences to new problems.

## Interactive Session

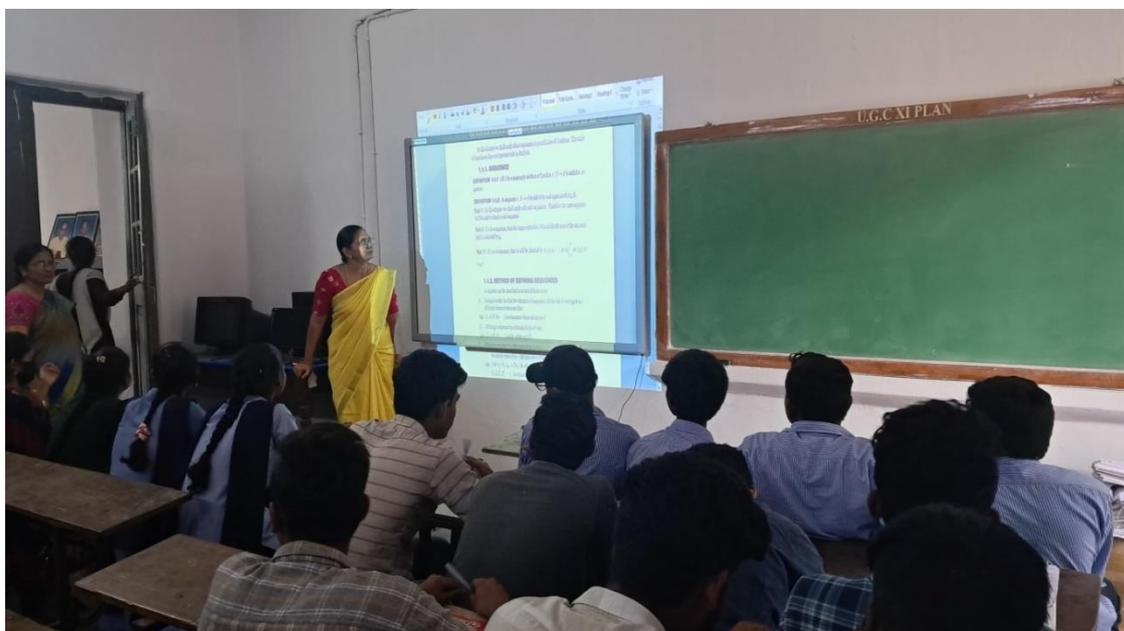
An interactive session followed the main presentations, allowing students to ask questions and engage in discussions with Ms. Anusha. This session was highly engaging and provided students with deeper insights into the topic of sequences and their applications.

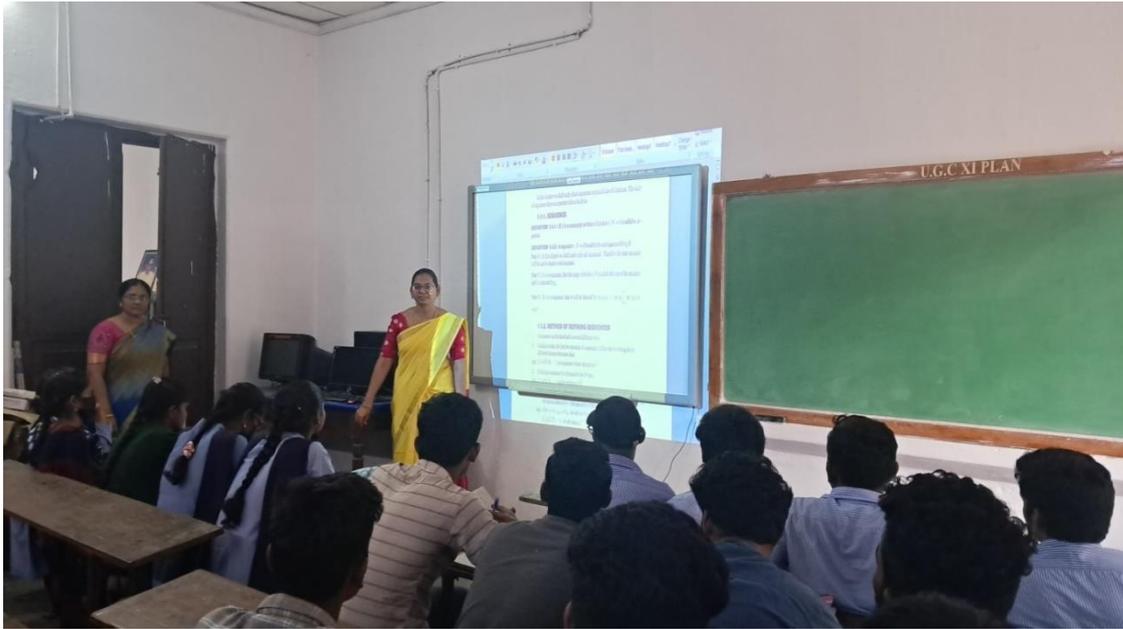
## Conclusion

The seminar concluded with a vote of thanks by Dr. J. M. Pradeep, Senior Lecturer. The students expressed their appreciation for Ms. L. Mary Anusha's informative and well-structured presentation. The seminar successfully achieved its objectives, enhancing the students' understanding of sequences and their applications in various fields of Mathematics.

## Acknowledgements

The Department of Mathematics, Andhra Christian College, Guntur, extends its heartfelt gratitude to Ms. L. Mary Anusha for her valuable contribution to the seminar. Special thanks to the faculty members, and students for their active participation and support.





**Ms. L. Mary Anusha delivering her seminar on the topic  
"Sequences and Their Applications."**

**Andhra Christian College, Guntur**

(Day, Evening & P.G.)

**NOTICE**

Date: 14-11-2022

All the B. Sc., Mathematics students are hereby informed to attend a Seminar in the department of Mathematics on the topic "Sequences and Their Applications" to be conducted on 15-11-2022 at 11.00 a.m.. Ms. L. Mary Anusha, Lecturer in Mathematics, St. Ann's Degree College for Women, Gorantla, Guntur will be the Resource Person for this seminar.

*B. Kumar*  
14-11-22

**Head**

Department of Mathematics  
**DR. B. VIJAYA KUMAR**  
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Department of Mathematics  
Andhra Christian College, GUNTUR

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**Mrs. G. Santhi Priya Ranjani, Lecturer in Mathematics of our college attended a seminar as resource person at St. Ann's College, Gorantla, Guntur.**

**Resource Person:** Mrs. G. Santhi Priya Ranjani, Lecturer in Mathematics, A. C. College, Guntur.

**Date:** 16-02-2023 at 3.00 p.m.

A seminar on "Solid Geometry - Distance Between Skew Lines" was conducted for the first-year B.Sc. Mathematics students of St. Ann's College, Gorantla, Guntur, on 16th February 2023 at 3:00 p.m. The resource person for the seminar was Smt. G. Santhi Priya Ranjani, a distinguished lecturer in Mathematics from A.C. College, Guntur.

The session commenced with a brief introduction to the concept of skew lines in solid geometry, which are lines that do not intersect and are not parallel. Smt. Santhi Priya Ranjani then delved into the core topic, explaining the mathematical derivation and geometric interpretation of the formula for finding the shortest distance between two skew lines. She illustrated the concept with several examples and diagrams, helping students visualize the orientation of lines in three-dimensional space.

Throughout the seminar, the students were engaged in interactive discussions, which enhanced their understanding of the topic. The session concluded with a Q&A segment, where she addressed the queries raised by the students, providing further clarity on complex aspects of the topic.

The seminar was highly informative and beneficial for the students, deepening their comprehension of solid geometry. The students expressed their gratitude to the resource person for her insightful lecture and to the college for organizing such an enriching event.



