

KNM GOVT. DEGREE COLLEGE

MIRYALGUDA

DEPARTMENT OF PHYSICS



SIR CHANDRASHEKHARA
VENKATA RAMAN

7 November 1888 - 21 November 1970

DEPARTMENT PROFILE



About the Department:

Department of Physics came into existence along with the Bsc programme in 1989 as self finance course. Since then it has been extending quality service. The Department has well experienced and committed three faculty members namely T.VenkataRamana, M.Venkat Reddy and M.Sudharshan Reddy . The service of the expert faculty members made thousands of students settle in higher education and in reputed Govt services. As most of the students from rural background the department took great risk in providing basic knowledge of physics by organizing remedial classes. The Department is successful in providing competitive skills so that many students secured post graduation seats in repudiated institutions. Some of the students were settled in abroad .It has the tradition of giving free P.G coaching to the poor and rural students. The existing faculty member T.VenkataRamana, who has been here since 1989 is extending his valuable and committed service besides fulfilling other responsibilities of the college.

Vision:

We envision a world in which all people embrace the beauty of mathematics, utilize their ability to help us understand the world, and harness their power to promote human flourishing.

Mission:

Our mission is to welcome all students into the study of physics, support them through their classes, and show them how mathematics is not only beautiful but also useful and powerful.

Values

We value hard work and determination to overcome challenges, inquisitiveness to foster learning, creativity to consider new ideas, cooperation to work with others and to help them excel, diversity to respect the opinions and backgrounds of others, and community to support one another.

Programmes offered:

Programme	Programme Name	Group/Subject
UG	BSc[Physical Science]	Maths, Physics, Chemistry
		Maths, Physics, Computer Science
		Maths, Chemistry, Computer Science

CBCS system is followed for all UG programmes.

FACILITIES IN THE DEPARTMENT:

- The Department has qualified and experienced faculty
- The faculty members are guiding the students for writing the degree examinations by giving study materials freely
- The faculty members are counselling the students for pursuing higher education and giving material for entrance examinations
- The faculty members are encouraging students to participate in cultural events, sports and games competition also
- The Department arranges extension lectures by inviting guests for improving the knowledge of students
- Remedial classes conducted for poor performance i.e failed students by the staff members
- Frequently seminars are conducted to the students
- Every year “National Science Day” is celebrated on February 28th to honour the discovery of Raman effect by famous physicist Sir Chandra Shekhara Venkata Raman.

CURRICULUM ASPECTS:

The department of Physics follows the schedule designed by Mahatma Gandhi University, Nalgonda. The Mahatma Gandhi University has implemented Semester Scheme for the undergraduate course from the academic year 2016-17. Accordingly, the undergraduate course includes Six Semesters of three years duration. The curriculum is prepared by the expert committee i.e., BOS by the University. The curriculum prescribed by the Mahatma Gandhi University in Physics encompasses both fundamental and applied aspects of Physics.

YEAR	SEMESTER	PAPER	SUBJECT	THEORY MARKS	INTERNAL MARKS	TOTAL MARKS
BSC -I	SEM-I	I	MECHANICS	80	20	100
	SEM-II	II	WAVES AND OSCILLATIONS	80	20	100
BSC-II	SEM-III	III	THERMAL PHYSICS	80	20	100
	SEM-IV	IV	OPTICS	80	20	100
BSC-III	SEM-V	V	ELECTROMAGNETIC THEORY	80	20	100
		VI(A)	SOLID STATE PHYSICS	80	20	100
	SEM-VI	VII	MODERN PHYSICS	80	20	100
		VIII(A)	BASIC ELECTRONICS	80	20	100

STAFF PARTICULARS:

ACADEMIC YEAR: 2014 -2015:

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,
2	M.VENKAT REDDY	LECTURER	M.Sc.,
3	M. SUDHARSHAN REDDY	LECTURER	M.Sc.,

ACADEMIC YEAR: 2015 -2016:

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,
2	M.VENKAT REDDY	LECTURER	M.Sc.,
3	M. SUDHARSHAN REDDY	LECTURER	M.Sc.,

ACADEMIC YEAR: 2016 -2017:

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,
2	M.VENKAT REDDY	LECTURER	M.Sc.,
3	M. SUDHARSHAN REDDY	LECTURER	M.Sc.,

ACADEMIC YEAR: 2017 -2018:

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,
2	M.VENKAT REDDY	LECTURER	M.Sc.,
3	M. SUDHARSHAN REDDY	LECTURER	M.Sc.,

ACADEMIC YEAR: 2018 -2019:

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,

Note: M. VENKAT REDDY, LECTURER IN PHYSICS WORKING AT MVS GDC MAHABOOB NAGAR08.08.2018 TO 31.05.2019

And M. SUDHARSHAN REDDY, LECTURER IN PHYSICS WORKING AT MKRGDC,
DEVARAKONDA ON ONDUTY BASIS FROM 08.08.2018 TO 31.05.2019

ACADEMIC YEAR: 2019 -2020

S.NO	NAME OF THE FACULTY	DESIGNATION	QUALIFICATION
1	T.VENKATRAMANA	LECTURER	M.Sc., B.Ed.,

Note: M. VENKAT REDDY, LECTURER IN PHYSICS TRANSFERRED TO NG COLLEGE,
NALGONDA

And M. SUDHARSHAN REDDY, LECTURER IN PHYSICS TRANSFERRED TO GOVERNMENT
DEGREE COLLEGE (W), NALGONDA

KNM GOVERNMENT DEGREE COLLEGE, MIRYALAGUDA

DEPARTMENT OF PHYSICS

ANNUAL ACTION PLAN 2020-21

1. Student Seminar:

In the last week of September, November, December of 2020 and last week of every month in 2021 till the end of 2020-21 academic year.(both online and off line mode depending on the situation)

2. Assignments:

For I,III,V Semesters-Students has to submit their assignments by the end of February-2021.

For II,IV,VI Semesters-Students has to submit their assignments by the end of last month of present academic year. (both online and off line mode depending on the situation)

3. Quiz Competition and Essay Writing:

For all the Students in the 3rd week of February- 2021.(ONLINE/OFF LINE as per feasibility)

4. Extension Lecture:

In the month of March-2021.

5. Important Days:

National Science day Celebration on 28th Feb'2021.

6. Career Guidance :

Last week of March-2021.

7. Special Coaching :

Classes for PG Entrance test in Physics Subject will be conducted for B.Sc.-III year Students from March-2021.

8. Other Activities :

Will be conducted as per the Guidelines received from CCE-TS, Hyd.

INDIVIDUAL LECTURER PROFILE

Personal Information:

1. Name : T.Venkata Ramana.
2. Father Name : Somaiah
3. Mother Name : Sanjeevamma
4. DOB : 09.05.1965
5. Place of Birth : Miryalaguda.
6. Marital Status : Married



Educational Qualification:

S.NO	Course studied	Institution	Year of passing	% of marks
1	B.Ed (Physical Science)	DVM College of Education, Nalgonda	1989	66
2	M.Sc Physics	Nizam College. Hyderabad.	1988	58.5
3	B.Sc (MPC)	Nagarjuna degree college, Nalgonda.	1986	65
4	Intermediate (MPC)	Govt. Junior college, Miryalaguda.	1983	62.1
5	SSC	Govt. High School, Miryalaguda.	1981	63.6

Teaching Experience and Previous Place of Work:

1. From 17th Sep. 1989 to till date at KNM GOVT. DEGREE COLLEGE as Lecturer.

Orientation programs attended:

- CAIMS Programme 3 days training at BJR Govt. Degree College on CA & Information.
- NAAC training programme at St. Ann's. College Organized by CCE, TS.

Achievements in last five years:

- Acting as a IQAC Coordinator.
- Acting as a NAAC Coordinator.
- Served as NSS Coordinator
- Discharging duties as DOST Coordinator
- Attended as Jury member for District level Science Exhibition at ZPHS Bakhawada organized by Department of school Education.
- Discharging duties as Head of Department of Physics, KNMGDC Miryalaguda.
- Worked as Academic Coordinator.
- Attending as Jury member for Mandal level Science Exhibition at TWS .

Vision for the next five years:

- I would like to induce more number of students to pursue higher studies in National level institutions.

Programme Outcomes, Programme Specific Outcomes

S.No	Programme	Programme Outcomes	Programme Specific Outcomes
1.	B.Sc. (MPCs.) Mathematics Physics Computer Science	1. Possess a sound understanding of the theoretical foundations of various core subjects. 2. Acquire analytical and logical thinking skills necessary to pursue higher education. 3. Gain employment at entry level positions based on program curriculum.	Master a broad set of knowledge concerning the fundamentals in the basic areas of Physics and Mathematics added with the necessary hands-on experience in various practical aspects of problem solving/programming/experimentation. The program imparts students with an understanding of the basics of Computer Science, to develop proficiency in the practice of computing, and to prepare them for continued professional development.
2.	B.Sc. (MPC) Mathematics Physics Chemistry		The combination integrating all Basic Science courses lays a strong foundation and prepares the learner for Post Graduation research in respective disciplines.

COURSE OUTCOMES

CORE PAPERS:

DSC1: Mechanics:

The students would learn about the behavior of physical bodies it provides the basic concepts related to the motion of all the objects around us in our daily life. The course builds a foundation of various applied field in science and technology; especially in the field of mechanical engineering. The course comprises of the study vectors, laws of motion, momentum, energy, rotational motion, gravitation, fluids, elasticity and special relativity.

DSC1 LAB:

Students would perform basic experiments related to mechanics and also get familiar with various measuring instruments would learn the importance of accuracy of measurements.

DSC2: Electricity and Magnetism:

It gives an opportunity for the students to learn about one of the fundamental interactions of electricity and magnetism, both as separate phenomena and as a singular electromagnetic force. The course contains vector analysis, electrostatics, magnetism, electromagnetic induction and Maxwell's equations. The course is very useful for the students in almost every branch of science and engineering.

DSC2 LAB:

Students would gain practical knowledge about electricity and magnetism and measurements such as: Resistance, Voltage, current etc.

DSC3: Thermal Physics and Statistical Mechanics:

The course makes the students able to understand the basic physics of heat and temperature and their relation with energy, work, radiation and matter. The students also learn how laws of thermodynamics are used in a heat engine to transform heat into work. The course contains the study of laws of thermodynamics, thermodynamic description of systems, thermodynamic potentials, kinetic theory of gases, theory of radiation and statistical mechanics.

DSC3 LAB:

Students would gain practical knowledge about heat and radiation, thermodynamics, thermo emf, RTD etc. and perform various experiments.

DSC4: Wave and Optics:

The course comprises of the study of superposition of harmonic oscillations, waves motion (general), oscillators, sound, wave optics, interference, diffraction, polarization. The course is important for the students to make their career in various branches of science and engineering, especially in the field of photonic engineering.

DSC4 LAB:

The practical knowledge of wave motion doing experiments: Tuning fork, electric vibrations. They would also learn optical phenomena such as interference, diffraction and dispersion and do experiments related to optical devices: Prism, grating, spectrometers

Discipline Specific Elective papers(any two):

DSE1: Elements of Modern Physics:

Students would know about the basic principles in the development of modern physics. The topics covered in the course build a basic foundation of undergraduate physics students to study the advance branches: quantum physics, nuclear physics, particle physics and high energy physics. The course contains the study of Planck's hypothesis, photoelectric effect, Compton effect, matter waves, atomic models, Schrodinger wave equations, and brief idea of nuclear physics.

DSE1 LAB-Elements of Modern Physics:

In this course students would be able to understand Basic experiments of modern physics such as: Determination of Plank's and Boltzmann's constants, Determination of ionization potential, Wavelength of H-spectrum, Single and double slit diffraction, Photo electric effect and determination of e/m

DSE1: Solid State Physics:

Students would be able to understand various types of crystal structures and symmetries and understand the relationship between the real and reciprocal space and learn the Bragg's X-ray diffraction in crystals. Would also learn about phonons and lattice.

DSE1 LAB- Solid State Physics:

The course Provides practical knowledge of various physical phenomena such as: magnetism, dielectrics, ferroelectrics and semiconductors. Students would gain a hands-on learning experience by performing experiments on these properties of materials.

DSE2: Quantum Mechanics:

Quantum mechanics provides a platform for the physicists to describe the behavior of matter and energy at atomic and subatomic level. The course plays a fundamental role in explaining how things happen beyond our normal observations. The course includes the study of Schrodinger equations, particle in one dimension potential, quantum theory of H like atoms, atoms/molecules in electric and magnetic fields.

DSE2 LAB- Quantum Mechanics:

Various practical problems solving methods related to Quantum Mechanics would be learned by students.

DSE2: Mathematical Physics:

Would learn mathematical methods to solve the various problems in physics. The topics include the calculus of functions, Fourier transform, special functions and special integrals, partial differential equations, complex analysis and variables.

DSE2 LAB- Mathematical Physics:

Various practical problems related to applications of mathematical tools to solve the problems in physics would be learned by students

Skill Enhancement Courses (any two):

SEC1 - Electronics –I:

The students would gain the knowledge of Basic Electronics circuits, network theorems and measuring instruments: They would know about common solid state devices: Semiconductor diodes and transistors. The topics also include the Rectifiers, Filters and their applications, number systems and logic gates which are foundation blocks of digital electronics.

SEC2- Computational Physics:

This course would introduce students with the basic knowledge of computers their applications in solving common and scientific problems, the course include scientific programming languages, scientific word processing and graphical analysis.

SEC3-Electronics II:

Students would learn about electronic circuits such as Amplifiers and Oscillators. Various types of Amplifier and Oscillator circuits their working and applications in in domestic, industrial and scientific devices/equipments.

SEC4: Radiation and Safety:

The students would gain the knowledge of different types of radiation and its interactions with matter, would also know about the photons, charged particles, neutrons, about radiation detection, monitoring and safety measures, and also learn about the applications of nuclear techniques.

RESULT ANALYSIS FOR THE FOLLOWING YEARS

1	2014	MARCH / APRIL ANNUAL
2	2014-15	ANNUAL
3	2015-16	ANNUAL
4	2016 NOVEMBER	I SEM – I BSc START CBCS BATCH
5	2017 APRIL II SEMESTER	II SEM – I BSc
		ANNUAL – II BSc
		ANNUAL – III BSc
6	2017 NOV – DEC	I SEM – I BSc
		III SEM – II BSc
7	2018 APRIL – MAY	II SEM – I BSc
		IV SEM – II BSc
		ANNUAL – III BSc
8	2018 NOV- DEC	I SEM – I BSc
		III SEM – II BSc
		V SEM – III BSc
9	2019 APRIL – MAY	II SEM – I BSc
		IV SEM – II BSc
		VI SEM – III BSc
10	2019 NOV – DEC	I SEM – I BSc
		III SEM – II BSc
		V SEM – III BSc

Achievements:



In 2014-15 Batch student Ch. Naresh got PG seat.

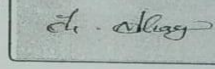


DIRECTORATE OF ADMISSIONS : OSMANIA UNIVERSITY, HYDERABAD
OUCET - 2018

RANK CARD

Hall Ticket No.	: 6913640202	Community	BC_B
Candidate's Name	: CHILAKAMARRI NARESH	Date of Birth	18/01/1997
Father's Name	: POTHULURA CHARI		
Test Paper	: M.Sc. Physics		
Marks Obtained	: 39		
Rank	: 839		


DIRECTOR

INSTRUCTIONS TO THE CANDIDATE

The admissions into PG Courses...

ACTIVITIES DURING LOCKDOWN DUE TO COVID

- Prepared YouTube Video Lectures and uploaded in YouTube Channel.
- Participated in Online Quiz.
- Online teaching: Started online teaching from April 2020.

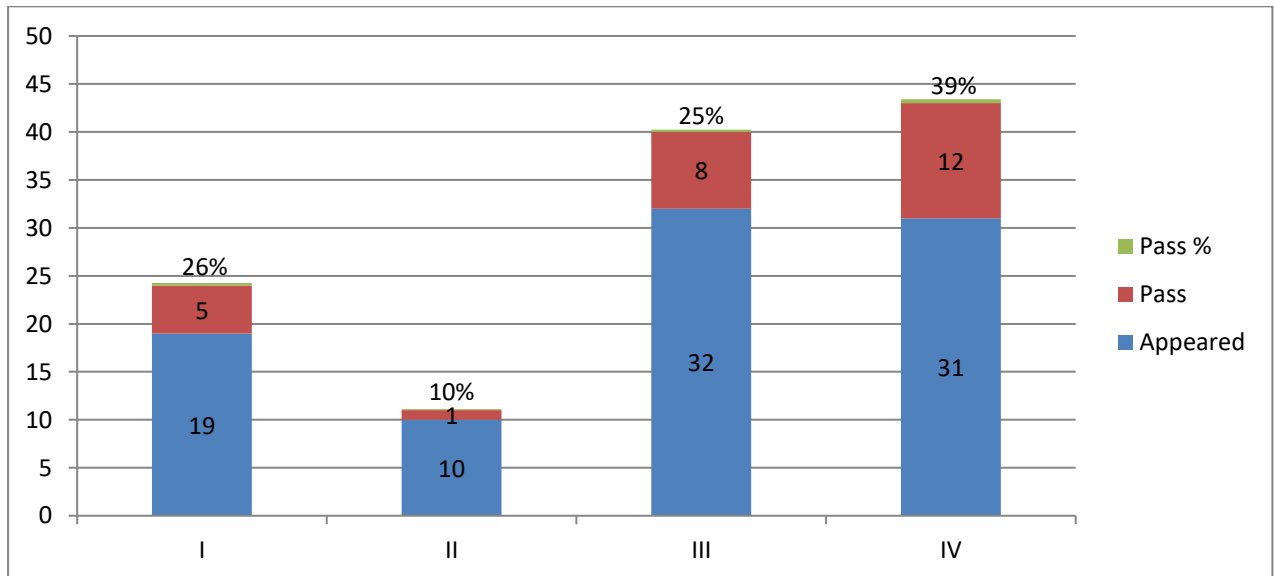
KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2014 - 15

DEPARTMENT OF PHYSICS

Group	Paper	Appeared	Pass	Pass %
I B.Sc	I	19	5	26%
II B.Sc	II	10	1	10%
III B.Sc	III	32	8	25%
	IV	31	12	39%



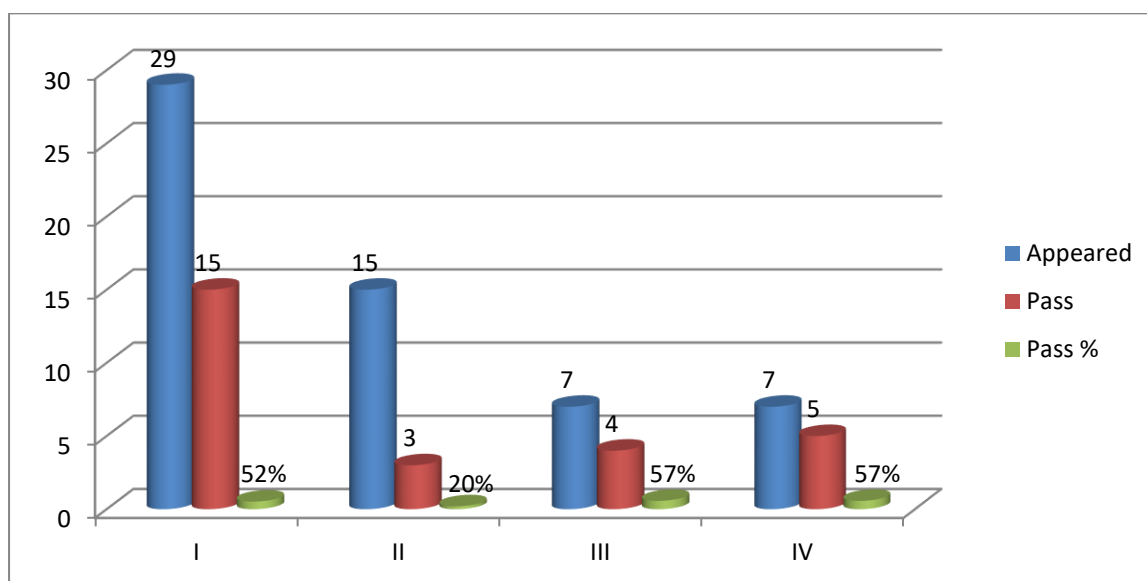
KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2015 - 16

DEPARTMENT OF PHYSICS

Group	Paper	Appeared	Pass	Pass %
I B.Sc	I	29	15	52%
II B.Sc	II	15	3	20%
III B.Sc	III	7	4	57%
	IV	7	5	57%



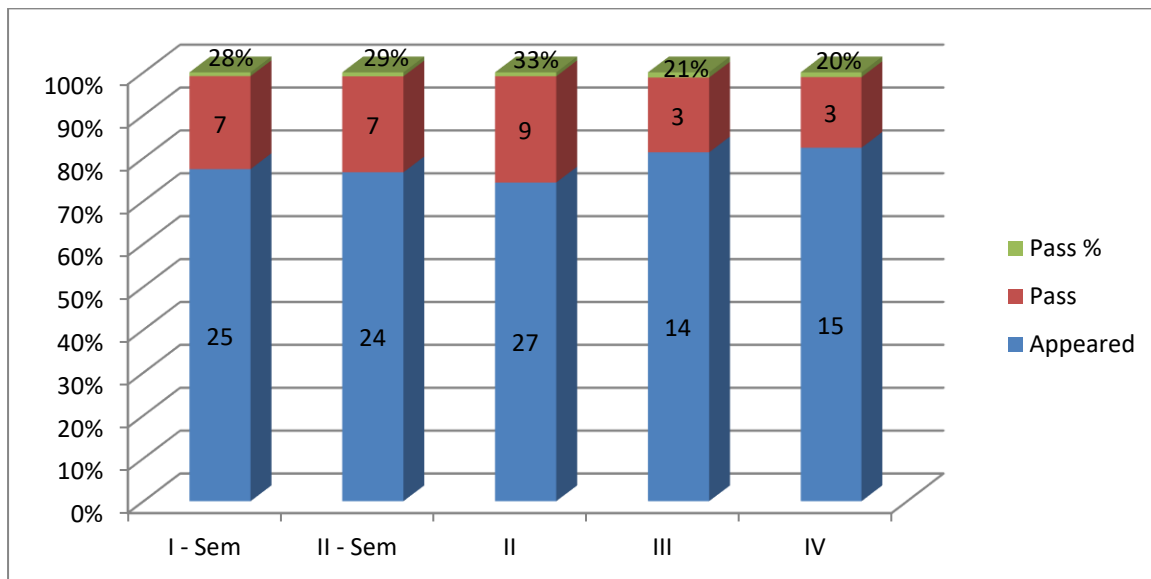
KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2016 - 17

DEPARTMENT OF PHYSICS

Group	Paper	Appeared	Pass	Pass %
I B.Sc	I - Sem	25	7	28%
	II - Sem	24	7	29%
II B.Sc	II	27	9	33%
III B.Sc	III	14	3	21%
	IV	15	3	20%



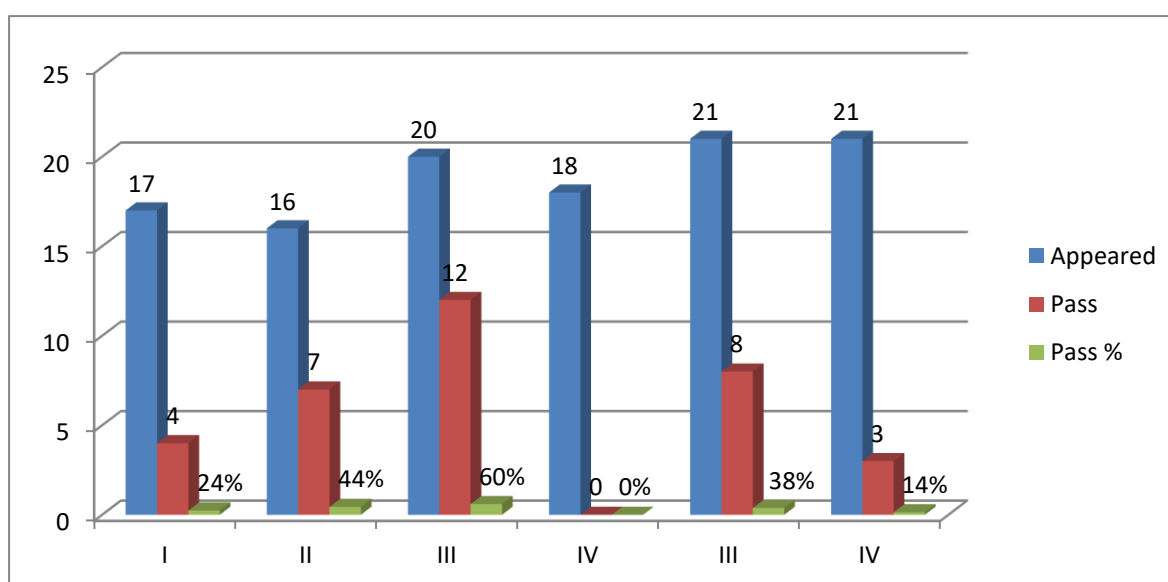
KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2017 - 18

DEPARTMENT OF PHYSICS

Group	Semester	Paper	Appeared	Pass	Pass %
I B.Sc	Sem-I	I	17	4	24%
	Sem-II	II	16	7	44%
II B.Sc	Sem-III	III	20	12	60%
	Sem-IV	IV	18	0	0%
III B.Sc	Year	III	21	8	38%
		IV	21	3	14%



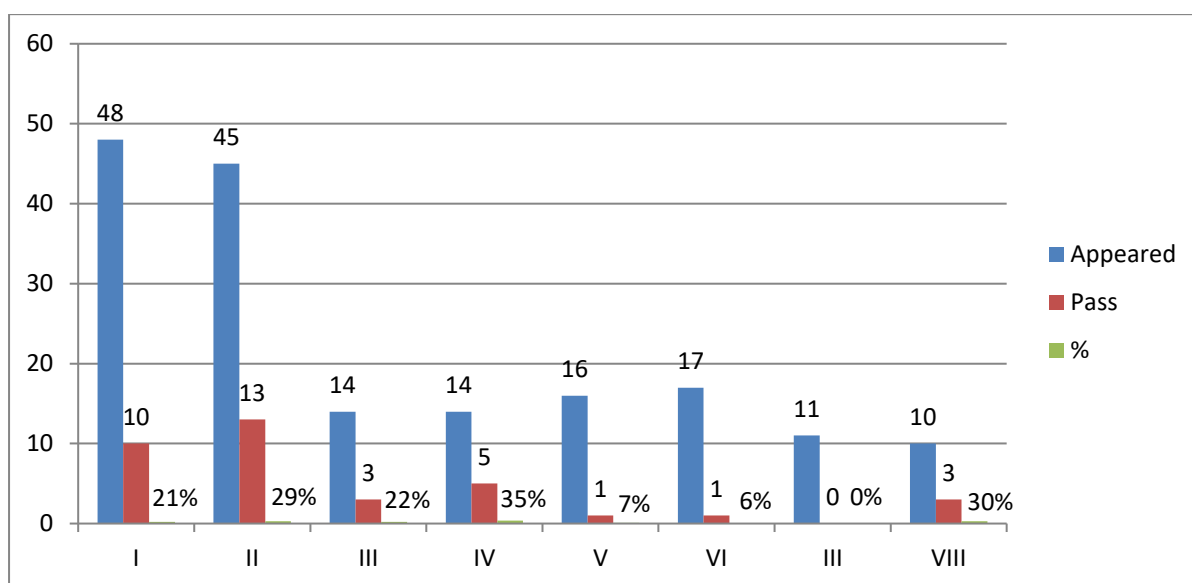
KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2018 - 19

DEPARTMENT OF PHYSICS

Group	Semester	Paper	Appeared	Pass	%
I B.Sc	Sem-I	I	48	10	21%
	Sem-II	II	45	13	29%
II B.Sc	Sem-III	III	14	3	22%
	Sem-IV	IV	14	5	35%
III B.Sc	Sem-V	V	16	1	7%
		VI	17	1	6%
	Sem-VI	III	11	0	0%
		VIII	10	3	30%



KNM Govt. Degree College - Miryalaguda

Result Analysis

Academic Year : 2019 - 20

DEPARTMENT OF PHYSICS

Group	Semester	Paper	Appeared	Pass	%
I B.Sc	Sem-I	I	32	12	38%
II B.Sc	Sem-III	III	42	3	7%
III B.Sc	Sem-V	V	13	3	23%
		VI	13	3	23%
	Sem-VI	VII	12	11	91%
		VIII	12	9	75%

