

(Autonomous), Affiliated to Osmania University Re-accredited by NAAC (3rd Cycle) with B⁺⁺Grade King Koti Road, Hyderabad

Department of Physics & Electronics

Date: 03-08-2022

This is to inform to the students of B.Sc(MPCs) and B.Sc(MECs) II Year, Semester-3 that the Department of Physics & Electronics is organizing a Computerized Quiz program (Jeopardy-2022) on 08th Aug 2022 at 1.30 pm in the Lecture Hall No. 508, V floor. Interested students can give their name to CR of the respective class.

M. Laxminarsimha Rao

HoD, Dept. of Physics & Electronics

Principal

(Fr. Dr. D. Sunder Reddy)



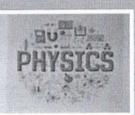


Department of Physics & Electronics



Science Club

presents





Fr. Dr. D. Sunder Reddy Principal

Jeopardy-2022

(Computerized Quiz)
For B.Sc(MPCs & MECs) II Year

On 08-08-2022 From 1.30 PM, at Lecture's Hall 508, V Floor



Quiz Master: M. Laxminarsimha Rao HoD, Dept. of Physics & Electronics

Student Coordinators:

S. Jyostna Sree Sahil Upadyay M. Pradeep Kumar Alladi Adarsh G. Dinesh Kumar Mirza Rizwaan Ali Baig

James J



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Department of Physics & Electronics

Report Induction Programme for B. Sc (MPCs/MECs) II Year Students

Date: 8th August 2022

Venue: Lecture Hall No. 508

Time: 1:30 P.M - 3:00 P.M

Organized by: M. L. N. Rao, HoD.

Target Group: B.Sc (M.P.Cs/M.E.Cs) II Year students

The Quiz is computer based which is organized in rows (6) and columns (5). It has five columns and each column is specific group like, Current affairs, Science, Aptitude, IT etc. The questions displayed on the screen with their marks. The first question in all the columns has 5 marks, second 10, third 20, fourth 40 so on. Participants can select any question in any group. If they answer correct they get the marks displayed on the question, or else same number of marks will be deducted from the total. The time given to answer the question is 60 seconds. Five groups participants with their team name.

1. C. V. Raman Team

- Neeraja
- Durga
- > Divya
- > Harsha

2. J. C. Bose Team

- Richard
- Melvin
- > Vaishnavi
- Sowrya

3. Newton Team

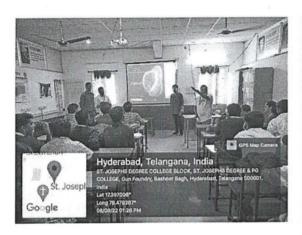
- > Aakash
- > Manideep
- ➤ SaiTeja
- > Upender

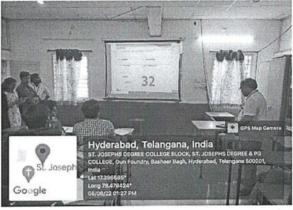
4. Kirchhoff Team

- > Moksha
- > Joseph
- > Vikranth
- > Sylvester

5. Einstein Team

- > Prabhakar
- > Manikanta
- > Sayeed
- > Omar









Students participated enthusiastically and displayed their knowledge in various groups

Winners:

SNo.	Participant Name	Team Name	Prize
1	Moksha Joseph Vikranth Sylvester	Kirchhoff	1 st Prize
2	Prabhakar Manikanta Sayeed Omar	Einstein	2 nd Prize
3	Richard Melvin Vaishnavi Sowrya	J. C. Bose	3 rd Prize

HOD Mr. M.L.N. Rao

Fr. Dr. D. Sunder Reddy



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Department of Physics & Electronics

Report on B.Sc (MPCs/MECs) II & III Year Orientation Programme

Date: 11th July 2022

Venue: Online Google Meet

Time:9:00 A.M-1:00 P.M

Organized by: Department of Physics & Electronics

Faculty Coordinators: Mr M L N Rao HoD, Mr. M. Sravan Kumar and Mr.R.Ashok Kumar

Target Group: II & III year students of B.Sc(M.P.Cs/M.E.Cs).

Report: The Orientation program to the second and final year students of B. Sc (MPCs & MECs) was conducted on 11th July 2022 on the first day of the College reopening.Mr. M. L. N. Rao, Head - Department of Physics & Electronics, oriented the students on campus culture, discipline, projects and academic planner for the semester. Mr.Sravan Kumar and Mr.Ashok Kumar oriented the students about their respective curriculum, and the significance of project to the final year students and Skill Enhancement Course to the second years. And also briefed the objectives and outcomes of the Courses briefly to the students.



Professor Anitha, Controller of Examination explained the process of the examinations and the importance of internal exams and marks. Dr. Sridhar Reddy Physical Director, oriented about selections, sports and tournaments conducted in the academic year.





M. L. N. Rao

Head, Department of Physics & Electronics

Principal

Fr. Dr. D. Sunder Reddy



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BSc MPCs - FINAL YEAR 2022-23

A Report on FIELD VISIT TO ARCI (INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS)

OBJECTIVE OF THE EVENT: To introduce, educate and create an awareness among students on different aspects of nanomaterial, metallurgy and solar energy.

DATE & TIME: 24th August 2022 9:00am to 3:00pm

VENUE: ARCI, RCI road, Balapur- Airport Road, Balapur, Telangana.

TOTAL NO. OF PARTICIPANTS: 24

FACULTY CO-ORDINATOR: Dr M. Sravan Kumar

STUDENT CO-ORDINATORS: Mirza Rizwan Ali Baig, AlladiAdarsh Krishna, D. Gopi

Krishna, G. Dinesh Kumar, A. Vamshi Reddy, SwamyPrithviraj.

TARGET AUDIENCE: Students of BSc MPCs final year

A BRIEF REPORT:

The field visit, planned by Dr M. Sravan Kumar, opened the eyes of students to the world of research, specifically in nanomaterials, Metallurgy and Solar Energy. It was a huge success in terms of introducing and educating students about the ongoing research, in ARCI, in the abovementioned fields.

As mentioned above the students visited three departments/laboratories in the ARCI. Namely:

- 1) Nano-Material
- 2) Powder Metallurgy
- 3) Solar energy

The scientific instruments related to the production of different raw/final materials were demonstrated by the Scientists and PhD scholars of ARCI and they gave the students a brief about the principles of those complex scientific instruments. Students were welcomed with a warm speech from Assistant Director DrRavichandra.

Nano-material -

"Study of particles of the order of 10⁻⁹ is Nanotechnology. We are interested in such a small order the surface area is significantly greater" said the Scientist DrDibyenduChakrawarty. The machine used for making Nanoparticles called Milling Machinewas the first machine that was shown to the students. According to the scientist DrDibyenduChakrawarty, the machine consumes more electrical power but is time efficient. The students were oriented on the different projects that the nanotechnology department is currently undertaking, including the tungsten alloy used in the making of many Indian missiles.

Then the Superplasma sintering methodology of joining the atoms or molecules together. "This method is more efficient than the conventional rolling method", said the guide. The process of making aerogel which is used as a lightweight insulator in many industrial

machineries was explained. The principle behind self-cleaning textiles was explained to the students. The making of LFP batteries and supercapacitors was explained using the models and the drawbacks of the conventionally used li-ion battery were highlighted. The superconductor is made using carbon from coke and by burning jute.

Metallurgy:

The introduction and tour of the Metallurgy department were taken care of by senior scientist Dr Ravi. Metallurgy, the department where the structure of the matter, especially metals, is described using the grain structure of the metal. Different machines are used to grind and then polish the surface before observing it in the TEM (Travelling Electron Microscope) and SEM (Scanning Electron Microscope) and then the properties are characterized by the X-Ray Diffractometer (XRD), Macro Tensile Testing machine and Micro Tensile Testing Machine.

Solar Energy:

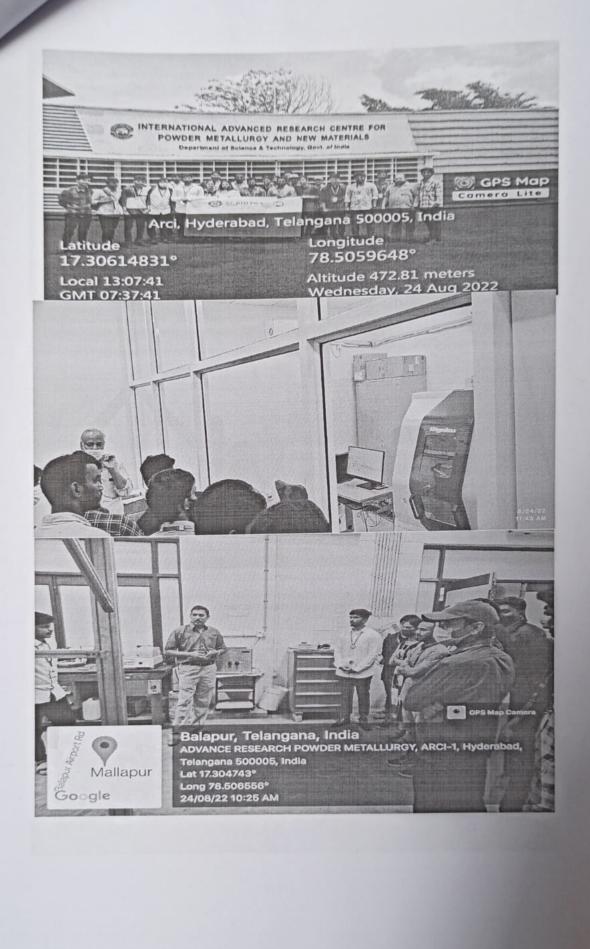
"On a large scale, Silica is used in solar panels, which is the first generation of solar panels. The third-generation solar panels use Perovskite, as it can be given a particular colour, aesthetically appealing, and they are more efficient." said the PhD scholar. Perovskite, a compound of the form ABX3 which is a chemically active substance, is coated with different layers which enhances the quality of the light entering the plate. It even converts the UV rays into the visible spectrum to increase the efficiency of every plate. Ongoing research focuses on making the plates more efficient by converting all the waves coming from the sun.

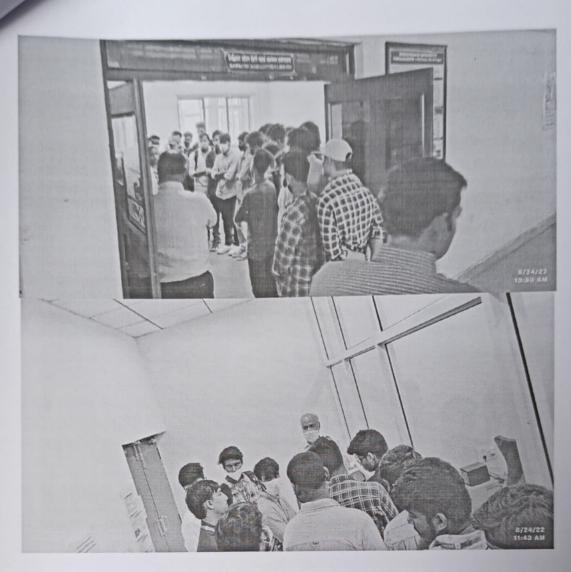
At the outset students of B.Sc. (MPCs) thanked principal Rev. Fr. Dr. D SUNDER REDDY for his guidance and permission to visit the ARCI.

Finally, students thanked the Head of the Department Mr. M L N Rao for his encouragement and PhysicsFacultySravan Kumar for motivation and necessary arrangements and ever ending

OUTCOME OF THE EVENT:

- > Created interest and motivated the students to pursue research in future after master Degree program.
- > Students learned the techniques and material preparations under Nano scale, metallurgy, Li-ion Battery synthesis reactions.
- > Alternate battery sources material synthesis processes.
- > Solar technology and relevant material preparations and characterisations for the commercial usage.









CONVENOR 2022

M.SRAVAN KUMAR

Jaan IQAC

DR.A. DANAM

PRINCIPAL

FR.DR.D. SUNDER REDDY



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S.NO	ROLL NUMBER	NAME OF THE STUDENTS	BACKGROUND STATUS
1	1214-20-468-001	ALLADI ADARSH KRISHNA	Inter- 959 SGPA(Sem-3)-
2	1214-20-468-003	DONTHULA GOPI KRISHNA	9.8 Inter-900 GPA(Sem-3)-
3	1214-20-468-004	ROUNAK TIWARI	9.48
4	1214-20-468-005	GURRALA.E.S. KUMAR	Inter-820 C GPA-7.9 Inter-837 C GPA(Sem-3)- 9.454
5	1214-20-468-006	GUTTULA DINESH KUMAR	9.434 Inter-968 C GPA(Sem-3)- 9.86
6	1214-20-468-010	KANTI BALASHIVA GOUD	Inter-850, GPA-8.5
7	1214-20-468-012	MIRZA RIZWAN ALI BAIG	Inter- 804 \$ GPA(Sem-3)- 9.2
8	1214-20-468-016	RAPAKA PAULINE SMITH	Inter-754, CGPA- 8.9
9	1214-20-468-017	SWAMY PRITHVIRAJ	Inter- 923 SGPA(Sem-3)-9
10	1214-20-468-018	SHREYASH PATKI	Inter- 530 \$ GPA(Sem-3)-7.5
11	1214-20-468-019	SYED AZIZ	Inter- 560 C GPA(Sem-3)-7.5
12	1214-20-468-023	VARDHAN REDDY	Inter- 660 C GPA(Sem-3)-
13	1214-20-468-024	MADDELA JAGAN MOHAN	Inter- 638 C GPA(Sem-3)- 8.2
14	1214-20-468-025	PREETHI JAKHAR	Inter-858 C GPA(Sem-3)-8.9
15	1214-20-468-026	SYED SHAH IFTEQUAR UDDIN	Inter-853 G GPA(Sem-3)-9.1
16	1214-20-468-028	KURAKULA SIDDHANTH	Inter-850 CGPA(Sem-3)-9
17	1214-20-468-030	K VARA PRASAD	Inter-480 G GPA- 7.2
18	1214-20-468-031	PINEMULA ARUN KUMAR	Inter-853 & GPA(Sem-3)-8.5
19	1214-20-468-032	BAVANA KARTHIK	Inter-789. G GPA-8.2
20	1214-20-468-038	NAKIRTHA SAGAR	Inter-808 C GPA-8.7
21	1214-20-468-040	AMBEKAR LAKSHMAN VISHAL RAO	Inter-792. CGPA-8





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ATTANDANCE SHEET

24-08-2022

ROLL NUMBER	NAME OF THE STUDENTS	SIGNATURE
1214-20-468-001	ALLADI ADARSH KRISHNA	A. Adaesh Krishno
1214-20-468-003	DONTHULA GOPI KRISHNA	OF DA
1214-20-468-004	ROUNAK TIWARI	9600
1214-20-468-005	GURRALA.E.S. KUMAR	797
1214-20-468-006	GUTTULA DINESH KUMAR	Suma
1214-20-468-010	KANTI BALASHIVA GOUD	Sun
1214-20-468-012	MIRZA RIZWAN ALI BAIG	Phio
1214-20-468-016	RAPAKA PAULINE SMITH	DO TIO.
1214-20-468-017	SWAMY PRITHVIRAJ	S.Pridur ra's
1214-20-468-018	SHREYASH PATKI	2. rr. ow 80,
1214-20-468-019	SYED AZIZ	1000
1214-20-468-023	VARDHAN REDDY	k. Yardhon
1214-20-468-024	MADDELA JAGAN MOHAN	M. Jaganmohai
1214-20-468-025	PREETHI JAKHAR	Pore Contraction
1214-20-468-026	SYED SHAH IFTEQUAR UDDIN	a l'
1214-20-468-028	KURAKULA SIDDHANTH	111
1214-20-468-030	K VARA PRASAD	b. vala grassel
1214-20-468-031	PINEMULA ARUN KUMAR	
1214-20-468-032	BAVANA KARTHIK	D. Karthet
1214-20-468-038	NAKIRTHA SAGAR	N'sbgar
1214-20-468-040	AMBEKAR LAKSHMAN VISHAL	
	RAO	C ARSENS -S
1214-20-468-002	ALLAM VAMSHI REDDY	Albomshi Leddy.
124-20-468-034	ROHAN JOY.	
121420468 020	T. GANESTI	Franch
121420 468 009		Canto
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Feedback form

Date: 34 08 23

Name of the Student: A. Vamshi Reddy

Roll number: 121420 468002

Place of Visit: - PRCI

Feedback:

1. Nano Materials (Types like Miller Body), (Sample Machine) Formation of Botteries - in 11 layers, Lithium Ion Batteries Super Capacitors, - Gentro Mechnical Test.

3. Metallogy (sample materials), Stress and Strain Application SAXS - Small Angle X-Rays

4. Macro Hardness Test, Micro Hardness Test of its limits Micro Islave processing,

5. SEM. 9 -> Charactrization CREER

XRD-stress, X-Ray

Signature of the candidate
With date and roll number

Thermal Employed is used for inderestion of sold cell total by sending nitrogen.



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Feedback form

Date: 24/08/2022

Name of the Student: A. Adarch Kerishno

Place of Visit: Advanced Research centre - International (ARCI)

Feedback:

1. Wonderful experience to learn about bulk peroduction of Nano Particles of elements like Al.

2. Experienced about the use of Tungsten weights in missiles.

3. Practical experiments of complicated phenomena like x-Ray

4. Futuristic development of solar cells using Perovskite cells

5. Wonderful place for tresearch Scholars and students interested in paractical applications.

A. Adaeth Laishnazy 08

Signature of the candidate

(121420468001)



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Feedback form

Date: 25-08-2022

Name of the Student: Bavana Karthik

Roll number: 121420468032

Place of Visit: ARCI

Feedback:

1. Development of Nanostructured transition metal Sulphides and applications like Li-ion battery electrode

2. And see have seen taking some precalitions like

Security, Safety etc.,

3. Scientiste and Employees are opened to Explain their developed ness technologies.

4. Very nice and clean campus area but photography is

strictly Prohibited.

5. Very good Place. Solid research happining there Laser aua, Posseder Metallwigy.

B. Karthik 08-2022 Signature of the candidate, 121420468032



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Feedback form

Date: 25 - 08 - 72

Name of the Student: Rohan Toy

Roll number: 121420468034

Place of Visit: ARCI

Feedback:

- 1. We learnst a lot about metallungy and its applications in the real world.
- 2. We got to learn about mineral processing methods which were unheard of before.
- 3. We learn't about new substances such as aeragels and hydrophobic and self cleaning coatings.
- 4. We learnt about the latest technology in solar energy
- 5. Overall it was very informative and an exciting way to learn about the field from the experts of their craft.

121420468034

Signature of the candidate



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Feedback form

Date: 24/08/22

Name of the Student: Swamy PRANIN!

Roll number: 12400 4690 12

Place of Visit: International Advanced Research Center (ARCI)

Feedback:

We had a great experience of 1838 Industrial Port

we learne a tole like nano materials how

nano materials are prepared what are the use of 2.

that. and we also learns tow the batteries 3.

and made in III layers, Lithern, I'm Butterles, super

Copracifies, cleens mechanial rests, use also learningets

5. To know that the our Luther will be from this Butterlas and X-buy diffraction than the machiness work and we

got a more knowledge about solar system and How will chean the chemical from the drew without work. Thank-you sir for the opposites.

Signature of the candidate

With date and roll number

P. O. Ohrivais 24/08/22

12420468012



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Feedback form

Date: 24/8/22

Name of the Student: Rounak Tiwari

Roll number: 121420468004

Place of Visit: ARCI

1. It was a very good experence.

2. It was informative.

3. got information and knowledge about nano Science

4. Explaination about all was nice

5.

Signature of the candidate

With date and roll number

121420468004 24/8/22



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Feedback form

Date: 25 /8/22

Name of the Student: Shreyash Salai

Roll number: 121420468018

Place of Visit:

ARCI

Feedback:

It was informative

2. It was a great experime

3. Solar got unformation como knowledge cabout rano Science

4. Explaination valout val was nice

5. got infermentos cabout Solar Power thurnsent

Signature of the candidate

With date and roll number

121420468018 25/8/22



(Autonomous), Affiliated to Osmania University Re-accredited by NAAC (3rd Cycle) with B++Grade King Koti Road, Hyderabad

Feedback form

Date: 25 8 22

Name of the Student: Syed Ayiy Roll number: 121420468019

Place of Visit: ARCI

1. It was a good informational experience about nano & micro science.

2. Got knowledge about interesting technologies like Self-cleaning clothes etc. 3. More interesting technologies like Anti-fogging,

Anti-reflective materials for solar panels.

4. Learned how solar energy is used deconverted to
thermal energy a electrical energy.

5. Thanks to Souran Sir for giving us the opportunity
to explore this interesting technologies.

Signature of the candidate

With date and roll number

171420468019 25 8 22



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Feedback form

Date: 26/2/22

Name of the Student: Vardhan heldy

Roll number: 12/4204680243

Place of Visit: ARC &

1. The stop were very webaring and were justient when we osked doubts.

2. There were PHd students who were our age and thus explained awaythy well.

3. The campus was very well maintained with big equipment

4. We got to bear so much about metals and this properties

5. Our accompanying lecturer, s ravon in was very accommendating and helped us got the best eseperiumed

PUL 20468023 Signature of the candidate



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Feedback form

Date: 24/08/22

Name of the Student: G. E. S. kumar

Roll number: 121420468005

1. We had a great experience in learning new things in materialistic physics. 2. leaent about none particle of elements.

3. Demonstration of X-Ray & dispartion phenomena.

4. le development of solar cells wing pervoskit cells was

5. Wonderful place to know more about the materialistic physical & to do research for physics casees.

La 108

Signature of the candidate

121420468005



(Autonomous), Affiliated to Osmania University Re-accredited by NAAC (3rd Cycle) with B++Grade King Koti Road, Hyderabad

Feedback form

Date: 25 08 22

Name of the Student: Sped Shah Iftegrar voldin

Roll number: 121420468026

Place of Visit: ARCT

Feedback:

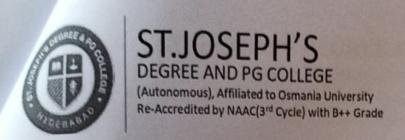
1. Tale heart alot as i am going for research in 2. I got to learn how things are be done.

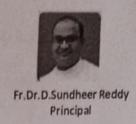
We learnt about the chardcall which are used to make Ghell and how it reacts the learnt about the Azamology in Solar energy

5. At last of was key informative and a wondusful. I learnt alot four this (Thanks for the Physic Str who take us for this field

Signature of the candidate

With date and roll number 121420 464026







INDUSTRIAL VISIT

INTERNATIONAL ADVANCED RESEARCH CENTER FOR POWDER METALLURY AND NEW MATERIALS (ARCI)

BSC.MPCS, Final year

Date: 24th August 2022

Time: 9:00am onwards

CONVENER:

M. SRAVAN KUMAR



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Ref: SJC/P&E/2022-23/002

21/08/2022

DEPARTMENT OF PHYSICS & ELECTRONICS NOTICE

This is to inform the students of B.Sc MPCs III Year that the Department of Physics & Electronics is organizing Industrial vist (Field vist) to "International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI)" on 24th August 2022 from 9:00 am to 3:00pm at ARCI, Balapur.

HoD Mr. M. L. N Rao



Principal

Fr. Dr. D. Sunder Reddy

Principal
ST. JOSEPH'S DEGREE & P.G. COLLEGE
King Koti Road, Hyderabad-500 029