

SGK GOVERNMENT DEGREE COLLEGE- VINUKONDA
(Affiliated to Acharya Nagarjuna University, Guntur, AP)
PALNADU DIST. A.P: 522647

Certificate Course
in

Introduction to Solid State Physics



Organized By

Department Of Physics

DATE: 28 .11.2022 to 20-01-2023

A.Y- 2022-2023

ABOUT THE COLLEGE

Srimathi Gangineni Kalyani Government Degree College, Vinukonda was established in 1980 to serve the higher education needs of the academically backward Palnadu region. It is located on the outskirts of Vinukonda, a small town in Guntur district. It is the only Government Degree College catering the academic aspirations of the young in palnadu region. Till 1979, students who were desirous of pursuing higher education were moving too far off places. The philanthropic intervention of Sri Gangineni Venkateswara Rao, Ex- MLA, Sri O. Venkateswarlu, Ex- MLA and Dr. V. Adi Reddy could realize the higher education dreams of the students on 11th September 1980. Initially, it rendered its services in the name of Madala Satyannarayana and Manne Rathamma Government Degree College and later re-named after its donor and former Principal Srimati Gangineni Kalyani (late). The college is sprawled out over 21 acres of vast land area and eco-friendly environment. It provides spacious and aerated classrooms, well equipped laboratories, library with 12,500 books and reading room, modern gymnasium, virtual lab, English language lab, Jawahar Knowledge Centre (JKC) for skill development, which are all well supported by serene and iconic ambience. The college achieved the status of 2(f) and 12(B) in 1994. For the quality education it has been imparting for the last 40 years, strictly adhering to the guidelines of UGC, it has been conferred with NAAC 'B' Grade twice (2006 & 2015). The college takes pride by offering quality education to students from the competent and qualified teaching faculty. The college has 20 sanctioned teaching posts, including Principal. Of them, six faculty members have Doctoral degrees in their respective subjects, one has M.Phil. Degree and all the lecturers have qualified in NET/SLET/SET. The college also provides opportunity for students to receive online certification from Spoken Tutorial maintained by IIT,Bombay and CISCO certified courses free of cost. Also imparting training in General knowledge and aptitude to prepare the students for competitive examinations and providing access to Jagananna Vidya Deevena and Vasthi Deevena scholarships given by Government of Andhra Pradesh to support students.

OUR VISION:

The vision of the institution is to make available higher education to all the young aspirants of the region and to edify their overall personality, keeping the emerging trends of the society in the view.

OUR MISSION:

To materialize the vision mentioned above, the mission is divided into the following achievable objectives.

- Catering to the academic needs of the rural poor students
- Imparting life skills to fit the students in the job market effectively
- Inculcating the spirit of diligence to achieve their goal and build their career
- Enriching the curriculum with value-based activities for the holistic development of the students
- Fostering the spirit of confidence and sportsmanship

OBJECTIVES:

- Serving the needs of rural students
- To enable the poor and down trodden/under privileged sections of the society and access to gainful employment opportunities by imparting skill oriented education.
- To achieve the academic excellence
- To inculcate human values and social responsibilities

ABOUT THE DEPARTMENT

Department of Physics was established in 1983 with an objective of providing quality science education in the conventional areas of sciences. It is the major department in the college with 1 sanctioned post with 79 Physics students serving 2 Physics combination groups (MPC, MPCs) in Physics undergraduate programme. The department has also dedicated, motivated, and enthusiastic group of faculty members actively involving in both teaching and research. The department encourages the students for completion of MOOCS, certificate courses and innovative activities. The Department of Physics recognizes and respects individual differences and we care deeply about the educational and career development of every member of our community. We always try to transforming the young to become good and responsible Indian citizens.

VISION:

Educating students in frontier areas of Physics enables them with essential knowledge and skills for real – world applications

MISSION:

- To inculcate the outcome based on holistic education in frontier areas of physics.
- To develop competent physicists who address future issues of society.
- To produce good quality human resources sensitive to environmental and sustainable development issues.
- To produce globally competitive, ethical and socially responsible young minds.

COURSES OFFERED

Course	Specialization	Intake	Medium
B.Sc	Mathematics, Physics, Chemistry	30	English
B.Sc	Mathematics, Physics, Computer Science	30	English

FACULTY PROFILE:

Name of the Faculty	Qualifications	Position
Sri B. NageswaraRao	M. Sc, NET, A.P SET	Lecturer in physics

ABOUT THE CERTIFICATE COURSE

This course is designed to introduce the structural properties and X-ray Crystallography techniques of solids to the students. It is supposed to be the fundamental course on solid state physics, covering in details the representation of crystal structure, symmetries in solid, x-ray diffraction. We will carefully develop the concepts in logical steps and solve problems, resulting in a concrete understanding of the topics. While a course covering these topics is mandatory in almost every university around the world for the Physics students.

PREREQUISITES: One should have some idea of quantum mechanics, statistical mechanics, vector algebra & calculus, and simple geometry.

Learning Objectives

Unit 1: Crystalline Nature of Matter

- Understand the concept of the crystalline nature of matter.
- Define and explain the terms space lattice, unit cell, and crystal lattice.
- Comprehend translation vectors and their role in describing crystal structures.
- Identify elements of symmetry in crystals and their significance.
- Recognize and differentiate between the seven crystal systems.
- Understand Bravais space lattices and their classification.
- Define lattice constant and its importance in crystallography.
- Describe directions and lattice planes in crystals.
- Learn how to determine and represent crystallographic directions and planes using Miller indices.

Unit 2: Crystal Structures

- Explore the simple cubic crystal structure and its characteristics.
- Understand the body-centered cubic (BCC) crystal structure and its properties.
- Examine the face-centered cubic (FCC) crystal structure and its features.
- Study the diamond crystal structure, including its arrangement of atoms.
- Learn about the zinc blende crystal structure and its distinctive properties.
- Analyze the crystal structure of CsCl (Cesium Chloride).

- Investigate the crystal structure of NaCl (Sodium Chloride).

Unit 3: X-ray Crystallography

- Explore the principles of X-ray diffraction by crystals.
- Understand Bragg's Law and its application in X-ray diffraction.
- Learn about Bragg's X-ray spectrometer and how it is used in crystallography.
- Familiarize yourself with the Laue method for crystallography.
- Explore the powder method for crystal structure determination.
- Understand Moseley's Law and its significance in X-ray crystallography.

These learning objectives provide a comprehensive foundation in the field of crystallography, covering the fundamental concepts, crystal structures, and experimental techniques used to study crystals and their properties. Students who successfully complete these units should have a strong understanding of crystallography principles and techniques.

Syllabus

Unit 1: Crystalline Nature of Matter

Crystalline nature of matter, Space lattice, Unit cell and Crystal lattice, Translation vectors, Elements of symmetry, The Seven crystal systems, Bravais Space Lattices, Lattice Points Per Unit Cell, Lattice constant, Directions and lattice planes, Miller Indices, Interplanar Spacing

Unit 2: Crystal Structures

Simple cubic Structure, Body Centered Structure(BCC), Face centered Crystal structure (FCC), Diamond Structure, Zinc Blende structure, Structure of CsCl, NaCl Structure

Unit 3: X-ray Crystallography

Diffraction of X-rays by crystals, Bragg's Law, Bragg's X-ray spectrometer, Laue method, Powder method, Moseley's Law.

Evaluation:

Practice Test for 25 Marks

Final Examination for 75 Marks

Assessment:

Students are assessed with a practice test and final Exam conducted at the end of the course. The exams are conducted for 100 marks and the student has to score at least 50 marks to get the certificate. The practice exam is conducted in the middle of the course in order to assess the students and act according to their learning levels.



SGK GOVERNMENT DEGREE COLLEGE

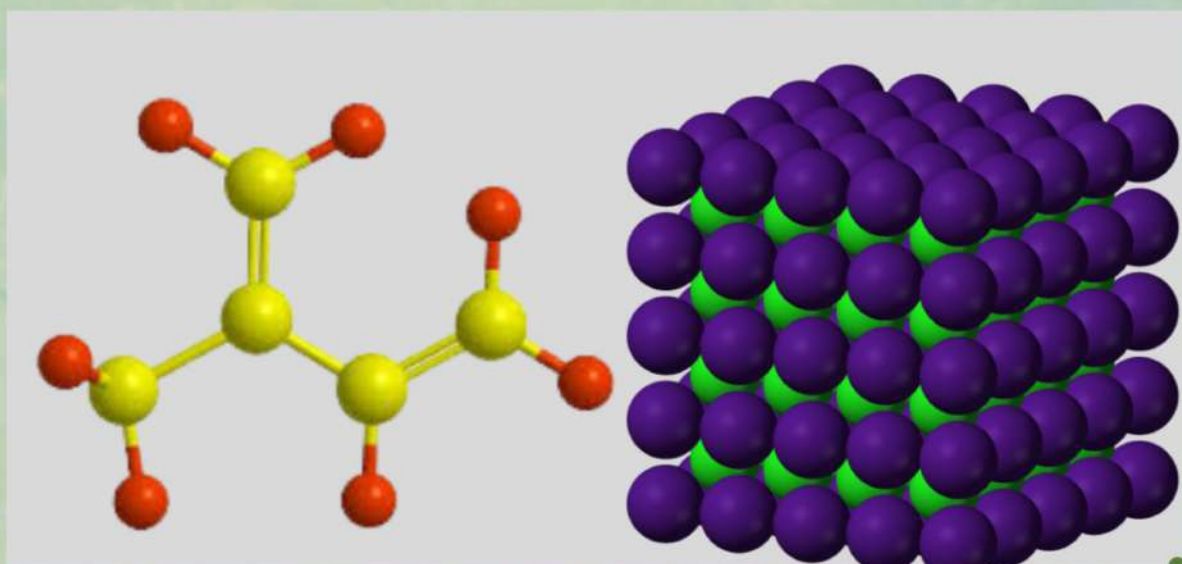
**Affiliated to Acharya Nagarjuna University
Vinukonda, Palnadu District-522647**



DEPARTMENT OF PHYSICS OFFERS

Certificate Course in

Introduction to Solid State Physics



BATCH STARTS FROM 28.11.2022

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www.sgkgdcvinukonda.ac.in

Detailed Pedagogical Plan

S. No.	Date	Name of the Topic	Taken By
1	28.11.2022	Introduction & Syllabus	Mr. B. NageswaraRao
2	29.11.2022	Crystalline nature of matter	Mr. B. NageswaraRao
3	30.11.2022	Space lattice	Mr. B. NageswaraRao
4	01.12.2022	Unit cell and Crystal lattice	Mr. B. NageswaraRao
5	02.12.2022	Translation vectors	Mr. B. NageswaraRao
6	06.12.2022	Elements of symmetry	Mr. B. NageswaraRao
7	12.12.2022	The Seven crystal systems	Mr. B. NageswaraRao
8	15.12.2022	Bravais Space Lattices	Mr. B. NageswaraRao
9	16.12.2022	Lattice Points Per Unit Cell	Mr. B. NageswaraRao
10	17.12.2022	Lattice constant	Mr. B. NageswaraRao
11	19.12.2022	Directions and lattice planes	Mr. B. NageswaraRao
12	20.12.2022	Miller Indices	Mr. B. NageswaraRao
13	22.12.2022	Interplanar Spacing	Mr. B. NageswaraRao
14	23.12.2022	Numerical Problems	Mr. B. NageswaraRao
15	27.12.2022	Practice Test	Mr. B. NageswaraRao
16	28.12.2022	Simple cubic Structure	Mr. B. NageswaraRao
17	29.12.2022	Body Centered Structure(BCC)	Mr. B. NageswaraRao
18	30.12.2022	Face centered Crystal structure (FCC)	Mr. B. NageswaraRao
19	02.01.2023	Diamond Structure	Mr. B. NageswaraRao
20	03.01.2023	Zinc Blende structure	Mr. B. NageswaraRao
21	04.01.2023	Structure of CsCl	Mr. B. NageswaraRao
22	05.01.2023	NaCl Structure	Mr. B. NageswaraRao
23	06.01.2023	Diffraction of X-rays by crystals	Mr. B. NageswaraRao
24	07.01.2023	Bragg's Law	Mr. B. NageswaraRao
25	09.01.2023	Bragg's X-ray spectrometer	Mr. B. NageswaraRao
26	10.01.2023	Laue method	Mr. B. NageswaraRao
27	11.01.2023	Powder method	Mr. B. NageswaraRao
28	18.01.2023	Moseley's Law	Mr. B. NageswaraRao
29	19.01.2023	Numerical problems	Mr. B. NageswaraRao
30	20.01.2023	Final Exam	Mr. B. NageswaraRao


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LIST OF STUDENTS ENROLLED

S. No	Hall Ticket no	Name of the Student	Group
1	Y203099041	BHUKHYA CHANDRA BABU NAIK	III B. Sc (M.P.C)
2	Y203099042	BOYALAPALLI LAZAR BABU	III B. Sc (M.P.C)
3	Y203099043	CHODAVARAPU SIREESHA	III B. Sc (M.P.C)
4	Y203099046	DIDDI SREENIVAS	III B. Sc (M.P.C)
5	Y203099049	DUDEKULA ALEEMA	III B. Sc (M.P.C)
6	Y203099050	ENIBERA EMEEMA	III B. Sc (M.P.C)
7	Y203099051	JEGINI PALANKAIAH	III B. Sc (M.P.C)
8	Y203099053	MALLAPURAM SRIKANTH	III B. Sc (M.P.C)
9	Y203099058	THIRUMALA SUBBARAYUDU	III B. Sc (M.P.C)
10	Y203099060	ADDANKI MANI	III B.Sc (M.P.Cs)
11	Y203099061	ATCHYUTHA LAHARI MANI	III B.Sc (M.P.Cs)
12	Y203099062	BANAVATHU EDUKONDALU NAIK	III B.Sc (M.P.Cs)
13	Y203099063	BOYALAPALLI JAKRAIAH	III B.Sc (M.P.Cs)
14	Y203099064	CHANDOLU SAVITRI KUMARI	III B.Sc (M.P.Cs)
15	Y203099065	INDLACHERUVU SUMANJALI	III B.Sc (M.P.Cs)
16	Y203099066	JENNEPOGU ANITHA JOSHNA	III B.Sc (M.P.Cs)
17	Y203099067	KANCHARLA VEERANJANEYULU	III B.Sc (M.P.Cs)
18	Y203099068	KATAKAM DIVYA	III B.Sc (M.P.Cs)
19	Y203099069	KOMMURI ADILAKSHMI	III B.Sc (M.P.Cs)
20	Y203099070	K N VEERA DAKSHINA MURTHY	III B.Sc (M.P.Cs)
21	Y203099074	MALAPATI THIRUPATHIRAO	III B.Sc (M.P.Cs)
22	Y203099075	MALAPATI VEERANARAYANA	III B.Sc (M.P.Cs)
23	Y203099076	NEELAM DIVYA JYOTHI	III B.Sc (M.P.Cs)
24	Y203099077	PALADUGU CHANDRA KALA	III B.Sc (M.P.Cs)
25	Y203099079	PIDATHALA MAHESWARI	III B.Sc (M.P.Cs)
26	Y203099080	RACHAMALLA	III B.Sc (M.P.Cs)
27	Y203099082	REDDYBOINA MAHESH	III B.Sc (M.P.Cs)
28	Y203099084	SATTEBOINA GOWTHAMI	III B.Sc (M.P.Cs)
29	Y203099085	SHAIK BAJI	III B.Sc (M.P.Cs)
30	Y203099086	SHAIK ITLAPURAM KHASIM SHAIDA	III B.Sc (M.P.Cs)
31	Y203099087	TIRUVAIPATI MALLIKARJUNA	III B.Sc (M.P.Cs)
32	Y203099088	TURIMELLA NAGESWARA RAO	III B.Sc (M.P.Cs)
33	Y203099089	YARRAGUNTALA AKHIL	III B.Sc (M.P.Cs)


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S. No	Reg. No	Name of the Student	Group	Signature
1	Y203099041	BHUKHYA CHANDRA BABU NAIK	III B. Sc (M.P.C)	B. chandra babu naik
2	Y203099042	BOYALAPALLI LAZAR BABU	III B. Sc (M.P.C)	B. Lazar babu
3	Y203099043	CHODAVARAPU SIREESHA	III B. Sc (M.P.C)	C. Sireesha
4	Y203099046	DIDDI SREENIVAS	III B. Sc (M.P.C)	D. Sreenivas
5	Y203099049	DUDEKULA ALEEMA	III B. Sc (M.P.C)	D. Aleema
6	Y203099050	ENIBERA EMEEMA	III B. Sc (M.P.C)	E. Emeema
7	Y203099051	JEGINI PALANKAIAH	III B. Sc (M.P.C)	J. Palankiah
8	Y203099053	MALLAPURAM SRIKANTH	III B. Sc (M.P.C)	M. Srikanth
9	Y203099058	THIRUMALA SUBBARAYUDU	III B. Sc (M.P.C)	T. Subbarayudu
10	Y203099060	ADDANKI MANI	III B.Sc (M.P.Cs)	A. Mani
11	Y203099061	ATCHYUTHA LAHARI MANI	III B.Sc (M.P.Cs)	A. Lahariman
12	Y203099062	BANAVATHU EDUKONDALU	III B.Sc (M.P.Cs)	B. Edukondalu
13	Y203099063	BOYALAPALLI JAKRAIAH	III B.Sc (M.P.Cs)	B. Jakarcelu
14	Y203099064	CHANDOLU SAVITRI KUMARI	III B.Sc (M.P.Cs)	C. Savitrikumari
15	Y203099065	INDLACHERUVU SUMANJALI	III B.Sc (M.P.Cs)	I. Sumanjali
16	Y203099066	JENNEPOGU ANITHA JOSHNA	III B.Sc (M.P.Cs)	J. Anitha Joshna
17	Y203099067	KANCHARLA VEERANJANEYULU	III B.Sc (M.P.Cs)	K. Veeraji neyulu
18	Y203099068	KATAKAM DIVYA	III B.Sc (M.P.Cs)	K. Divya
19	Y203099069	KOMMURI ADILAKSHMI	III B.Sc (M.P.Cs)	K. Adilakshmi
20	Y203099070	K N VEERA DAKSHINA MURTHY	III B.Sc (M.P.Cs)	K. N. V. D. Murthy
21	Y203099074	MALAPATI THIRUPATHIRAO	III B.Sc (M.P.Cs)	M. Thirupathirao
22	Y203099075	MALAPATI VEERANARAYANA	III B.Sc (M.P.Cs)	M. Veeranarayana
23	Y203099076	NEELAM DIVYA JYOTHI	III B.Sc (M.P.Cs)	N. Divya Jyothi
24	Y203099077	PALADUGU CHANDRA KALA	III B.Sc (M.P.Cs)	P. Chandra kala
25	Y203099079	PIDATHALA MAHESWARI	III B.Sc (M.P.Cs)	P. maheswari
26	Y203099080	RACHAMALLA	III B.Sc (M.P.Cs)	R. Mallikarjun
27	Y203099082	REDDYBOINA MAHESH	III B.Sc (M.P.Cs)	R. Mahesh
28	Y203099084	SATTEBOINA GOWTHAMI	III B.Sc (M.P.Cs)	S. Gowthami
29	Y203099085	SHAIK BAJI	III B.Sc (M.P.Cs)	SK. Baji
30	Y203099086	SHAIK ITLAPURAM KHASIM	III B.Sc (M.P.Cs)	SH. I. KHASIM
31	Y203099087	TIRUVAIPATI MALLIKARJUNA	III B.Sc (M.P.Cs)	T. mallikarjuna
32	Y203099088	TURIMELLA NAGESWARA RAO	III B.Sc (M.P.Cs)	T. Nageswara Rao
33	Y203099089	YARRAGUNTALA AKHIL	III B.Sc (M.P.Cs)	Y. Akhil

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S. No	Name of the Student	28-11-2022	29-11-2022	30-11-2022	01-12-2022	02-12-2022	06-12-2022	12-12-2022	15-12-2022	16-12-2022	17-12-2022	19-12-2022	20-12-2022	22-12-2022	23-12-2022	27-12-2022	28-12-2022
1	B. Chandra Babu Naik	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P
2	Boyalapalli Lazar Babu	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
3	Chodavarapu Sireesha	P	A	P	P	P	A	P	P	P	P	P	P	P	P	A	P
4	Didi Sreenivas	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P
5	Dudekula Aleema	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	Enibera Emeema	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P
7	Jegini Palankaiah	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	A
8	Mallapuram Srikanth	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P
9	Thirumala Subbarayudu	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P
10	Addanki Mani	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
11	Atchyutha Lahari Mani	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	B. Edukondalu Naik	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P
13	Boyalapalli Jakraiah	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
14	Chandolu Savitri Kumari	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
15	Indlacheruvu Sumanjali	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
16	J. Anitha Josha	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
17	K. Veeranjanyulu	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
18	Katakam Divya	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P
19	Kommuri Adilakshmi	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P
20	K N V. D Murthy	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
21	Malapati Thirupathirao	P	P	P	P	A	P	P	P	A	P	P	A	P	P	P	A

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22	Malapati Veeramarayana	P	P	A	P	P	P	P	P	P	P	P	A	P	P		
23	Neelam Divya Jyothi	P	P	P	P	P	A	P	P	P	P	P	P	A	P		
24	Paladugu Chandra Kala	P	A	P	P	P	P	P	P	A	P	P	P	P	P		
25	Pidathala Maheswari	P	P	P	P	P	P	P	P	P	P	A	P	P	A		
26	R. Mallikharjunarao	P	P	A	P	A	P	P	P	P	P	P	P	P	P		
27	Reddyboina Mahesh	A	P	P	P	P	P	P	P	A	P	P	P	P	A		
28	Satteboina Gowthami	P	P	P	A	P	A	P	P	P	P	P	P	P	P		
29	Shaik Bajji	P	P	P	P	P	P	P	P	P	A	P	P	P	P		
30	Shaik I Khasim Shaidda	P	A	P	P	P	P	P	P	P	P	P	A	P	P		
31	Tiruvaiipati Mallikarjuna	P	P	A	P	P	P	A	P	P	P	P	P	A	P		
32	T. Nageswara Rao	P	P	P	P	P	P	P	P	A	P	P	P	P	A		
33	Yarraguntla Akhil	A	P	P	P	P	P	P	A	P	P	P	P	P	P		

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22	Malapati Veeranarayana	P	P	P	A	P	P	P	A	P	P	P	P	P	A	P	P
23	Neelam Divya Jyothi	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P
24	Paladugu Chandra Kala	P	A	P	P	P	P	A	P	P	P	P	P	P	A	P	P
25	Pidathala Maheswari	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	A
26	R. Mallikharjunarao	A	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P
27	Reddyboina Mahesh	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P
28	Satteboina Gowthami	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P
29	Shaik Baji	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P
30	Shaik I Khasim Shaيدا	P	P	P	P	P	P	P	A	P	P	P	P	A	P	A	P
31	Tiruvaiapati Mallikarjuna	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
32	T. Nageswara Rao	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A
33	Yarraguntla Akhil	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P

B. Nageswara Rao

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K.V. S. Lakshmi



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K. Nageswara Rao

Principal
SGK Govt. Degree College
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Assessment

S.L No	Name of the Student	Marks	Result
1	BHUKHYA CHANDRA BABU NAIK	50	PASS
2	BOYALAPALLI LAZAR BABU	65	PASS
3	CHODAVARAPU SIREESHA	75	PASS
4	DIDDI SREENIVAS	65	PASS
5	DUDEKULA ALEEMA	60	PASS
6	ENIBERA EMEEMA	65	PASS
7	JEGINI PALANKAIAH	80	PASS
8	MALLAPURAM SRIKANTH	65	PASS
9	THIRUMALA SUBBARAYUDU	60	PASS
10	ADDANKI MANI	65	PASS
11	ATCHYUTHA LAHARI MANI	71	PASS
12	BANAVATHU EDUKONDALU NAIK	64	PASS
13	BOYALAPALLI JAKRAIAH	75	PASS
14	CHANDOLU SAVITRI KUMARI	79	PASS
15	INDLACHERUVU SUMANJALI	66	PASS
16	JENNEPOGU ANITHA JOSHNA	80	PASS
17	KANCHARLA VEERANJANEYULU	71	PASS
18	KATAKAM DIVYA	70	PASS
19	KOMMURI ADILAKSHMI	75	PASS
20	K N VEERA DAKSHINA MURTHY	80	PASS
21	MALAPATI THIRUPATHIRAO	75	PASS
22	MALAPATI VEERANARAYANA	76	PASS
23	NEELAM DIVYA JYOTHI	70	PASS
24	PALADUGU CHANDRA KALA	68	PASS
25	PIDATHALA MAHESWARI	75	PASS
26	RACHAMALLA MALLIKHARJUNARAO	68	PASS
27	REDDYBOINA MAHESH	66	PASS
28	SATTEBOINA GOWTHAMI	80	PASS
29	SHAIK BAJI	76	PASS
30	SHAIK ITLAPURAM KHASIM SHAIDA	68	PASS
31	TIRUVAIPATI MALLIKARJUNA	80	PASS
32	TURIMELLA NAGESWARA RAO	70	PASS
33	YARRAGUNTALA AKHIL	75	PASS



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**SGK GOVERNMENT DEGREE COLLEGE, VINUKONDA
PALNADU DISTRICT 522 647**


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Brief Report

Department of Physics organized a certificate course “**Introduction to Solid state Physics**”. The duration of the course is one month (30 hours) and the course was conducted from **29-12-2022 to 20-01-2023**. This course is designed to introduce the structural properties and X-ray Crystallography techniques of solids to the students. 33 students of **III B. Sc (MPC&MPCs)** registered in the course. Sri B. Nageswara Rao, Lecturer in Physics acted as the resource person for this course. During the course students are evaluated using internal and final exam. All the 33 students successfully completed the course and received certificates for completion.


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CERTIFICATE

This Certificate is awarded to **BOYALAPALLI JAKRAIAH, III B.Sc (M.P.Cs)** with Reg. No. **Y203099063**

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Sri B. Nageswara Rao
Convener

Dr. K. Srinivasa Rao
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This Certificate is awarded to *K N VEERA DAKSHINA MURTHY, III B.Sc (M.P.Cs)* with Reg. No. *Y203099070* SGK Government Degree College, Vinukonda for completed and passed the “**Introduction to Solid State Physics**” certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to **BHUKHYA CHANDRA BABU NAIK, III B.Sc (M.P.C)** with Reg. No. **Y203099041** SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to **THIRUMALA SUBBARAYUDU, III B.Sc (M.P.C)** with Reg. No. **Y203099058** SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to *RACHAMALLA MALLIKHARJUNARAO, III B.Sc (M.P.Cs)* with Reg. No. *Y203099080* SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to **REDDYBOINA MAHESH, III B.Sc (M.P.Cs)** with Reg. No. Y203099082

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This Certificate is awarded to **KOMMURI ADILAKSHMI, III B.Sc (M.P.Cs)** with Reg. No. Y203099069

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This Certificate is awarded to *JENNEPOGU ANITHA JOSHNA, III B.Sc (M.P.Cs)* with Reg. No. *Y203099066* SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to *PIDATHALA MAHESWARI, III B.Sc (M.P.Cs)* with Reg. No. Y203099079

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This Certificate is awarded to **CHODAVARAPU SIREESHA, III B.Sc (M.P.C)** with Reg. No. Y203099043

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This Certificate is awarded to *ATCHYUTHA LAHARI MANI, III B.Sc (M.P.Cs)* with Reg. No. *Y203099061* SGK Government Degree College, Vinukonda for completed and passed the “**Introduction to Solid State Physics**” certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to *KANCHARLA VEERANJANEYULU, III B.Sc (M.P.Cs)* with Reg. No. *Y203099067* SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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CERTIFICATE

This Certificate is awarded to *SHAIK ITLAPURAM KHASIM SHAIDA, III B.Sc (M.P.Cs)* with Reg. No. *Y203099086* SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to *KATAKAM DIVYA, III B.Sc (M.P.Cs)* with Reg. No. Y203099068 SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics,SGK Government Degree College, Vinukonda.

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This Certificate is awarded to **TURIMELLA NAGESWARA RAO, III B.Sc (M.P.Cs)** with Reg. No. **Y203099088** SGK Government Degree College, Vinukonda for completed and passed the **“Introduction to Solid State Physics”** certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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This Certificate is awarded to *CHANDOLU SAVITRI KUMARI, III B.Sc (M.P.Cs)* with Reg. No. *Y203099064* SGK Government Degree College, Vinukonda for completed and passed the “**Introduction to Solid State Physics**” certificate course during 28.11.2022 to 20.01.2023 conducted by Department of Physics, SGK Government Degree College, Vinukonda.

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