

SAI VIDYA INSTITUTE OF TECHNOLOGY

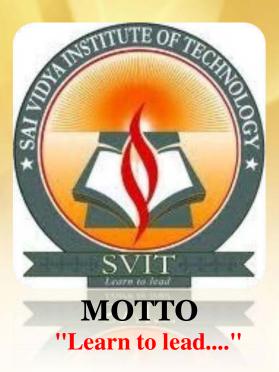
Rajanukunte, Doddaballapur Road, Bangalore-64

Prathibimba 2019



Journey of every svitian





VISION

Contribute dedicated, skilled, intelligent engineers and business administrators to architect strong India and the world.

MISSION

To impart quality technical education and higher moral ethics associated with skilled training to suit the modern day technology with innovative concepts, so as to learn to lead the future with full confidence.

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HISTORY OF SVIT

A COLLEGE BY THE TEACHERS FOR THE STUDENTS

Sai Vidya Institute of Technology, affiliated to Visvesvarya Technological University (VTU) Belagavi Karnataka approved by All India Council for Technical Education (AICTE) New Delhi and recognized by the Government of Karnataka was established in the year 2008 by SRI SAI VIDYA VIKAS SHIKSHANA SAMITHI which is a trust formed by a group of well-known academicians.

This Visionary group is committed to develop SVIT as a paradigm within a couple of years. The future of SVIT in Engineering Education is bright as the above professors are heading the departments and extend their service to develop the institution with the support of highly qualified and dedicated teaching and non-teaching staff.

Prof. M.R. Holla, a well-known academician and administrator with-over more than 50 years of academic and administrative experience to his credit along with an excellent team of popular professors of RVCE/RNSIT Bengaluru. The team comprises of Prof. Y. Jayasimha, Prof. R.C. Shanmukha Swamy & Prof. A.M. Padma Reddy, in association with Shri R. Srinivas Raju, a practicing Civil Engineer, Shri M.K. Manohar renowned Chartered Accountant and Shri Narayana Raju well known administrator both at RVCE/RNSIT.

SVIT will provide students with a sense of history, an understanding of the ideals and principles, a commitment to law and morality, an appreciation of human creativity an analytically inquisitive mind. We believe that once the students experience these, they are ready to address the challenges of the rapidly transforming world.

Message from the Directo

Prof. M.R. Holla, Director, SVIT

I am extremely happy at the launch of the third edition of magazine of SVIT "**PRATHIBIMBA-2019**". Hope it will bring out innovative and interesting articles. This is an occasion for both students and staffs to exhibits their talents by producing extraordinary articles and bringing out new ideas. It is a source to tap the potential of our students and staff.

The management has provided within a short period whatever possible infrastructure facility to develop the personalities of students. They also provided well equipped laboratories; a good library is also established. Ample opportunities are also given in sports and cultural activities to students to bring out their inherent qualities.

I am glad that many of the students have utilized this facility and came out successfully. They also participated in many inter-collegiate festivals and won over many prizes. A special training was given to students for placement activity, soft skills aptitude and technical. I am very happy that majority of the students got placed in good companies.

I wish "THE BEST" for the chief editor, executive editors and all the members of the editorial board.

Prof. M.R. Ho

Message from the Secretary



Mr. Srinivas Raju, Secretary, SVIT

I am glad to know that SVIT is coming out with third edition of its annual magazine PRATHIBIMBA-2019. Prathibimba is expanding space for students and staff alike to showcase their literary talents and they have made the best use of it. An open canvass of this kind is very essential for young budding engineers to paint their imagination, experts their feelings and leave their footprints at SVIT forever. SVIT takes pride in assuring that it does not leave any stone unturned in ensuring the delivery of best quality education and research to all sections of the society. We strive to look far into the future of engineering education, understand the dynamics of it, update our strategic plan, translate it into medium and short term plans, deploy appropriate human and financial resources, meticulously execute the plans, continuously keep tabs on their progress and control them, and gain the necessary feedback to activate the continuous improvement loop. Our strategic plan aims to groom competent engineers who invariably encourages and promotes cultural, sports and literary talents in students. I am sure that the editors of Prathibimba must have had a tough time selecting articles or contributions from enthusiastic writers. Many articles may not have found place in this edition due to limited space. Nevertheless, I presume, they were equally good. No doubt, scope for improvement remains, as always. I must congratulate the executive editors Prof. Raveendra R.S. and Prof. Vijaya B and the editorial team who have done a wonderful job in bringing out this piece of literary marvel. I wish all those associated with this effort, the best.

w Pagebark

Sd/-

Mr.Srinivas Raju

Message

From Vice Chancellor - VTU

Visvesvaraya Technological University

"Jnana Sangama" Belagavi - 590 018, Karnataka State.

Dr. Karisiddappa, B.E.M.Tech., Ph.D. Vice Chancellor Phone :(0831)2405454 Fax:(0831)2405456

Ref. No.: VTU/VCS/2019-20/ 03-

Date: 04-04-2019

MESSAGE

I am pleased to note that Sai Vidya Institute of Technology, Bengaluru, is bringing out the College Magazine "Prathibimba" for the year 2018-19.

My best wishes to the college to meet the challenges and to achieve greater heights in the field of Technical higher education.

I wish the Magazine "Prathibimba" to put in to lime-light, the latest trends in Engineering and Technology, current affairs and constructive views, which provides a platform for an individual to build a sound career.

I wish all the best to the students and teaching faculty involved in bringing out the magazine.





The Principal, Sai Vidya Institute of Tech., Rajanukunte, Bengaluru – 560 064.

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Phone: (0831)-2405454, Fax: (0831)-2405456, e-mail: vc@vtu.ac.in, website: www.vtu.ac.in

Message from Principal/Editor in chief



Dr. Ramesh Babu H.S. Principal, SVIT

It gives me immense pleasure in bringing out annual magazine **PRATHIBIMBA-2019**, which is a curtain riser to all those concerned with the institution particularly students and staff. SVIT is one among reputed technical institutes imparting finest quality education. The evolution of the institute over the past 11 years has witnessed strong blend of state-of-the-art infrastructure and intricately intertwined human resource committed to provide professional education with thrust on creativity and innovation. The motivating environment in SVIT for knowledge assimilation, generation and dissemination with a sense of social responsibility, human values and concern for environment has carved a place for itself among the best technical institutes.

In SVIT, it is believed and practiced that excellence is a continuous process and in pursuit of which the institute has made deep forays into contributing world renowned technocrats, successful entrepreneurs, competent leaders, innovative scientists and researchers. Dear students "A desire can change nothing, a decision can change something but a determination can change everything". Life is a set of problems. An engineer has to solve problems in their domain areas with strong innovative ideas with scientific knowledge. Your commitment to become an engineer by devoting four year academic journey in SVIT will be fruitful and enjoyable in every aspect and the experience you gain from here and the moments you spend here will be cherished by you throughout your life.

en P-H

Dr. Ramesh Babu H.S

Message from Executive editors



Prof. Raveendra R.S.

It gives me immense pleasure to bring out the third edition of college magazine "**Prathibimba-2019**". This magazine has been an effective platform for students and staff to express their talents and hidden skills. I would like to take this opportunity to express my sincere thanks to the principal, director, secretary and all the trusties of SVIT. I thank the editorial board members for their informable suggestions and advice. I am indebted to the student members of the editorial board for their tiredness efforts in bringing out the magazine.



Prof. Vijaya B

It gives me great pleasure to bring you the college magazine of SVIT "**Prathibimba-2019**". A lot of efforts have gone into the making of this issue. We hope you enjoy reading the magazine. The best thing about this issue is that it represents the creative side of SVIT students to a fair degree-something that we think we all need to reconnect with. Amidst the busy schedule of a 4-month semester, with 3-exams, surprise quizzes and all those assignments and problem sheets that make you want to bang your head on the wall, we tend to lose track of all the other simpler things that we are capable of, things that we could have been proud of, that can bring one satisfaction. So this time we have made an attempt to bring out the talent concealed within our student community. This issue includes articles, poems, anecdotes, art-works, a host of other things.

Editorial board committee members

Dr. Ramesh Babu H.S., Principal Editor-in-Chief Prof. Raveendra R. S., Asst. Prof. Chemistry. Executive Editor Prof. Vijaya B., Assoc. Prof. Mechanical. Executive Editor

Student co-ordinators

- 1. Hampesh K. R.
- 2. Suvratha V
- 3. Nithin Bharadwaj
- 4. Sohan Kumar
- 5. Soundarya S. P.
- 6. Shylaja B.S.
- 7. Sunil H. Kote
- 6th SEM Mechanical 6th SEM ECE-A 4th SEM Mechanical 4th SEM Mechanical 2nd SEM ISE 2nd Year MBA 2nd SEM ECE-B





DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION

To become a centre of academic excellence with innovations to make a significant contribution to the society in the field of Electronics and Communication Engineering.

MISSION

- \checkmark To educate and empower the students with state-of-art knowledge and innovation in electronics & communication engineering to meet the global challenges.
- \checkmark To imbibe the professional competency and ethics congenial to the society through training.
- ✓ To include professional ethics and morals among the students and enabling them to become good Leaders.
- \checkmark To inspire the students to the **research and technology** for societal issues.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Educational objectives are the career and life accomplishments that the program prepares graduates to achieve within a few years after graduation. The educational objectives of Electronics and communication Engineering programs of Sai vidya Institute of technology are to produce graduates who are able to:

PEO 1: Design & develop electronic systems.

PEO 2: Effectively communicate technical information, successfully lead and participate in a multi-disciplinary team environment.

PEO 3: Engage in lifelong learning through continuing education and industrial practise.

PEO 4: Demonstrate professional ethics and social awareness.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- 1. Design and simulate Electronics and Communication systems using concepts and tools of electronic circuits, signal processing, VLSI technology and communication.
- 2. Architect, partition and select appropriate technologies for implementation of a specified electronics & communication system

PROGRAM OUTCOMES (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
- **PO5:** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of thelimitations.
- **PO6: The Engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineeringpractice.
- **PO7: Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainabled velopment.
- **PO8: Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineeringpractice.
- **PO9: Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinarysettings.
- **PO10: Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clearinstructions.
- **PO11: Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinaryenvironments.
- **PO12: Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technologicalchange



Dr. Narayan. K

PRATHIBIMBA-2019 our annual college magazine showcases the various achievements and talents of students and members. I would like to appreciate and congratulate the editorial team for their efforts in bringing PRATHIBIMBHA-2019 in an elegant & presentable manner. I am privileged to offer my best wishes. I congratulate students & members who have contributed their articles in huge volume.

The department is mentored by Prof. Y. Jayasimha, Professor and Dean - Academics, SVIT, with an experience of more than 30 years. The department is headed by Dr Narayan .K (Dean R&D), Professor and Head. Dr Narayan. K has done doctorate from prestigious Indian Institute of Science (IISc), Bangalore. He has more than 43 International Publications. Department is supported by well qualified Professors, such as Prof Vikramathithan A. C, and Dr. Raj Bharath. The department has Research & Development Centre which encourages the teachers and students to engage in R & D activities. Currently department has received Rs. 83.55 Lakhs from DST/ VGST and other corporates. The department has IEEE Photonics student chapter, Bangalore, IEEE EMBS Student Chapter and Student Forum TECHGENES.

Department has signed a MoU with XEROX Corporation and RTTC, BSNL, Mysuru. Agricultural robot project designed and developed by students of ECE department under the guidance of Mr. Pavan Kumar E, Assistant Professor, won First Prize in VTU Project exhibition. The department offers state of art subjects as elective such as MEMS (Micro Electro Mechanical Systems) and Nanoelectronics to name a few. Such advanced electives are not generally offered by other engineering colleges. So far Fifteen Students under the guidance of Dr. Narayan K have visited abroad and presented their papers at top international conferences, including countries such as USA, Germany, Portugal and Czech Republic in Europe. Many of the students have even received international travel grants from IEEE Photonics Society.

Events held during the academic year 2018-19

Workshop on Nanotechnology and Photonics - 5th September- 2018

The one-day workshop on nanotechnology and photonics was organized by SVIT IEEE photonics and EMBS student chapters & department of ECE, Sai Vidya Institute of Technology, Bengaluru in association with IEEE-IISc student branch as part of IEEE-IISc Knowledge & networking outreach workshop (I-KNOW) program on 05-09-2018. The chief guest for the workshop was **Dr. T. Srinivas**, Associate Professor, ECE department, Indian Institute of Science and branch counsellor IEEE-IISc student branch.

The workshop was inaugurated by chief guest, branch advisor, SVIT IEEE student branch, principal and student chair, SVIT IEEE student branch. Dr. T. Srinivas addressed the gathering about the student branch activities and its importance. Dr. H.S. Ramesh Babu, Principal of SVIT also spoke on the occasion about the student activities and expressed his happiness. Dr. Narayan K, IEEE SVIT student branch advisor addressed the gathering about the benefits of IEEE membership and on the activities to be conducted under the IEEE student branch chapters. Dr. Narayan K also highlighted about the 5 students of Sai Vidya Institute of Technology, Bengaluru attending the IEEE IPC 2018 conference to be held at Reston, Virginia, USA. Followed with the Inauguration, the following Speakers gave their talk on the following topics,

- 1. **Dr. T. Srinivas**, Associate Professor, ECE department, Indian Institute of Science (Topic: Optics in India: Opportunities and Future).
- 2. Mr. Awanish Pandey, CeNSE, Indian Institute of Science (Topic: Nanotechnology and Photonics).

3. **Mr. Rahul Singh Kotesa**, CeNSE, Indian Institute of Science (Topic: Life of a Ph.D student in IISc). There was panel discussion was held at the end of the workshop, Dr. T. Srinivas emphasized about the internship opportunities available for Photonic student members and also about the studies in abroad. 133 participants participated in the workshop from host institute, The Oxford Engineering College and CMRIT.

Workshop Organizers:

Mr. Venkatesha M, Execom Member, IEEE photonics society Bangalore chapter.Mrs. Shwetha M, Execom Member, IEEE photonics society Bangalore chapter.Mr. Vaibhav L Shah, SVIT IEEE photonics chapter student chair.Mr. Sharth K Prabhu, SVIT IEEE student chair.Ms. Vismaya, SVIT IEEE student secretary.

IEEE Humanitarian Event on Road Safety Training for Youth - 4th February - 2019

An event on road safety was hosted by SVIT IEEE student branch and department of ECE, Sai Vidya Institute of Technology, Bengaluru in association with IEEE- Bangalore section, IEEE young professionals, Bangalore section and MASH foundation.

We would like to thank Management and Principal for providing an opportunity to host this event. A special thanks to our Principal, Dr. Ramesh Babu H S for his encouragement in hosting and also for providing the logistics required for hosting the event.

Dr. Narayan K, IEEE SVIT Student branch advisor, initiated the event by addressing the students about road safety and the importance of it. Mr. Mangesh Raut, MASH foundation, was the trainer for the event. He addressed the students about the road safety, how to take measures when someone is met with an accident, he explained the students about samaritan law. He demonstrated how the first aid can be performed on the spot of accident. He has also given insight to the students about medical emergencies like CPR, snake bite, dog bite etc.

Students have actively participated in this event, at the end of event students have gained knowledge about the first aid, which can be performed in an emergency situation. Students have got the clear information about Samaritan law.

Smart India Hackathon-2019

Under the mentorship of Prof. Pavan Kumar. E, Asst. Professor from department of ECE and Mr. Abhijeet Asst. Professor from department of CSE, Apeksha N.T, Akshay Kumar P, Srinivas G.P, from 6^{th} semester ECE department along with Shashank J, Vinay Kumar R.T, Aishwarya G, from CSE department have participated in **"Smart India Hackathon-2019"** at **Sri Krishna College of Engineering, Coimbatore,** The competition was held on 2^{nd} and 3^{rd} of March 2019. The problem statement on "To design, develop and demonstrate the functioning of a reliable, cost effective, high security platform to facilitate good video conferencing when the bandwidth drops from 140 to 400 kbps from contracted bandwidth is 512 kbps (1:1). This should be reliable at external temperatures of -25 °C at heights of 14,000 ft" Defined by Apollo Hospital. They are declared as winner. SVIT is proud to become one of the colleges amongst VTU to achieve competition.

VTU Project Exhibition cum Competition

Under the guidance of Prof. Pavan Kumar. E, Asst. Prof. from department of ECE, Mr. Akshay uppin, Mr. Abhiskek N. Vasisht, Mr. Chandrakanth. R.N and Mr. Nagabhargav from 8th semester ECE participated in **VTU Project Exhibition cum Competition!** Held at VTU campus at Belagavi on the eve of 20th foundation day. The competition was held on 28th June 2018. They won 1ST prize and cash prize of **INR 25,000/-** amongst 200 College participated SVIT is proud to become one of the colleges amongst VTU to achieve competition.

Student's achievements

PHOTOPTICS-2019

Final year students Ms. Sharon and Mr. Vinith Kumar from department of Electronics and Communication Engineering presented a paper entitled "Modelling and Analysis of Double Layer Moth-Eye Anti Reflective Coating on Organic Light Emitting Diode" in **PHOTOPTICS-2019** Conference at **Prague, Czech Republic, Europe,** held during 25th to 27th February 2019. Photoptics-2019 is one of the top conferences in the area of photonics held every year in Europe. This work was guided by Dr. Narayan. K, Professor and HOD, Dean (R & D), department of ECE and Ms. Chaya from the department of ECE.

SPIE (Optics and Optoelectronics)

Two third year (6th semester) students from department of Electronics and Communication Engineering (ECE), Ms. Umme Kulsum and Ms. Raksha V, presented their papers entitled "FDTD modelling and simulation of organic photodetector using photonic crystals" and "Analysis of ring structure with quality factor enhancement" respectively at **SPIE** (**Optics and Optoelectronics**) held at **Prague Czech Republic, 1 - 4 April 2019**. The students had also got a unique opportunity to interact with 2018 Physics Nobel Prize Laureate, **Gerard Mourou.** Ms. Raksha received travel grant of USD 500 from SPIE Society USA (Society of Photo-Optical Instrumentation Engineers). This work was done under the guidance of Dr. Narayan .K Professor and HOD, Dean (R&D).





Department of Electrical and Electronics Engineering

VISION

To attain centre of excellence in Electrical and Electronics Engineering and contribute professional Engineers

MISSION

- Impart high quality education with a focus on fundamentals and practical applications of Electrical and Electronics Engineering concepts.
- Inculcate professional knowledge on recent trends in Electrical and Electronics Engineering through Industry Academic interactions and training.

Program Educational Objectives (PEOs)

- **PEO1:** To provide a strong foundation in Electrical and Electronics Engineering fundamentals to understand and analyze with intent to design and develop products / applications to address practical issues.
- **PEO2:** To inculcate ethical attitude, effective communication skills, leadership qualities and team spirit for a successful professional career with concern for society.
- **PEO3:** To encourage professional development and higher learning through training and researchactivities

Program Specific Outcomes (PSOs)

- **PSO1:** To Apply science, engineering, mathematics through differential and integral calculus, complex variables to solve Electrical Engineering problems.
- **PSO2:** To demonstrate proficiency in use of software & hardware to be required to practice Electrical Engineering profession.
- **PSO3:** To apply the knowledge of ethical and management principles required to work in a team as well as to lead a team.

PROGRAM OUTCOMES (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
- **PO5:** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of thelimitations.
- **PO6: The Engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineeringpractice.
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- **PO8: Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineeringpractice.
- **PO9: Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinarysettings.
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Prof. T.G. MANJUNATH B.E. M.Tech (Ph.D) ASSOCIATE PROFESSOR & HOD

"It is indeed a happy moment for our Electrical and Electronics Department as the SVIT bringing out the third edition of the **PRATHIBIMBA-2019** for the year 2018-19. The most important aspect we could derive from this amazing effort is that it brings out the various technical and analytical skills of the budding engineers. I wish them II the very best for releasing magazine."

This department is headed by **Prof T G Manjunath** with an experience of more than 18 years in the field of Electrical and Electronics Engineering. The Department is mentored by **Prof. R.C. Shanmukka Swamy**, Professor and Dean - Administration, SVIT with an experience of more than 30 years in R.V.C.E/RNSIT and supported by well qualified and experienced with an average teaching experience of more than 8 years. The department has well equipped laboratories. The D.C & A.C machines lab, power electronics lab, High voltage & relay lab, Control system lab and measurements & circuit simulation labs are set up in the department for the students to learn and Practice. The department has been separately housed in Block I Building with spacious class rooms and laboratories along with E & C dept. The department has initiated a students' forum named "EGNITE" in 2012. Under this forum the department regularly conducts seminars and workshops on solar energy, renewable energy resources and other topics on latest trends in industry to update the knowledge of the students. The department also arranges industrial visits every year to help students gain practical exposure.

Main thrust of the department will be in the areas of alternative energy and power electronics. The Electrical & Electronics Engineering course is designed to impart knowledge in power generation, conversion, transmission and distribution of power, electronic circuits, control systems, high voltage, VLSI etc. The Electrical & Electronics Engineers have the career opportunities in government organizations like Power Corporations, Electricity Boards, Hardware and Software Industry, Manufacturing Industries, Power Generation Plants besides entrepreneurship as consultants and contractors.

The department is continuously achieving 90-100% results in final year exams of VTU.

Events held during the academic year 2018-19

The Department has initiated a professional IEEE Student's chapter (Power and Energy Society) and student's forum named "EGNITE" in 2012. Under this forum the department regularly conducts seminars and workshops on solar energy, renewable energy resources and other topics on latest trends in industry to update the knowledge of the students. The department also arranges industrial visits every year to help students gain practical exposure.

A professional body student chapter "IEEE Power and Energy Society" - a platform to enhance and exhibit innovative ideas.

Egnite Forum: A platform for the students to showcase their skills.

E-POWER: A NEWSLETTER to ink the Technical articles.

Skill development training programs and internships at: Central and State Government recognized reputed Training Institutes like NPTI, KREDL, BSNL, FTI.

MOU's: NPTI, Ministry of Power, Government of India, KREDL, Government of Karnataka, PRDC and Prolific Systems Pvt Ltd to provide training on professional skills to meet industrial demands.

MINI PROJECTS: students will be given mini projects related to curriculum to make them understand the practical aspects.

Students are trained to meet industrial requirements by conducting domain specific workshops and internships

- 1. Skill development program on **RENEWABLE ENERGY SOURCES AND GRID INTEGRATION** by NATIONAL POWER TRAINING INSTITUTE (under ministry of power, Govt. of INDIA) was organized for 8th semester students for a period of 21 days from 21st January to 15th February 2019.
- 2. A one week, Skill development program on **ELECTRIC MOTORS** at FOREMEN TRAINING INSTITUTE (NSDC) Govt. of Karnataka was organized for 4thsem students from 29th April to 6th may 2019.
- 3. 4-day student development program was organized for students of 6th and 8th semester on ***VIRTUAL INSTRUMENTATION & GRAPHICAL PROGRAMMNG in Electrical and Electronic Systems**" using NATIONAL INSTRUMENTS LABVIEW (**NI Labview**) from 30th January to 2nd February 2019.
- 4. 4 day workshop on "**PLC SCADA & HMI**" for final year students during 1st to 4th August 2018, in association with Prolific Systems and Technologies Pvt Ltd (Authorized training partner NSDC, Govt., of India).
- 5. 3 day training program on ARM PROCESSORS AND MICROCONTROLLERS for 6th semester students.
- 6. **3-day workshop on ELECTRICAL SWITCHGEAR and ITS APPLICATION for final year students** by UNIVERSAL POWER CONTROLS (DBSONS) from 25th to 27 February, 2019.
- 7. Regular Industrial visits to 33/11KV SUBSTATIONS, KAVIKA (transformer manufacturer), SHARAVATHI AND VARAHI HYDEL POWER PLANT and KAIGA NUCLEAR POWER PLANT.
- 8. **Mini projects** were done by 6^{th} semester students on ARM PROCESSORS.
- 9. **Technical paper** presentation by 4th sem students at IISc, Bangalore.















Department of Computer Science Engineering

Vision

Contribute dedicated, skilled, intelligent Computer Engineers to architect strong India and the world

Mission

- ✓ Provide quality education in Computer Science by promoting excellence in Instruction, Research and Practice.
- ✓ Promote Professional interaction and Lifelong Learning
- \checkmark Encourage the youths to pursue career in Computer domain with modern innovation and ethics.

Program Educational Objectives (PEOs)

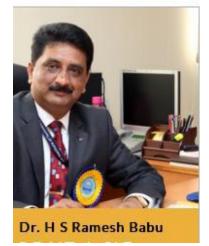
- **PEO1:** Graduates will have the expertise in analyzing real time problems and providing appropriate solutions related to Computer Science & Engineering.
- **PEO2:** Graduates will have the knowledge of fundamental principles and innovative technologies to succeed in higher studies, and research.
- **PEO3:** Graduates will continue to learn and to adapt technology developments combined with deep awareness of ethical responsibilities in profession

Program Specific Outcomes (PSOs)

- **PSO1**: Demonstrate the knowledge and understanding of working principles, design, implement, test and evaluate the hardware and software components of a computer system.
- **PSO2**: Apply standard Software Engineering practices and strategies in software project development
- **PSO3**: Demonstrate the knowledge of Discrete Mathematics, Data management and Data engineering.

PROGRAM OUTCOMES (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
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- **PO7: Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainabled velopment.
- **PO8: Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineeringpractice.
- **PO9: Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinarysettings.
- **PO10: Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clearinstructions.
- **PO11: Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinaryenvironments.
- **PO12: Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technologicalchange



Department of Computer Science Engineering (CSE) started its course of journey for four year B.E course in CSE/ISE branch from the year 2008-09 with an intake of 60 students in each branch.

The CSE department has Research & Development Centre which encourages teachers and students to do projects in the centre itself and to engage in R & D activities. The department of CSE is mentored by **Prof. A. M. Padmareddy**, well known author among CS community with more than 32 years of experience and headed by **Dr. H. S. Ramesh Babu** having vast experience in academics & research work, supported by a team of qualified and experienced. With the advancement and modernization of today's hardware & software components within computers which have grown in complexity, capacity & multitasking, the demand for quality computer engineers with expertise in software engineering has increased manifold. Keeping this as the goal, the Computer Science Engineering department meets the VTU Curriculum & IT Industry requirements. The branch has excellent team of young, dynamic & dedicated members who are highly qualified with a rich & vast experience in teaching & industry. The faculties are involved in proctoring, research, conduction of other co-curricular activities like Seminars, Workshops & Conferences apart from regular teaching.

Events Conducted

- 1. To train the students in the field of computer network one Day Hands-on workshop on "Network Simulator-2" was conducted for 5th semester CSE students on 26th September 2018.
- 2. SVIT **IoT Club** was inaugurated on 29th September 2018. The inauguration was done by Mr. Pramod Kumar, Industry expert from SoC domain. He delivered a technical talk on IoT and its applications.
- 3. Department newsletter 'Sameeksha' was released on 29th September 2018. Mr. Pramod Kumar, Industry expert from SoC domain was the chief guest for the function.
- Department Forum day "Techmania" was organized on 29th October 2018. It was one day technical event which consist of innovative and technical game. Various technical events like You Murderer, Search It, Gaming, Blind Coding, Tech Quiz, Tech Dumb chards, Crossword Puzzle was conducted. Students from all semesters actively participated in various events.
- 5. Two day workshop on "Internet of Things" was conducted for 6th semester ISE students during 21st and 22nd February 2019. The main focus of this workshop is to train the students in the field of Internet of Things through a practical approach using Arduino.

- 6. Five day workshop on "**Object oriented Programming with C++**" was conducted during 4th February 2019 to 8th February 2019. There were both theory and lab sessions. Students were exposed to case studies which enhanced their programming skills. There was also online test at the end of the session.
- 7. Every Monday students were trained in the latest technology tools like MIT App Inventor, Web development, SSH, Docker as a part of department forum activity and FSMK. Group of technically skilled students are conducting these trainings.

Student's Achievements

- 1. Mr. Shashank J, Mr.Vinay Kumar R.T and Ms Aishwarya G of 6th semester has won Smart India Hackathon 2019 grand finale. It's a non-stop product development competition, where problem statements are posed to technology students for innovative solutions.
- 2. Anirudh M.V of 6th semester CSE was part of Western group Band which won 3rd price in VTU Youth Fest -2018, 1st place in SIT, Tumkur, 2nd place in Presidency University.
- 3. **Mr. Abhinav Kumar Abhay** and **Mr. Anirudh M.V** of 6th semester CSE have won 3rd place in the regional finals of **TCS-Tech Bytes** held at SIT, Tumkur held on 18-03-2019. TCS-Techbytes organized by Tata Consultancy Services (TCS) Asia's largest IT company is an initiative to help engineering students keep pace with the evolving technology landscape in the process enhance their lateral thinking process and inculcate the spirit to compete and excel.
- 4. Ms. Sampritha and Mr. Vijeth Sarashetti of 8th semester have presented the paper at SPIE Photonics, held at San Fransisco, California, USA. SPIE, the international society for optics and photonics.



















Department of Information Science & Engineering

Vision

Architect dedicated and intelligent Information technology engineers to address evolving global needs

Mission

To provide quality education by creating and nurturing innovative and technologically steadfast learning environment.

To inculcate moral ethics in students enabling them to become socially committed professionals with leadership qualities.

Program Educational Objectives (PEOs)

- **PEO1**: Serve as IT professional with proficiency in developing solutions to complex engineering problem
- **PEO2**: Pursue higher education and preserve the essence of lifelong learning.
- **PEO3**: Exhibit high standards of social and professional ethics, entrepreneurship and leadership qualities.

Program Specific Outcomes (PSOs)

- **PSO1**: Analyze, design and develop secure Information system by organizing data efficiently.
- PSO2: Analyze, design, develop, test and maintain software that satisfy the specified requirements.
- **PSO3**: Apply the knowledge of network communication concepts, computation and optimization techniques to provide solutions to real time IT problem

Program outcomes (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
- **PO5:** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of thelimitations.
- **PO6: The Engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineeringpractice.
- **PO7: Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainabled velopment.
- **PO8: Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineeringpractice.
- **PO9: Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinarysettings.
- **PO10: Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clearinstructions.
- **PO11: Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinaryenvironments.
- **PO12: Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technologicalchange



Dr. Vrinda Shetty

At the outset I express my happiness and thanks for the editorial team of college magazine for bring out **"PRATIBIMBA 2k19".** It's my pleasure to write about the Department of Information Science & Engineering, Sai Vidya Institute of Technology. The department of ISE is headed by me, Dr. Vrinda Shetty. The department has an excellent team of young, dynamic & dedicated members who are highly qualified and have vast experience in teaching & industry.

ISE department is best equipped department in the region and our students are exposed to a variety of hardware and software platforms. The department has excellent academic record with a total pass percentage of 90% in all semesters.

It also holds commendable placement record. The faculties are involved in proctoring, research, conduction of other co-curricular activities like development programs, Seminars, Workshops & Conferences apart from regular teaching. Students of the department take part in technical contests at state as well as national levels.

Department of ISE, SVIT encourages and facilitates students to take up internship in leading companies. Currently students of ISE department are doing internship in C-DOT, Bosch, HP, BEL etc.

Achievements

- 1. Dr. Vrinda Shetty, Professor and HOD, Dept. of ISE received "EXCELLENCE IN EDUCATION AWARD" on Feb 23rd 2019, by VENUS INTERNATIONAL FOUNDATION at Green Park Chennai, India.
- 2. **Prof. Abhijith H. V**, Assistant Professor, Department of ISE is selected as reviewer for IEEE access.

Student's Achievements

- 1. M B Alka of 8th semester ISE won 3rd price in VTU Youth Fest -2018 Debate Competition.
- 2. Karthik P, Pramath and Nishanth of 8th Semester ISE Received a Fund of Rs 5500 From KSCST for the project "Eye movement based controlling of wheelchair" Under the guidance of Prof. Amogh P K.

Events Conducted during the year 2018-19

- 1. One day hands-on workshop on "Network Simulator-2" was conducted for 5th Semester ISE students on 26th September 2018. The main focus of this workshop is to train the students in the field of computer network by using the NS2 Simulator.
- 2. SVIT **IoT Club** was inaugurated on 29th September 2018. Mr. Pramod Kumar, Industry expert from SoC domain was the chief guest for the function. He stressed the importance of IoT in future. Also he delivered a technical talk on IoT and its applications.
- 3. Department news letter **'Patrika'** was released on 29th September 2018. Mr. Pramod Kumar, Industry expert from SoC domain was the chief guest for the function.
- 4. Department forum day "Techmania" was organized on 29th October 2018. It was one day technical event which consist of innovative and technical game. Events Like You Murderer, Search It, Gaming, Blind Coding, Tech Quiz, Tech Dumb chards, Crossword Puzzle was conducted.
- 5. Two day workshop on "Internet of Things" was conducted for 6th semester ISE students during 13th and 14th February 2019. The main focus of this workshop is to train the students in the field of Internet of Things through a practical approach using Arduino.
- 6. 5-day workshop on "Object oriented Programming with C++" was conducted during 4th Feb 2019 to 8th Feb 2019. There were both theory and lab sessions. Students were exposed to case studies which enhanced their programming skills. There was also online test at the end of the session.
- 7. As a part of department forum activity and FSMK, Every Monday students were trained in the latest Technology tools like MIT App Inventor, Web development, SSH, Docker. Group of technically skilled students are conducting these trainings.



Department of Civil Engineering

VISION

"To produce civil engineers with the necessary knowledge, skills, attitudes and to be the fountain-head of sustainable innovations in civil engineering."

MISSION

- To provide high quality technical education to students for a successful career through professional consultancy, outreach and manpower training, in civil engineering
- > To transform the students as Frontrunners and guardians of the natural environment and resources
- ▶ Inspiring Innovations and integration of ideas and technologies

Program Educational Objectives (PEOs)

PEO 1: Lead and work in a team with effective communication skills to pursue civil engineering endeavors in multidisciplinary areas.

PEO 2: Function ethically in their profession and meet professional challenges.

PEO 3: Engage in lifelong learning through independent study, participating in professional conferences, workshops or continuing education.

Program Specific Outcomes (PSOs)

PSO 1: Impart practical knowledge in planning, analysis, design and construction management

PSO 2: Function as a professional engineer and contribute towards betterment of the society

PSO 3: Function as an individual or in a team to find solutions for civil engineering problems of multi disciplinary nature in the context of environmental and sustainable development.

Program outcomes (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
- **PO5:** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of thelimitations.
- **PO6: The Engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineeringpractice.
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Prof. R. Leeladharesha

The department of Civil Engineering in SVIT was established in the year 2010 affiliated to Visveswaraya Technological University, Belgaum, Karnataka. Over the years, it has grown into one of the finest centres of learning in the field of Civil Engineering.

The Department is headed by **Prof. R. Leeladharesha** who has vast experience in academics and engineering fields who encourages with the academics and also shows keen interests in students with extra curriculum activities such as sports and cultural.

The department offers under graduate program in bachelor degree in Civil Engineering with an intake of 60 students. The department has well experienced members to provide the best of engineering knowledge to the students. Well established laboratory, timely conducted workshops; seminar and development programs make both faculties and the students aware with the latest technical endeavors and global exposure.

A department library is operational apart from the central library. Department has set up an infrastructure for students to take up massive online open courses like NPTEL, IIRS and GIS & Remote sensing course from ISRO.

Events held in the department of Civil Engineering

International Conference on Topical Transcends in Science, Engineering & Technology 2018

ICTTSET- International conference on Topical Transcends in Science and Technology was an esteemed event organized with an inspiration to provide an international platform for the Researchers, Academicians, Engineers, Industrialists and students around the world to share their research findings with the global experts. In addition, this gathering was helpful for the delegates to establish research or business relations as well as to find international linkage for future collaborations in their career path. ICTTSET- 2018 was held in Sai Vidya Institute of Technology, Bangalore-560064, India on 17th and 18th August- 2018. The outcomes of ICTTSET- 2018 have lead to significant contributions to the knowledge base in these up-to-date scientific fields in scope.

Survey camp

Department of Civil Engineering conducted extensive survey project for 6^{th} SEM Civil Students as per the academic curriculum, which is one among the best training the students can get. Here is a glimpse of the survey conducted from 23^{rd} Jan - 2^{nd} Feb 2019.

The best batch was awarded with the best survey batch award with a cash prize to encourage them and bring the best out of the students.

Sl. No	Title	Project guide	Te am le ade r	USN
1.	Design and fabrication of permeable pavement model to analyze its applicability for heavy rainfall roads and parking lots	Gowtham B	Brunda G C Kavya G Anusha H Deeksha R N	1VA15CV012 1VA15CV021 1VA15CV004 1VA15CV015
2.	Signal optimization in selected areas of bengaluru urban and its effect on fuel consumption	Gowtham B	AkshayPachapuri Meghashree M Vinod S A Sunil Kumar T	1VA16CV400 1VA15CV027 1VA15CV057 1VA15CV049
3	Application of gis and rs for aquifer mapping and site suitability for ground water recharging in bangarpet taluk of kolar district karnataka	Sreekumary G	Mamatha K B Harshitha R Saritha K Suma M	1VA16CV406 1VA16CV404 1VA16CV411 1VA15CV048
4	Ground water quality assessment using gis and rs: a case study in kolar hobli, karnataka	Sreekumary G	Pooja D Varshitha D Manasa M K	1VA15CV034 1VA15CV053 1VA16CV407
5	Retention behaviour of soil bentonite and flyash liner tocontrol migration of heavy metals of landfill leachate, solid waste disposal site- bellahalli near bagalur bangalore	Dr. Megha N Kulkarmi	Bhavani Prasad G Shivakumar B R Gowtham L	1VA16CV402 1VA16CV412 1VA14CV037

KSCST Projects

Engineer's day and Teacher's day Celebrations

Engineer's day and Teacher's day, both being in the same month of the year i.e September. Both the prominent days in life an Engineer and a Teacher was celebrated in a single day of September and was held on 18/10/2018.

SMP Program

Department has an MOU with ACCE(I) which provides internships for all the students of 8^{th} sem and 6^{th} sem where renowned resource persons, industrialists and professionals deliver lectures to our students and take them to visit sites which has been conducted along with the curriculum.

Students from department of civil engineering at Singapore

Students from the department had been to Singapore to present a paper entitled "Influence of additives in controlling migration of Heavy metals- A case study Solid waste disposal site Bangalore" at International Conference on Science and Technology Research held in The National University of Singapore Society on 15/03/2019 and 16/03/2019 under the guidance of Dr. Megha Kulkarni.

Industrial visits

Rajankunte railway station

Students from 4th year were made to visit the Rajankunte railway station for experiencing and learning the Design of steel structures and trusses on 2nd May 2018. Steel connections i.e Welded and Bolted connections, Basics of components of railway tracks and also witnessed the pre-cast structures.

Construction of 23 storeyed building by Mantri Developers at Manyata Tech Park

Students got an opportunity to visit Manyata Tech Park for Mantri Developers work on 9th May 2018. Students could learn the new techniques introduced in construction of the 23 storeyed building from Mantri Developers. They also could witness Construction Machineries and procedure involved in constructing different Structural elements and also maintenance techniques like curing, deshuttering etc. Students from 8th SEM Civil Enginerring visited Industrial Waste water Treatment plant at Yelahanka on 29/10/2018 to understand and learn how sewage water was treated with primary treatment. Students learnt designs to build the treatment plant which includes clarifiers, settling tank etc.

Panchami RMC Plant at Guttanahalli

Students from 4th SEM were taken to **Panchami RMC Plant at Guttanahalli on 13/03/2019** and they had hands on Concrete Mix and Lab Material testing was explained. Achievements of students

Mr. Nithin Kumar T. K. (1VA15CV032) and Mr. Bhavani Prasad (1VA16CV402) of 7th SEM receiving the Best Paper Award at the NCACE-EWIT- 2018 a National Conference in Advances in Civil Engineering held at East West Institute of Technology on 28th and 29th September 2018.

Ranks VTU Examinations held in DEC 2017/JAN 2018



Mr. Nithin Kumar T. K. USN: 1VA15CV032 9th Rank (6th SEM)



Ms. S Krishna USN: 1VA16CV038 7th Rank (4th SEM)

NPTEL COURSES

Students are actively registered and successfully completed various NPTEL courses offered by the IIT's apart from their curriculum. Students opt the subject of their choice or the course in their area of interest and successfully completed in courses like:

- 1. Geotechnical Engineering
- 2. Employment Communication
- 3. Applied Geotechnical Engineering
- 4. Design of Reinforced Concrete Structures













Department of Mechanical Engineering

VISION

• To establish Mechanical Engineering Department as an excellent centre to produce skilled and intelligent engineers as architects for a strong nation and the world.

MISSION

- To impart quality technical education in Mechanical Engineering domain through an excellent teaching-learning environment.
- Instill ethical values among students to create technologically superior global man power through industry participation.

Program Educational Objectives (PEOs)

- **PEO 1:** Our graduates will be competent with strong fundamentals and sound knowledge in the field of Mechanical Engineering.
- **PEO 2:** Our graduates will practice and incorporate design, manufacture and carryout research activities to mould themselves as successful engineers.
- **PEO3:** Our graduates will process themselves personally and professionally in taking up state of the art technological challenges and pursuing leadership roles.

Program Specific Outcomes (PSOs)

PSO 1 Characterize the performance of a Mechanical component or a Mechanical system using computational tools
PSO 2 Design Mechanical systems including drives, energy conversion systems, RAC and Fluid power systems as per specifications
PSO 3 Select, plan and implement the process for manufacturing of Mechanical elements and for assembly of Mechanical subsystems

Program outcomes (POs)

- **PO1: Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineeringproblems.
- **PO2: Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineeringsciences.
- **PO3: Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4:** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide validconclusions.
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- **PO12: Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technologicalchange



Dr. A.V. Seetha Girisha

The Mechanical Engineering department at SVIT was established in the year 2010 with an intake of 60 students. The department has initiated its activities with a **vision** of establishing Mechanical Engineering department as excellent centre to produce skilled and intelligent engineers as architects for strong nation and the world. The **mission** of the department is to impart quality technical education in Mechanical Engineering domain through excellent teaching-learning environment and to instill ethical values among students to create technologically superior global manpower through industry participation. Mechanical Engineering is one of the most opted courses in engineering arena which has created ever standing demand as the graduates in this course are offered worldwide placement opportunities in Design and Manufacturing sectors of the Industries.

The department has well built team of dedicated teachers and technicians. The department is headed by **Dr.A.V.Seetha Girish** along with a team of enthusiastic and well qualified teaching members with an average teaching experience of 20 years. The department has spacious and well equipped laboratories to cater to academic requirements of students as per the university curriculum. The examination results for the previous academic years are very encouraging. The department is emphasizing more on mini projects by students to impart more practical knowledge than they get out of their course of study. Periodically, workshops, seminars & technical symposia are organized in emerging trends of Mechanical Engineering to update student knowledge at par with today's industrial requirements. The department is organizing special training programs in Mechanical Engineering software like CATIA, ANSYS, and Pro-E etc. which helps to enhance and explore student skills in CAD/CAM/CAE discipline which is very essential in the present scenario of industries.

Events held during the academic year 2018-19

Industrial visit to Hindustan Aeronautics Limited (HAL) Heritage Centre & Aerospace Museum

The department of Mechanical Engineering, Saividya institute of technology, Rajanukunte, Bangalore organized a one day Industrial Visit to "Hindustan Aeronautics Limited (HAL) Heritage Centre & Aerospace Museum Bangalore on 1st March 2019 for second year (4th SEM) students. The visit was organized with the prior permission and guidance of Dr. H.S. Ramesh Babu Principal, SVIT and Dr A V Seetha Girisha, HOD, ME. A total of 44 students along with a member Dr Raghavendra.S have joined the visit. 1. We started from our college premises sharply at 10:00 P.M. on 1st March 2019. Reached HAL Museum by 11:45 pm. At 12:00 p.m. We are welcomed by the Mrs. Padma, Guide from Hindustan Aeronautics Limited (HAL) Heritage Centre & Aerospace Museum. She gave instructions before visiting the company. She also had given in detail explanation about the company overview and various

aircraft engines. This makes the students to know about the aircrafts. At 2.00 p.m. We completed visit and reached college campus at 2.50 pm.

Engineer's Day Celebration at L&TConstruction Equipment Ltd Doddaballapur on 15th Sep 2018

As a mark of Sir M Visvesvaraya Birthday, the students of 3rd SEM Mechanical Engineering were taken to L&TConstruction Equipment Ltd, Doddaballapur on 15th Sep 2018.

IMTMA Celebrated 50 Years IMTEX at IMTEX 2019 & Tooltech 2019 in BIEC with SVIT

Department of Mechanical Engineering, Sai Vidya Institute of Technology, Bengaluru, had organized industrial visit for 4th & 6th semester students on 30th January 2019 under the guidance of Dr. Raghavendra.S & Prof. Arun.R, Dept of ME, SVIT. As a part of academic curriculum industrial visit is mandatory. In this connection IMTEX 2019 at BIEC, 10th mile, Tumkur main road, Madavara, Dasanapura Hobli, Bengaluru, Karnataka 562123 was selected and 35 students were a part of this Industrial visit.

Indian Machine Tool Manufacturers' Association (IMTMA) organized its flagship IMTEX 2019 at the Bangalore International Exhibition Centre (BIEC) from 24 to 30 January, 2019 in Bengaluru. Tooltech 2019 is a premier event concurrent showcasing machine tool accessories, metrology and CAD/CAM cutting tools, tooling systems and current trends in the tooling industry. An initiative of IMTMA, IMTEX is a flagship event for the Indian metal cutting industry.

i2 Pavilion (Industry - Institution Pavilion)

Indian Machine Tool Manufacturers' Association (IMTMA) has been in the forefront of bonding Industry - Academia linkage and is continuously taking several initiatives and offering aplatform for Indian Academia institutions to participate in its prestigious IMTEX – Indian Machine Tool Exhibitions every year. At IMTEX, IMTMA provides an opportunity for Indian Academic / R&D Institutions to show case their R&D capabilities in Metal working field. This participation will be through display of four posters and product demonstration from each institution. IMTMA will provide the display space to selected institution/s free of charge.

St. Thomas Tyre retreading plant

Department of Mechanical Engineering, Sai Vidya Institute of Technology, Bengaluru, organized industrial visit for 4th & 6th semester students on 8th February 2019 under the guidance of Dr. Raghavendra.S & Prof. Arun.R, Dept of ME, SVIT. As part of academic curriculumindustrial visit is mandatory, in connection to this visit was scheduled to St. Thomas Tyre Retreading plant, Doddaballapura on 8th Feb 2019 along with 65 students.





Department of Mathematics

VISION

To transform young people to be competent and motivated professionals with sound theoretical and mathematical knowledge across the globe.

MISSION

- > Provide strong mathematical foundation to augment all disciplines of technical education.
- > Enable the students for mathematical modeling and analytics in the engineering field.



Dr. Lakshminarayanachari. K

Hearty congratulations to the editorial team for bringing out SVIT annual magazine **PRATHIBIMBA-2019.** It is a matter of great pleasure for me to go through the wonderful contributions made by the students and staff. This magazine is intended to bring out the hidden literary talents in the students and the teachers and to inculcate leadership skills among them. The outside world will come to know about the caliber of the students and the through this magazine. I extend my thanks to all the contributors for their articles, poems and drawings.

The department of Mathematics is one of the pioneering departments of the institution that offers assistance to many engineering courses of the college. It is committed to the cost of quality education in mathematics that forms the basis for all the engineering fields, a field growing in leaps and bounds. The department strives to achieve global identity through innovative methods and constant efforts for the betterment of the student's community.

The department of Mathematics is headed by **Dr. Lakshminarayanachari. K**, having experience of 17 years in teaching and research field. He completed his doctoral degree from Bangalore University in the year 2009 and has guided two students for their doctoral degree. Presently five students are pursuing Ph.D under his guidance and he has published 23 research papers in reputed national and international journals.

Dr. Arun Kumar. R, Associate Professor in the department having experience of 16 years in teaching and research field. He completed his doctoral degree from Visvesvaraya Technological University in the year 2015 and is guiding three students for their Ph. D degree.

The department of Mathematics is recognized as a research and development center (**R&D Centre**) by Visvesvaraya Technological University, Belgaum and currently five students are pursuing their Ph. D in this center. The department consists of six qualified, experienced and dedicated faculties, who are involved in teaching and research activities.

Department of Chemistry

VISION

Produce knowledgeable graduates for careers in science and technology, future leaders in advanced research in applied chemistry.

MISSION

Escalating students with basic foundations in engineering chemistry, to identify and solving problems related to applied chemistry.



Prof. Raveendra R.S.

I am delighted to know that our college is bringing out a magazine **PRATHIBIMBA-2019** for this academic year. It is a nice platform for both the students to exhibit their talents. I strongly believe that it would be an excellent medium through which the world can learn about the potential and achievements of SVITians. I hope that this would be an ongoing process and the magazine would bring out the latent talent of everyone. I join others in appreciating and recognizing the hard work of the editors and the magazine committee in bringing out the magazine and in wishing them success in their endeavor.

The department is headed by **Prof. Raveendra R.S.** The department is one of the leading among the basic science stream of Sai Vidya institute of Technology consisting of qualified teaching professionals. The members prepare students to gain knowledge in applied chemistry which is a base for all fields of engineering. The laboratory is built with area of 250 Sqm to accommodate thirty students at a time for engineering chemistry lab class. State-of-the-art equipment is provided in the laboratory for first year students to conduct experiments in engineering chemistry lab included in University curriculum.

The department has been recognized as Research Centre by Visvesvaraya Technological University for conducting Ph.D. programme. Material science research is carried out continuously in the department by publishing high standard research articles in peer reviewed international journals.

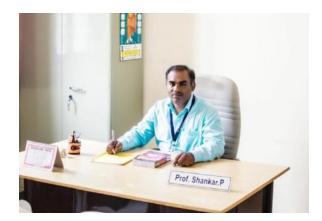
Department of Physics

VISION

To contribute a proficient engineers with strong foundation of fundamentals and advances in physics

MISSION

- ➤ To impart basic concepts of physics to aspiring engineers enabling excellence in their domain.
- ➤ To inculcate awareness about the latest developments in applied physics.



Prof. Shankar. P

I am happy to learn that SVIT is coming out with the annual college magazine **PRATHIBIMBA-2019**. Efforts such as this will provide an opportunity for the staff and students to showcase their talents in technical writing, essay and poetry writings, sketching and drawings, among others. Such value additions are very much essential for the young technocrats and engineers. I sincerely appreciate and congratulate the editorial team for their unrelenting efforts in compiling this magazine.

The Department is headed by **Prof. Shankar P**, a highly qualified professor with an experience of more than 15 years. The department has a spacious and well equipped laboratory. Efficient teaching along with the best training in laboratories is the highlights of this department, thus maintaining 90-95 percent aggregate results in the theory examination and 100 percent results in Practical examinations of VTU.

The department emphasizes on the importance of practical training to supplement class room teaching. In this connection, all the students are encouraged to conduct experiments on their own. The department provides required materials and gadgets to students to try hands on experience, in practical classes. The department also encourages research, publications of papers and seminars by regularly conduction of seminars & guest lecturers by inviting experts from industry, IISc, ISRO and other research organization to keep students abreast with latest trends.

Dr. Yogananda H. S. assistant professor has acquired a Ph.D, Degree from the Bharathiar University on 15/3/2019. Hearty congradualations to Dr. Yogananda H.S from the department of Physics editorial board of Prathibimba-19.

Department of MBA

VISION

To be an anchor in management by developing leaders in business and entrepreneurs steering organizations in a holistic manner.

MISSION

- Committed to serve the various stake holders by ensuring healthy competitiveness through business administrators and entrepreneurs.
- Develop professionals well equipped to lead with state-of-the-art management skills through innovative ideas and human concern



Dr. Pradeep Kumar N.E.

It highly excites to note that Sai Vidya Institute of Technology is bringing out another edition of college magazine **PRATHIBIMBA-2019**. In the changing environments and development of social media, such efforts to collate multiple achievements, talent exhibits, artistic creations and publish such many more aspects in one space deserves an appreciation.

"The journey of any individual will begin in their thoughts, flourish through the education, improve through persistent practice and continues at their career space".

Every individual should aim at accomplishing the best outcomes where the journey of progression itself will motivate individuals. Students are smart to learn on their abilities, further it is important for them to enhance their skill set by continuous practice and never giving up attitude. Let your achievements speak your personalities, your passion set the way for exuberance, your desire lead to emotional stability and every effort you place in the path of career space create a new mile stone.

I believe that our students at SVIT will continue to set new records in all their future endeavors as they have been doing it during their academic journey at SVIT.

I extend the warmth wishes to the editorial team for raising this edition and believe that they have done a stupendous work in the making of **PRATHIBIMBA-2019**.

Students have access to an excellent library and a management laboratory with a state-of-the-art computer centre. Our alumni's hold important positions in top Corporate Offices all over the nation. The two-year postgraduate program (MBA) is a four semester course affiliated to VTU and approved by the AICTE, New Delhi. The program is conducted by experienced full-time faculties and professionals from industry.

The department of MBA is headed by **Dr. Pradeep N.E, MBA, Ph.D**. He has a perfect blend of industry & academic exposure having experience of more than 15 years. The department consists of well experienced and qualified who on an average has more than 10 years of teaching experience. The department offers specializations in three areas i.e. Finance, Marketing and HR.

Department of Library and Information Center



Dr. Harish H.T.

Sai Vidya institute of technology Library and Information Center has emerged as a center of attraction with its modern library features, state of the art facilities updated collections. The Center is headed by **Dr. Harish H.T.** It has crossed many milestones developmental stages, by its continuous resource enrichment, continuous infrastructural developments and implementation of new technologies since 2008.

The Library uses easily software package which is an integrated multi-user library management system that supports all in-house operations of the Library. The Easylib consists of modules on acquisition, cataloguing, circulation, serials, article indexing and OPAC. Retrospective conversion of bibliographic records has been completed and more than 15249 bibliographic records of books available in the Library can now be accessed through the OPAC Search. The database of books available in the Library is being updated on day to day basis with details of recently acquired books. The editing and updating activities are in progress

SVIT Library and Information Centre is aesthetically housed in a four floored building with an adequate space and good ambience. The library (Includes MBA and M.Tech. Department Library) has a total collection of over 16705 volumes of reference and textbooks, 4640 titles, 53 national and 32 international reputed print journals covering all branches, besides 1250 learning CD-ROMS, Data Books, Project Reports and E-Resources. Under VTU Consortium for E-Resources, IEL/IEEE, Springer, Taylor & Francis, ProQuest, KNimbus, (For MBA) ProQuest and Emerald (Total E-Journals 6197) and all subject E-Books (Total E-Books 13139) online E-resources and digital library full-text journals access facility.

- 1. Main features of SVIT Library and Information Center is:
- 2. Fully automated with OPAC facility
- 3. Digital Library service, Bar coded for fast transaction
- 4. User friendly: with fully open access and well organized arrangement
- 5. Infrastructural well developed and good ventilation ambience
- 6. Good services with well experienced and dedicated staff

Library Services

1. Circulation service

The Library Circulation System is automated using Easylib Software 4.3.3 (Fully Automated). Bar coded ID Cards issued to all the Members (Students and Staff). Each Undergraduate student is provided 03 books & the Post Graduate students are provided with 03 books. The Teaching staff members can borrow 05 to 08 books.

2. Periodical service

A good number of journals and magazines both technical and general in nature are subscribed to library latest issues will be displayed as and when received, follow-up with suppliers for recovering missing issues.

3. News paper clippings service

Important and relevant information published in dailies will be displayed on library notice board regularly and the same will be updated once in a month on library website.

4. Question paper service

Previous years VTU Question papers are arranged subject wise in multiple copies and will be provided to users to take photocopies. The softcopy of question papers are available on library website which is downloadable.

5. Project report service

One copy of Students projects of all previous years is maintained in library and providing for reference.

6. Reprographic service

A photocopier has been added to the library for the benefit of users.

Issue of library books for examination

Students can borrow and use library books during their odd semester examination only. At the end of each academic year i.e. before starting of even semester examination students have to return their all library borrowings and get no dues from library which is mandatory for getting their hall tickets.

Digital Library

Online access to the e-resource of the digital library portals of IEEE, ASME, ASCE, Springer link. These e-resources are IP enabled, can be accessed anywhere in the campus.

I. Engi	neering Books (Under Graduate)		
Sl. No.	Name of the Branches/Subjects	No of titles (for reference)	Total no of Volumes (for lending)
1	Electronics & Communication Engg	605	2500
2	Electrical & Electronics Engg	372	1450
3	Computer Science Engg	458	1950
4	Information Science Engg	415	1630
5	Civil Engineering	342	1500
6	Mechanical Engineering	346	2053
7	Basic Science	277	2580
8	General/Kannada/Law & Dictionary	218	350
Total	BE Text Books	3033	14013
II. MBA Books (Post Graduate)		500	1558
III. M.Tech Books (Post Graduate)		55	200
Total	BE and PG Text Books	3592	15771



Department of Physical Education



Mr. Vijaya Kumar. K

Congratulations to the editorial team for their determined efforts in bringing out this magazine.

We are all proud that SVIT has completed nine academic years and enriched the lives and lifestyles of more than a thousand students and staff.

The Sports Department is headed by **Mr. Vijaya Kumar. K** specialized in Athletics, Basket Ball, Volley Ball and Football with and experience of over 15 years. The Sports Department serves as a vital and integral part of student life on campus.

The mission of the department is to provide a broad spectrum of sports, recreation and leisure activities for students, staff and, as well as members of the local community. The primary direction is to provide services and programs that stimulate growth, development and retention of students in a contemporary and safe environment that develops fitness and wellness, social interaction and leadership opportunities. The Department ensures students of Sai Vidya Iinstitute of Technology to be active, healthy, fit and enlightened individuals by offering an academically sound sports, fitness and health programs. At present Physical Education & Sports Department have all major sports and games with fully loaded equipment and upcoming project of multi gym. The students can take part in individual and group events as per the requirement.

Outdoor Games Facilities:

Cricket, Football, & Athletics (Multi Purpose Ground)

Basketball, Volleyball, Throw Ball, Badminton, Ball Badminton, Hand Ball, Kabaddi, Kho-Kho etc,

Indoor Games Facilities:

Table Tennis, Chess, Carom etc.

Our students have continuously participated in VTU inter collegiate tournaments and competitions like Athletic Meet, Cricket, Basket Ball, Volley Ball, Foot Ball, Kabaddi Throw Ball Table Tennis Badminton, Ball Badminton and VTU Youth Festival and won many trophy's and medals.

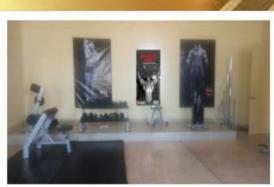












GYM and Fitness centre





National Service Scheme (NSS)

Sai Vidya Institute of Technology, Bengaluru



National Service Scheme (NSS) Unit motto is "Not Me But You"

The National Service scheme (NSS) is an Indian government-sponsored public service program conducted by department of Youth Affairs and Sports of the Government of India which was begun in 1969. Its primary aim is personality development through social (or community) service. The NSS motto is "Not Me, But You"

Most government and government-aided institutions (schools and colleges) have volunteer NSS units, and private institutions are encouraged to have NSS volunteers. A unit typically comprises 50 - 60 students. They are managed internally by responsible party from the school (or college), who reports the regional NSS coordinator.

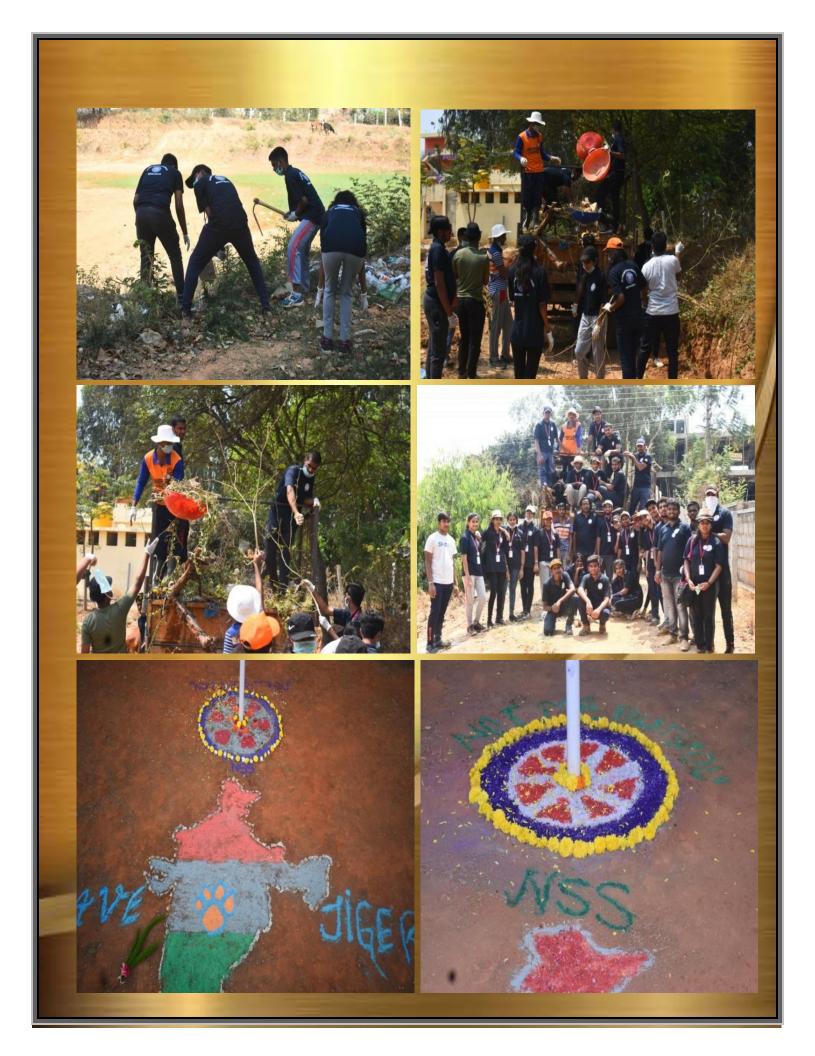
The social activities aim to include social welfare in students, and to provide service to society without bias. NSS volunteers work to ensure that everyone who is needy gets help to enhance their standard of living and lead life of dignity. The Sai Vidya Institute of Technology students actively participated in events conducted on behalf of Sai Vidya Institute of Technology NSS unit.

The NSS unit of the college has 100 student members and approved by VTU. The unit is headed by **Dr. Harish H. T**, Chief Librarian & NSS Program Officer. The NSS unit has organized

Programmes conducted

- 1. Swachh Bharat Summer Internship from July 8th -18th July 2018
- 2. 7 days annual special camp
- 3. Blood donation camp

The students organize blood donation camps regularly. NSS volunteers participate in all the awareness programs conducted by PHC of Rajanukunte. NSS unit regularly organizes SWATCH CAMPUS program very often.





Department of Transportation

The department of transportation is headed by **Mr. Vishwanath**. The college has a fleet of 10 buses running from different parts of Bangalore for comfortable and tension free commuting of students and staff. The charges are nominal and affordable. Pick up and dropping off points will be as per the convenience of students and staff. There is a plan to add more buses to the fleet so as to spread the wings of transportation to almost every nook and corner of Bengaluru.



SVIT-Women Cell "SARA"

International Women's Day was celebrated on March 8th 2018 at SVIT organized under "SARA"-Women cell of SVIT. The event was organized between 11:30 am and went on till 4:00 pm. The event was inaugurated by Mrs. Shruti Chauhan, Squadron Leader, Indian Air Force Station, Yelahanka, presided by Prof. M.R. Holla, Founder Trustee and Director along with Dr. H. S. Ramesh Babu, Principal, SVIT, Chief Coordinator Women Cell Dr. Chitra Kiran N, Anti Sexual Harassment committee Coordinator Dr. Vrinda Shetty, Student counselor Mrs. Chetana Srinivas and Prof. Sujata Mukarjee. Later felicitation was organized by 'SARA' for the women helpers of SVIT.

The gathering was addressed by Mrs. Chetana Srinivas, Student counselor on the topic "Peer Pressure Management". It was continued by Prof. Sujatha Mukarjee on the topic "Health and Hygiene" till 12:45 pm.

In the afternoon session from 1:45 pm to 3:55 pm talent show for girl students which included Singing, Dancing and 'Make-up me' was organized. The program ended with a high tea. The event was organized for all lady teaching staffs, technical staffs, office staff and especially for girl students of SVIT.

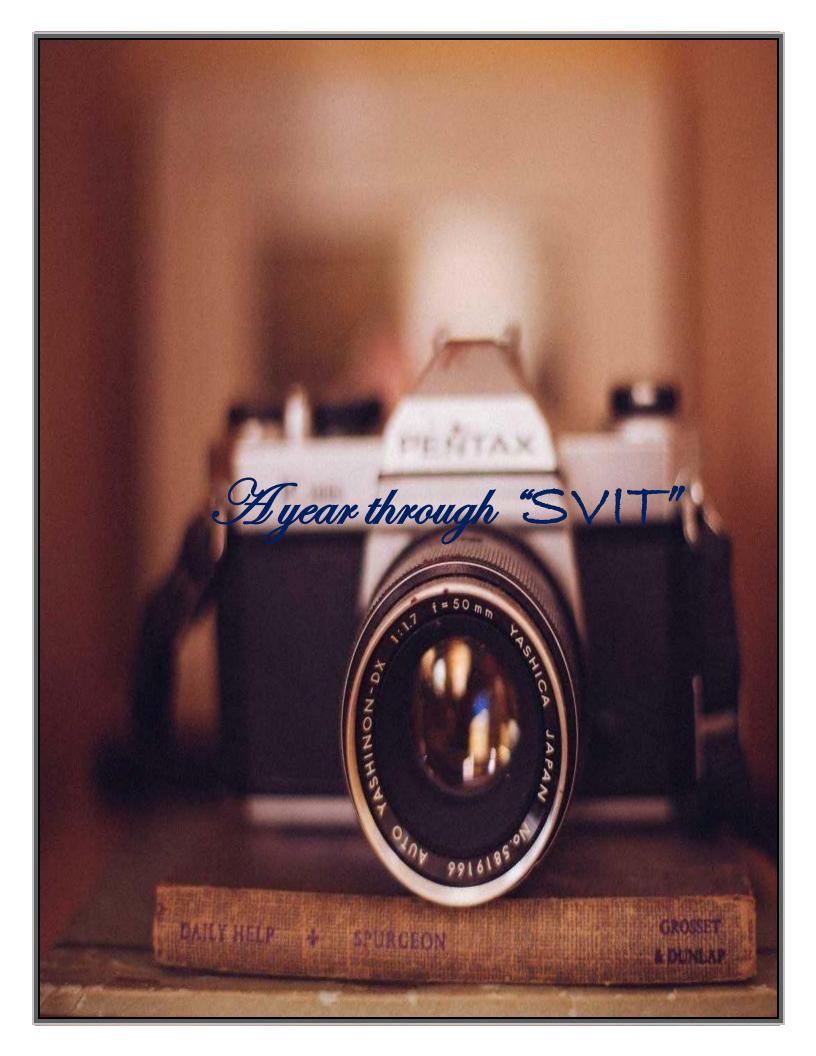
Placement and training Center

The Placement and Training Centre is headed by an experienced and well qualified personality **Dr. Pradeep N.E.** The Training wing consistently researches and interacts with recruiters to understand their expectations from prospective students and creates and executes an annual roadmap for training. Students are trained in Communication, Soft Skills at the first year level itself to prepare them for Industry expectations. Training on Technical, Aptitude and other essential techniques to solve logical and aptitude problems to improvise on their conversational, oratory skills, personality and competency in strengthening the technical concepts is imparted by the end of their third year course. By this process, they are enabled to satisfy the expectations of the industry. Many companies like the quality of our students and are glad to give opportunities to our students.

Compenies visited the campus for the year 2018-2019







SANCHALANA-2019





















SANCHALANA-2019



SAMMILANA-2019



SAMMILANA-2019















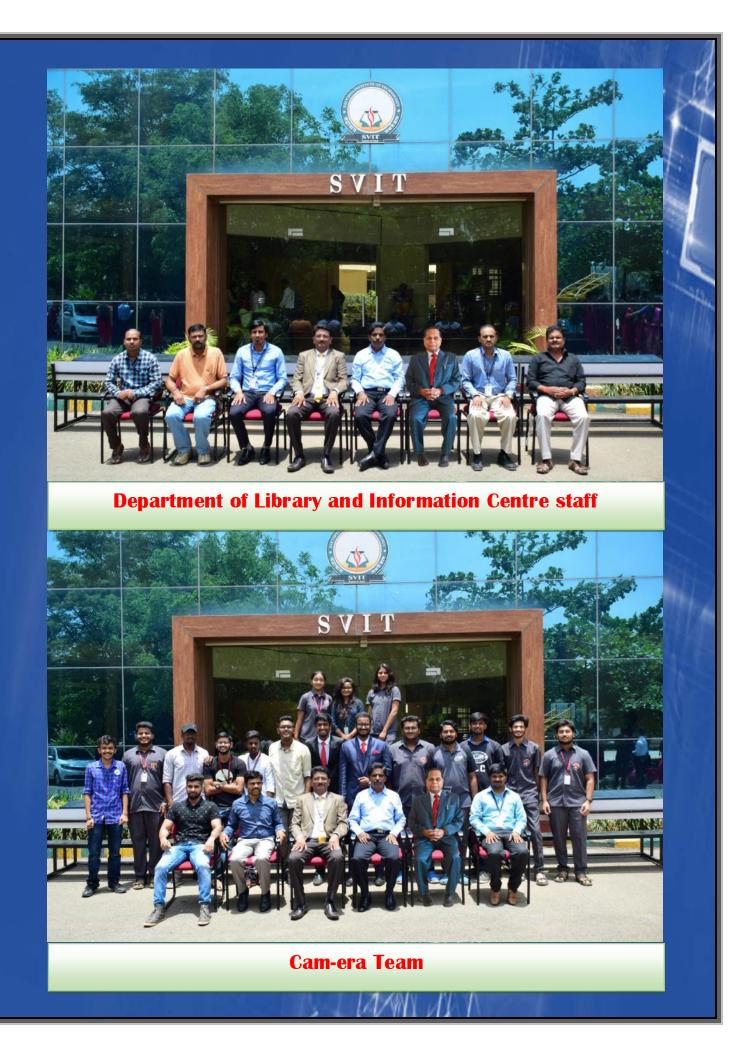




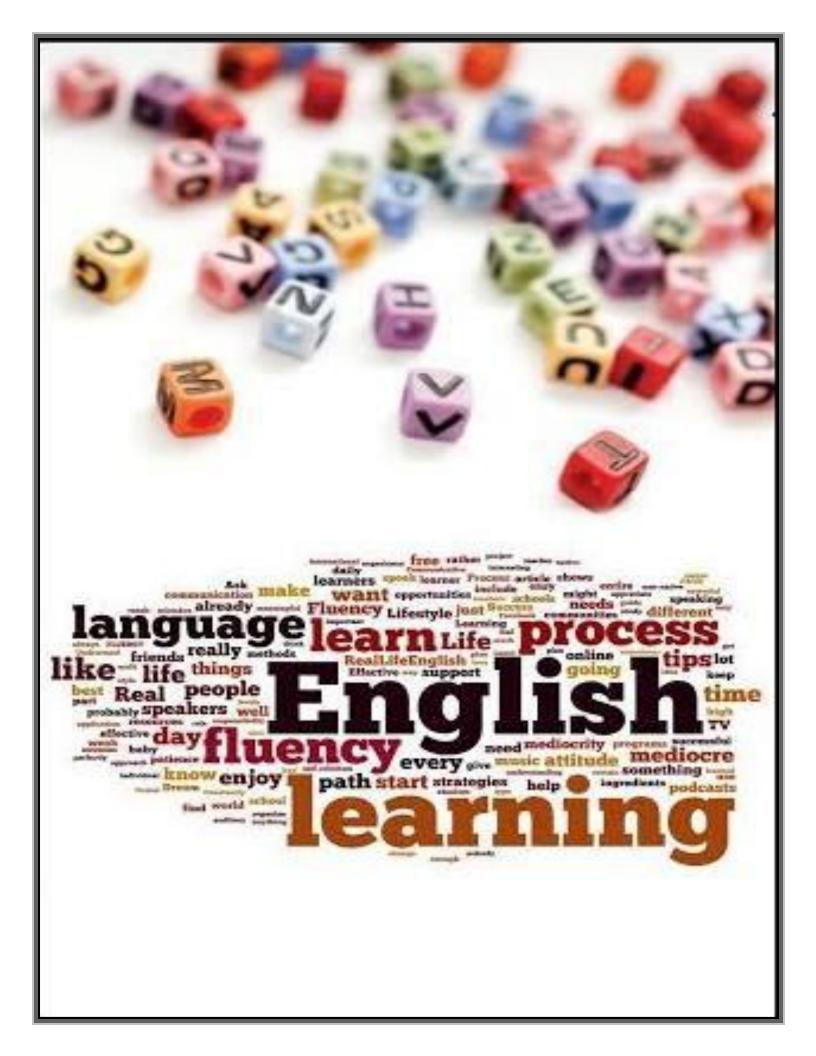




Administration staff







Term Insurance & Medical Policy – the perfect cover for you

This is one of the two insurance policies that you must buy before even starting your investments. We are talking about the plan vanilla term cover here; medical insurance policy is the other must have. The term cover is a pure insurance policy, a risk protector of sorts. Specifically, a term cover is taken so that your family does not suffer financially in case you and should not be looked at as an investment.

Before opting for a term insurance policy, you must take into account several factors so that you get a cover that suits your requirements. These include decisions on the quantum of cover, premium rates, and mode of purchase, riders and medical tests.

How much is enough?

Crude as it may sound; you need to put a price or a value to your life. Why so?

Simply because the sum received on your death should be enough to meet your financial commitments such as home loans, children's education and their marriage. The idea is to let your family members maintain the lifestyle that they currently do.

Therefore, the amount for which you need to take a term cover has to factor in all expenses.

So, add all your EMI's, monthly utility bills, grocery expenses, kid's school fees and all other costs. Multiply this figure by the number of years left for your retirement.

Let's say you are 35 now. If your monthly expenses including EMI's, add up to Rs.75,000 and you have a 25-year home loan and 25 years to go for retirement, you must multiply Rs75000 with 300 months. Thus, you need to take a term cover for Rs.2.25 cr.

To take a more conservative call on the amount of insurance required, you can even add your monthly investments. If you and your spouse work, both need to take term covers separately.

Insurance companies also have calculators to compute the human life value or the sum assured that your family would need in your absence. Usually, insurance agents and some online calculators just give a multiple of 10 or 12 times your annual salary. Often, the amount arrived at in such cases would fall well short of your requirements.

Therefore, choose detailed calculators, do your own math with costs as given in the example earlier and take a final call. You will need to develop a statement of your assests and liabilities to make an informed decision.

If you have liquid or easy-to-tap investments of Rs. 25 lakh, you can reduce that from the total amount for which you need to take a cover-Rs. 2 crore in our example. But this approach is a tad aggressive. The Timelines

Ideally, you should continue with your term policy till you decide to retire. Of course, you should have completed all your financial commitments and settled your children by the time you retire.

If you are not sure of that, buy a policy for as long term as possible. The premiums will get steeper as you grow old! There are term covers available till the age of 75.

You can also take a second policy to enhance your cover, if your assests and liabilities swell, and as your salary soars midway through your career.

Make disclousers

While applying for a term insurance policy, come clean on all your habits and health ailments.

If you are a smoker and consume alcohol regularly, state it upfront. If you have any existing health issues, disclose all details. In any case, most insurers, even those offering it onlin e, insist on medical tests before giving out policies.

By giving full details, the risk of claims getting rejected is mitigated.

Ignore the riders

Along with the basic term policy, you may be offered riders such as for accident, disability and critical illness.

If you opt for any of these, each of them can escalate your premium rates by 10-15 per cent.

If needed, take only the accident rider, as for a slightly higher premium, your normal sum assured would be topped with an accident sum assured, which could be to the tune of your basic sum.

The costs

Most insurers offer plain-vanilla term covers online. It would be preferable to use this mode for buying the insurance policy.

For a 35-year-old male and 25-year policy term, the term, the annual premium for a Rs.1 crore cover ranges from Rsd.12000 to Rs.20000 across insurance companies when purchased online.

Companies such as HDFC Life, ICICI Prudential, Max Life, Bjaj Allianz and Bharthi AXA are prominent players offering term cover online.

> Prof. Vijaya B Associate Professor Dept. of Mechanical Engg

Technology Addiction-Overview

Technology addiction is defined as a non-chemical addiction, which is a type of behavioral addiction, which is a type of behavioral addiction that involves human-machine interaction.

It can be passive e.g. watching T.V or active e.g. playing computer games. They are pleasurable, hence rewarding to user. India is 3rd largest internet user in the world.

Consequences of Technology Addiction

- 1. Social Isolation
- 2. Insomnia
- 3. Health problems- especially obesity
- 4. Low academic performance

Physical side effect

- 1. Sleep deprivation
- 2. Backstrain
- 3. Eyestrain
- 4. Headache
- 5. Risk of carpal tunnel syndrome

Technology Addiction affecting college students

Major issue relates to decline in academics, due to lack of reading textbooks, Hence quality of studying is inferior. It leads to superficial exam time studying, hence quality of professionalism lowered.

Overcoming Technology Addiction

- 1. Introspecting onselfUnderstanding consequences of technology addiction
- 2. Making plan to limit technology use for education or useful purpose only
- 3. Use of APPS to control technology use.
- 4. Planning on daily basis, or weekly basis with minimum time, approx. 1 hour in day for internet use, alternatively increase physical activity and books, novel reading which will enhance knowledge.
- 5. Alternatively can be structured to have entire group of friends agree to minimize sending useless messages, which kills useful time. Entire group can divide to limit WhatsApp use.
- 6. Finally, evaluation needs to be made to understand the Internet diet plan, assess usefulness. To conclude Internet can be your FOE or FRIEND decision is yours.

Mrs. Chetana Srinivas Counsellor (SVIT)

Interesting Facts about Bengaluru

Elevation

At the height of over 3,000ft (914.4m) above sea level, Bangalore is situated even above Dehradun (630m). No wonder the city enjoys the pleasant climate entire year.

Electricity

In 1906, Bangalore became one of the first cities in India to have electricity from hydropower situated in Shivanasamudra. The building in city market was honoured recipient of first electricity.

Silicon Valley

Everyone knows that Bangalore is known as Silicon Valley of India, because it has more than 212 software companies in its heart.

Engineers

Bangalore is raining thousands of engineers every year. Bangalore has highest percentage of engineers in world, with more than a million IT professionals making their home.

Engineering colleges

Bangalore has around 40 engineering colleges which is highest in any city across the country. In addition, Bangalore University has 57 Engineering colleges affiliated to it, which also a record in itself.

Traffic

Bangalore has the highest traffic density in India. The reports and survey tell that traffic density in Bangalore is equal to that of Delhi, Mumbai and Hyderabad considered together.

Foreign connections

Except for Gulf region, Bangalore sends highest number of professionals to abroad from India. It mainly comprises to USA, London and Singapore.

IT-BT hub

Bangalore contributes to 33% of India's INR 2500 billion IT exports in 2017-18. Infosys and Wipro, India's third and fourth largest software companies are headquartered in Bangalore. Also around 47% of 260 BT companies in India ae located in Bangalore. Biocon is the largest BT Company.

History

Though it is widely assumed that Kempe Gowda was the founder of Bangalore city, few records found in Begur referring to city from 890 CE shows it has much older history.

Transport

Bangalore has maximum number of bikes riding daily. It is found that more than 30 lakh bikes daily travel in city. Also, everyday around 1500 new vehicles are getting registered and come to road. Everyday around 78 lakhs of vehicles travel in city daily, which is the record in the world.

Greenery

Bangalore is called as Garden City of India. It has maximum number of greenery with huge trees. A report says that Bangalore has around 8 lakh trees, also the least polluted metropolitan city if India.

Venkatesh M 4th SEM- ME

Independence

The thing which world wants immediately after having the basic needs. Responsibility a load on a pillar...

Independence though the world always wishes to have isn't easy to obtain... The world obtained various kinds of independence only through struggles only... As goes the saying "The Mountain Far Away always looks easy to trek" even independence looks easy to obtain and live with it.... But isn't for sure...and yes it's been proven from time to time at various instances where in people sell off their independence....either unable to take decision or to take the responsibility!!

Sourabh V Bhat 4th SEM, ECE-B

MOVIES ARE MAGIC



This is an article to motivate the people who are interested in making it big in the movie industry. There are a lot of movies coming out now as the demand for Movies, NEVER dies. Genre's such as action, drama, biography, sport, music, thriller, crime are most trending right now. Whenever you're feeling low or just want to have a great time, you can pick a movie on any of the streaming services available or just download right off the internet and watch on- the-go with portable devices.

The first independent film to gross more than \$200 million, *Pulp Fiction (1994)* was a shot of adrenaline to Hollywood's heart. How did Quentin Tarantino, a high-school dropout and former video-store clerk, change the face of modern cinema? That's amazing, because the movie's budget was just around \$8.5 million. Roger Ebert called it "the most influential" movie of the 1990s, "so well-written in a scruffy, fanzine way that you want to rub noses in it—the noses of those zombie writers who take 'screenwriting' classes that teach them the formulas for 'hit films.' It earned around \$215 million at the box office.

Movies are a way of telling stories through experience or fantasizing them. These movies can be experienced in such great ways with the available technologies today such as Dolby Atmos, 3D, 4DX, IMAX which cost a bit more but the experience in the cinemas are just amazing. There are a lot of people who made it big in the movie industry in India, such as Rajinikanth (Former: Bus Conductor), SRK and Yash (Struggled to get into movies).

The movies are mainly uplifted by the director's way of telling these stories. Movies usually take a year to make and edit and release it into the theatres. Some of the great directors from India are S.S. Rajamouli, Rajkumar Hirani, Anurag Kashyap and a few to name.

Quentin Tarantino said that there is no need of a college degree in film-making to make it big. If you have great passion for movies, understand them and if you have a great way to tell stories it's almost impossible in failing to make a great movie.

Consider the movie Arjun Reddy, shot by Sandeep Vanga, a simple story about a young lover who takes the path of destruction after his breakup with his girlfriend. The movie is uplifted by strong characters, direction and acting which make up to a great movie. The budget of this movie was around 40—51.5 million and grossed 510 million at the box office. That's the power of movies in the business right now, due to expanding growth of cinemas or streaming platforms such as You tube, Netflix, Amazon Prime Video in India.

Movie consists of screenplay, dialogue, story, direction, acting, makeup, stunt coordinators, musicians, lyrics writers, video editors etc which almost has around 100 people in making a movie. <u>https://www.scripttoscreen.film/</u> here's a great website where the screenplay of movies can be found to get an idea of how movies are written first and then directed.

Imagine if Rajinikanth or any of the great actors would just pursue their jobs, they could never make it big, except they had the courage to stand up, act in movies and entertain the whole India by their style and make money along the way. If you think you have any of the talent in any one of the aspects in movie-making or if you have strong imagination which can be turned into movies, you have to take up the risk into converting it into a movie which can be seen by anyone around the world. Good luck in making it big in the entertainment industry!

Sanjay Bhakta K 6th SEM-ISE

It's always the little things in life that make us happy©

Being happy never goes out of style.

-Lilly Pulitzer

In today's world, a genuine smile has become a rare sight, a heartful laughter, a thing of the past.

A lost job, a break-up or a failed exam is the end of the world as we know it. We spend our lives chasing ideas and pursuits of riches. But where does true happiness come from? Happiness comes from within the depths of your heart, breaking all the barriers; it gushes up your throat and dances on your face in your beautiful smile.

It isn't necessary that only the big or the great things in life make us happy. All too often we take the little things in our life for granted. Like, the sunrises, sunsets and the morning dews. Watching a baby smile in its sleep. That feeling of great accomplishment when you solve a really tough math problem, when a stranger compliments you. The smell of rain on the pavement and bursting of bubble wrap. It's the smell of fresh bread at the bakery you love so much. Sleeping while the rain gently beats against your window. When you've passed in all the subjects in the exam where you didn't really care about your percentage and just didn't want any back logs.

The little dance your heart does when you get a let-off because there is no teacher free to engage your class. I wish that it happened often. The happy moment when someone calls you over on phone whom you just thought about. Finding money you thought you had lost or finding it in your old jeans pocket. Getting the right lyrics of the hardest song at a stretch while you sang. Waking up prior your a larm went-off, so you aren't jolted out of bed.

Parents are fascinating oddities. They do so much for us and yet never ask anything in return. The little things we could do to make our parents happy without much effort are,

1. Wish them Good Morning, with a hug.

- 2. Get him/her a gift.
- 3. Stay a kid when you are with them.
- 4. Ask them out on a long weekend.
- 5. Ask them for advice.

The big things are getting a job, purchasing your first apartment. These things are necessary of course. They give us reason and purpose. They drive our lives, keeping us busy and motivated through a seemingly purposeless world. But, they aren't the real reasons to live or the things that bring the most joy. We are merely aware of the little elements in our life, but we seldom take time to appreciate them. It's time we step aside and breathe life into our lives.

Life is filled with ups and downs which everyone should face. Just live the moment!! Because it's a smile on your face that sets everything straight[©].

Bhavana K 8th SEM- CSE

Internet of Things (IoT)

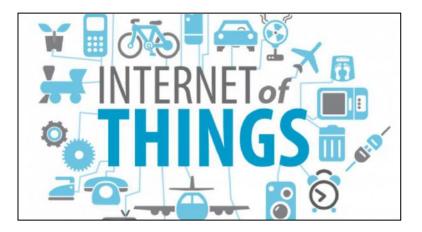
What is the Internet of Things?

The Internet of Things, or IoT, refers to the billions of physical devices around the world that are now connected to the internet, collecting and sharing data. Thanks to cheap processors and wireless networks, it's possible to turn anything, from a pill to an aeroplane to a self-driving car into part of the IoT. This adds a level of digital intelligence to devices that would be otherwise dumb, enabling them to communicate real-time data without a human being involved, effectively merging the digital and physical worlds.

What is an example of an Internet of Things device?

Pretty much any physical object can be transformed into an IoT device if it can be connected to the internet and controlled that way.

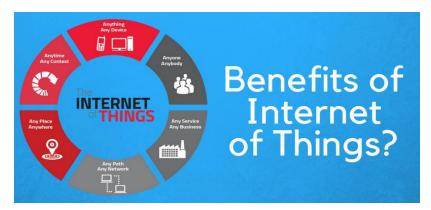
A light bulb that can be switched on using a smartphone app is an IoT device, as is a motion sensor or a smart thermostat in your office or a connected streetlight.



An IoT device could be as fluffy as a child's toy or as serious as a driverless truck, or as complicated as a jet engine that's now filled with thousands of sensors collecting and transmitting data back to make sure it is operating efficiently. At an even bigger scale, smart cities projects are filling entire regions with sensors to help us understand and control the environment.

The term IoT is mainly used for devices that wouldn't usually be generally expected to have an internet connection, and that can communicate with the network independently of human action. For this reason, a PC isn't generally considered an IoT device and neither is a smartphone -- even though the latter is crammed with sensors. A smart watch or a fitness bandor other wearable device might be counted as an IoT device.

Benefits of IoT:



- 1. **Connectivity:** Say goodbye to the era of manually operating a different device for every task. Say hello to the ability to operate multiple things from one device; for example, your smart phone. From controlling your thermostat to turning up the volume on the TV to dimming the lights and more, soon practically every device will be connected for streamlined control.
- 2. Efficiency: An increase in connectivity means a decrease in the amount of time normally spent performing the same tasks. For example, voice assistants like Apple's home pod or Amazon's Alexa can provide answers to your questions without you needing to pick up your phone or turn on your computer. According to Lang (2017), they may even eliminate the need for many business meetings, as they can quickly provide important updates and information.
- 3. **Convenience:** Smart appliances are becoming more commonplace, especially at home. Smart refrigerators and Amazon Dash buttons are a few examples of IoT devices that are making it easier for you to reorder items, requiring little more than an action or two signaling your consent. These IOT benefits can save you time and make your life easier.
- 4. Wellness: Whether you have invested in wearable technology or not, there are many ways to monitor your health goals using the IoT. A Withings scale can record your weight and body composition, provide suggestions, and reward progress towards weight loss goals.
- 5. **Conservation**: Smart cities are also on the rise, and IoT developers are devising ways to use the IoT to monitor city conditions such as traffic, air quality, electric/water usage, and environmental factors. Doing so can assist city planners as well as residents to come up with solutions to current issues and conserve resources.
- 6. **Personalization**: According to Lindsay (2017) "more personalized connections are better connections, as personalized connections are "more relevant, more interesting, less distracting, and more enjoyable." As your IoT devices gather more data from you, they will quickly learn your likes as well as dislikes and tailor their services to your preferences.

"Big data, IoT, Digital supply chain- all have a great potential. Do your due diligence before investing." – Dave Waters

Source: <u>innovationatwork.ieee.org</u> <u>www.zdnet.com</u> Deviprasad D Mahale 6th SEM- ISE

A small change

This is a short article based on the life of the people around us who can change the whole country by taking a small change.

Basically it's an article which contains the truth of day to day life ,so if you are thinking about what is the truth ,the answer is in our social media and twitter, instagram ,face book and also in the most powerfull means of communication 'the newspaper' as we can see that nowadays man is not just a man he has become the enemy of the nature by destroying the nature as well as the emotion and integrity of the nation .we live in a 'democratic secular' country where too many educated people live but their education is not for the development of the nation but rather only to make money.

Though India is in the race of developing nation but does it really deserves the title of development.

In our country there are many kinds of newspapers of different languages, contents, facts etc ,but the most common thing among them is that there are more RAPE cases in them compared to that of the total number of pages present in it. I like to quote "India is becoming a more rape cultural country rather than becoming a developed cultural country."

Though we have many cultures in our country wherein one more special culture is added called "RAPE". So generally what we do after an incident of rape case, we just basically start off with a so called non-violent walk established by MAHATAMA GANDHI JI to achieve freedom and in other words it's also called as strike of mob where the prime weapons are candles, foolish emotions, and some tears in the eyes are used. But no one will ever think of discarding this culture which is harming our nation. And what does a rape victim get? – the answer is still more common as they get only some blessings to get well soon and some sort of financial support and the famous saying to get compro mised as they are "GIRLS". The girls who has the ability to compete men and has the ability to win over them who are almost in all the fields of the economic sector of the nation. Even after freedom the "freedom of our GIRLS" is not yet obtained.

And some of the cases of rape are mentioned below:-

- 1. <u>The Nirbhya case</u> :- The 2012 Delhi gang rape case involved a rape and fatal assault that occurred on 16 December 2012 in Munirka, The incident took place when a 23-year-old female physiotherapy intern, Jyoti Singh Pandey, was beaten, gang raped
- 8-year-old raped in Kathua: An eight-year-old innocent girl was brutally raped for days. She was sedated, tortured before finally killing her inside a temple. The nomadic girl had gone missing on January 10 and her body was recovered from the Rasana forest on January 17 – and the reason for rape is the innocent Bakherwal girl was raped and killed to make the nomads move out of the area in fear. Yes, just to make them leave Kathua.
- 3. <u>Sitapur gangrape</u>: A father allegedly 'gifted' his daughter to his friends and later joined them to gang-rape her in Sitapur district, about 70 km away from Lucknow.
- 4. <u>13-year-old raped 9-year-old in Uttar Pradesh</u>: This is even more shocking; a 13-year-old boy allegedly raped a nine-year-old girl at his home in Mainpuri, Uttar Pradesh. The boy had reportedly lured the girl with a silver ring. According to police the alleged rape was committed on Wednesday when the girl was alone at home. The suspect had lured her to his house and committed the crime.
- 5. <u>4-month-old baby raped in Indore</u>: What was her fault? Was she wearing revealing clothes? Or did she invite rape? A four-month-old baby was raped and murdered in the Rajwada area. The infant's body was found in the basement area of the heritage Shiv Vilas

Palace, blood smears on the stairs telling a horror story. Hardened policemen were nearly moved to tears as they conducted a preliminary examination of the ravaged body and carried it away in a little bundle. A suspect, a member of the family, is in custody.

Why are we all bearing this instead of mob fight and complaining against the government laws of the country. If we bring "A SMALL CHANGE" within ourselves then there will be a great impact on the country. The change is all about first changing ourselves and then changing our friends, neighbors, relatives etc.

If the following questions are answered the change can be accomplished;

1.] Why always a girl should compromise?

2.] Why we always teach a girl to behave properly, why not the boys?

3.] Why we judge a girl by her outfit?

4.] Why not we change the way the boys look at girls?

5.] Why don't we say the boys about coming home early before 8 pm?

6.] Why always a girl should be sent away from the house after marriage?

And there are yet more questions to come, but the answers are not yet discovered and are still major questions in front of the society.

"IF WE CHANGE THE WAY WE LOOK AT THINGS, THE THINGS WHICH WE LOOK AT CHANGE"

Akash P II SEM Mechanical

Air Pollution has shortened lifespan by 30 Months

The current high level of air pollution has shortened the average life span of a south Asian child by 30 months while globally the reduction stands at 20 months, according to a global study released recently State of Global Air 2019 published by Health effects Institute said, exposure to outdoor and indoor air pollution contributed to over 1.2 million deaths in India in 2017. The report added that worldwide, air pollution was responsible for more deaths than many better known risk factors such as malnutrition, alcohol abuse and physical inactivity.

In India air pollution is the third highest cause of death among all health risks, ranking just above smoking. Each year more people globally die from air pollution related diseases than from road traffic injuries and malaria.

Overall, long-term exposure to outdoor and indoor air pollution contributed to nearly 5 million deaths due to stroke, diabetes, heart attack, lung cancer in 2017.

India also initiated major steps to address pollution sources: The Pradhan mantri Ujjwala Yojana house hold LPG program, ac-to result in significant health benefits in coming years accelerated Bharath stage VI clean vehicle standards and the new national clean air programme. These and future initiatives have the potential-if fully implemented as a part of a sustained commitment to air quality.

Suvratha V 6th SEM, ECE-B

VOAGUAR

Our college band has secured 3^{rd} place in VTU Youth Fest 2019, Bidar. Calling themselves Voaguar, they participated in college cultural fests such as Nitte Meenakshi Institute of Technology and PES University and secured 1^{st} place in SIT, Tumkur and 2^{nd} place in Presidency University. The band also performed in Sanchalana 2k19 to encourage other students to take up music as a hobby and join the SVIT Music Club.

The core members for 2018-2019 rendition of Voaguar include-

Anirudh M V, CSE - Drummer K Suhas, ECE – Lead Guitar Adarsh M M, ECE – Vocals Sanjay BS, ECE - Vocals Sadique Ali Hashmi, ECE - Keys S Varshini, ECE - Vocals Ananth Charan P, ME – Bassist The supporting members who have performed includewith the band Reetik Chitragupt, CSE - Keys Priyanka R Vidur, EEE - Bass Bhagyashree Rao, ECE – Rhythm Guitar Sharat Kumar, CSE - Violin Puneeth P, CSE – Vocals Sourabh S Hiremath, ME – Bass Namratha KS, CSE - Flute Bhavana SP, ECE - Vocals



The Chemistry of Tobacco



Mankind consumes a great deal of tobacco, most commonly in the form of cigarettes. Worldwide, roughly 15,000 kg of nicotine from tobacco makes its way daily into smoker's lungs. That alone is sufficient reason for us to consider this particular natural product more closely. In this part we look at what the tobacco plant contains and which chemical changes happen between the tobacco harvest and a finished cigarette.

Contents of the Tobacco Plant

Looked at from a chemical standpoint, a tobacco plant consists of precisely those substances that all plants have in common: amino acids, sugars, and fats. However, starting from these primary metabolites, many plants synthesize additional compounds that do not play a direct role in the metabolism of the plant itself, but rather fulfill special ecological functions. Tens of thousands of these so-called "secondary metabolites" are known. Typical examples are fragrances and pigments used to attract insects for pollination purposes, pheromones for attracting partners, or substances to repel or even poison predators. The characteristic secondary metabolite of the tobacco plant, nicotine, is synthesized not only by tobacco and other *solanaceae* species, but also by certain plants completely unrelated to tobacco (Fig. 1).

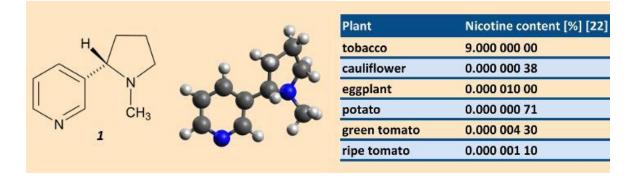


Figure-1. The plant toxin nicotine

The toxicity with respect to mammals of (S)-(-)-3-(1-methylpyrrolidine-2-yl)-pyridine, nicotine, depends heavily upon the species. On the basis of individual cases, the lethal oral dose for adults lies in the range 0.5–1.0 mg/kg body weight and for infants' ca. 0.1 mg/kg. For humans, nicotine is as toxic as hydrogen cyanide. First mild toxic symptoms include excessive salivation, nausea, stomach pains, vomiting and diarrhea, headache, perspiration, dizziness, and an increase in blood pressure.

The nicotine content of tobacco (dry weight) can be up to 9 %. In comparison, the nicotine content in other plants consumed as vegetables can be regarded as negligible. A typical cigarette tobacco contains ca. 1.5 % (S)-(–)-nicotine, which at over 95% is the principal alkaloid present. There are also small amounts of the enantiomeric (R)-(+)-nicotine together with nornicotine, anatabine, and anabasine. In the course of drying and fermentation, some of the alkaloid content of tobacco leaves is decomposed, leading to compounds (Fig. 2).

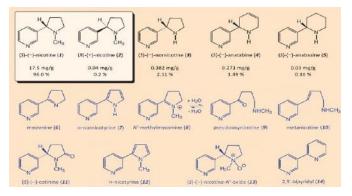


Figure 2. Nicotine and related tobacco alkaloids

Literature survey by Prof. Raveendra R. S., Dept of Chemistry

Take a deep breath to be calm and alert

In college debate competitions, you had to respond to your opponent effectively and win, and do so in a short time. There was also this competition called 'Just a minute' where the referee would ask you to talk about a topic that he chooses; you should talk about it for one minute- no hemming and having. No irrelevant words and no catching of breath. And the one who makes the most sensible speech in a minute wins.

In all this, our teacher or 'coach' would tell us: "take a deep breath before you start; it will improve your performance". That he was right has recently been confirmed by a study from a group of scientists, led by Professor Noam Sobel of the Weizmann Institute of Science, Israel, Titled "Human non-olfactory cognition phase-locked with inhalation". A nice 'popular' summary of this work has been presented by Dr. Yivsam Azgad of the media relations group of Weizmann. In this paper, the authors compared performance within a group of volunteers where they presented cognitive tasks to them, concurrent with inhalation or exhalation. The tasks included mathematical puzzles, spatial visualization problems and verbal tasks. The experiment was designed in such a manner that the subjects were not aware that their inhalation of breath was being monitored. And at the same time, the electrical activity to each of their brains was monitored using EEG.

The 'sniffing' brain

Three points of note came out of the trial. First, they found that in trials where he participants inhaled while attempting the task they did better than when that exhaled. Second, whether one inhales through 'the picture perfect' pattern would prefer nasal over breathing in. Third, the EEG results also showed altered patterns of connectivity between different parts of the brain which differed along the respiratory cycle.

Note that as we inhale, we take up oxygen from the air. So, is it the oxygen that they inhaled which helped? When asked, Professor Sobel said: "No; the time frame does not fit. The response time was far sooner than the time it takes for oxygen from the lungs to reach the brain...It is not only the olfactory system that is sensitive to inhalation and exhalation, it is the entire brain. We think that we could generalize and say that the brain works better with inhalation...We think of this as the "sniffing brain".

Most ancient sense

The paper also points out that the sniff alone – no odorants – orchestrates neural activity; thus it is not necessarily good or pleasant smell versus bad smell. The group hypothesis that nasal inhalation, apart from processing incoming information, also optimizes non-olfactory mechanisms for incoming interactions. That 'sniffing' or breathing-in drives brain activity has an evolutionary history.

Yoga and Meditation

While these authors do not directly address this question, we note that several scientists have suggested that yogic exercises lead to calmness and tranquility. In a set of experiments at Stanford University, USA, showed how a group of 175 neurons in the brain act as the breathing pacemaker in mice and how controlled breathing promotes mental calmness in the animals. Finally, a systematic critical review concludes that slow breathing techniques enhance parasympathetic activity, emotional control and psychological well being.

> Harsitha 4th SEM. CSE

Oh why did I say that!?

The many things I have said, For which I have felt regret. I have hurt people for no reason at all, Revealing my anger on young and old. My anger was out of control, Everyone's happiness it stole. But truthfully I didn't mean to hurt, The words just burst out Now I advice you to think before you speak, Because shouting only makes others weep. Remember words are like arrows piercing hearts, Hitting them hard and tearing them apart. So, don't make fun of the thin and fat. Because you will then end up saying, Oh! Why did I say that!?

Music

Music is everywhere It's the most beautiful melody in the air Full of rhythmic beats That makes you tap your feet Music makes all places feel like home Never makes you feel alone Music soothes your mood It is the language that is universally understood Music can make you laugh or cry The note may be low or high Music can make you dance Music can put you in a trance Music is for everyone It makes life full of fun Music can make you find new friends Music is the language of the soul There's classical, jazz, melody, pop and rock Music can wake you up and put you to sleep Without it our life is incomplete!!

> Pooja M Kaushik 8th SEM, ECE-B

The Nature

The rain drops touched the ground with a splattering sound, The heat faded, As the rain invaded, The sounds of nature. erased the noise of man The birds picked their feathers, The trees swayed with the wind. The plants became greener, As the air became cleaner One was sucked out of the daily life and thrown into the blissful nature The sound of thunder Got me to wonder I don't need to go to the countryside Because, the nature is where I reside...

Jagruthi G 6th SEM, CSE

Nature

Why are you so beautiful? You have made yourself colorful The streams that flows, The wind that blows; Have made yourself glow, Fragrant of the flowers... Haveade the butterfly shower Bees suck the honey; But by that we make money, Nature.... Why are you so beautiful? You're the god's gift, Which made our mind shift? Nature you have wonderful mountains But we are destroying it to make fountains; When we come to you we feel happy, But when you go away we start getting BP; Nature... Why are you so beautiful....? You always give us the best; Which makes us forget the rest....? Pallavi.S (Rashi) 2nd SEM, ECE - A

Human values v/s electronic gadgets

How beautiful were those days When tech had not touched us To spoil our minds and hearts When life was simple and plain And ambitions too were not very rosy. When poetry music and art Use to inspire us to touch the sky On the wings of our imagination As then our dreams too were simple And love use to empower our hearts To swim across any deep ocean While singing the songs of love. When television had not snatched Our leisure hours from every one of us And we use to dance and sing On the call of heart touching tunes. When mobiles had not spoiled our minds While snatching from us, Our peace of mind When computers were a remote cry And internet had not ruined the purity of minds. When as children we use to enjoy the life While playing the throw ball Or even the Gilli Danda As they all use to fill us with a serene joy Which the new technology has snatched From our kids and younger generations. How beautiful were those days When we use to enjoy the company Of human minds and hearts Unlike the numerous appliances Which we keep close to our hearts Instead of live, music and friendship. The new generation would never know The beauty of those precious moments Which used to embrace our hearts? And were the result of love and affection Which always come from non tech things?





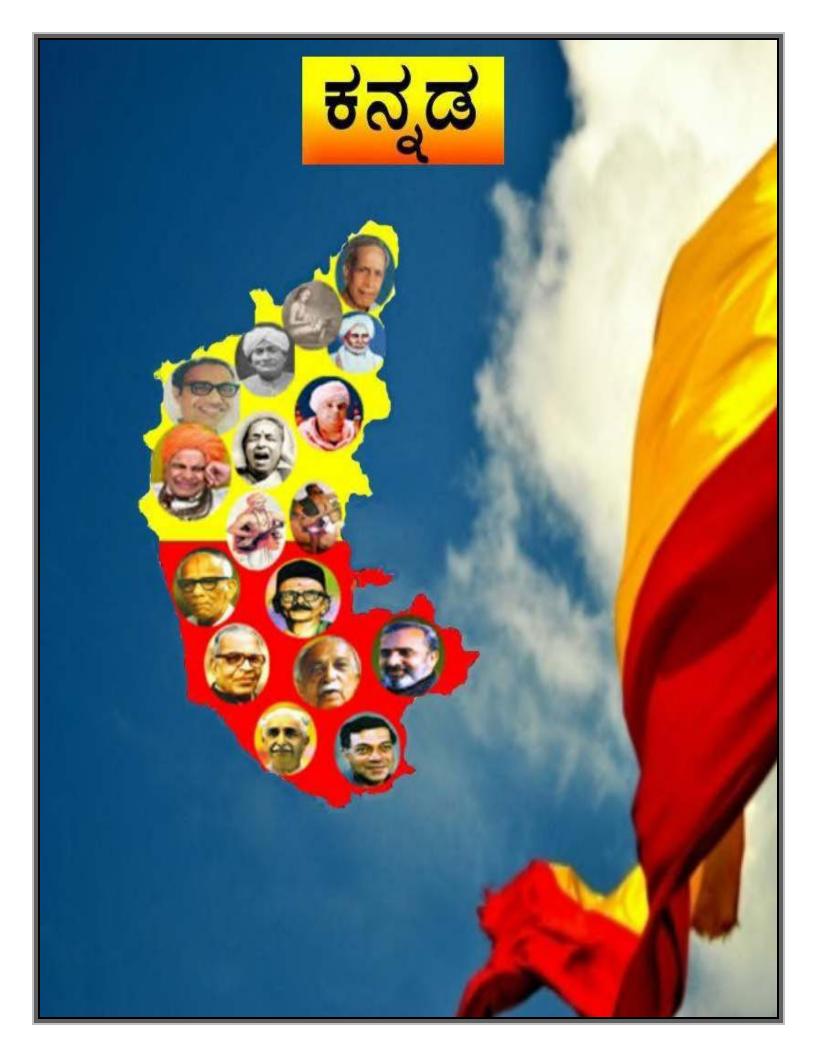








Collected and edited by Prof. S. Sathyanarayani Dept. of Chemistry



ಜನತೆಗಾಗಿ ವಿಜ್ಞಾನ-ವಿಜ್ಞಾನಕ್ಕಾಗಿ ಜನತೆ

ವಿಜ್ಞಾನವೆಂಬುದು ಇಡೀ ಜಗತ್ತಿನ ಬಗ್ಗೆ ಪ್ರಾಯೋಗಿಕ ಮತ್ತು ಪರೀಕ್ಷಣೀಯ ವಿವರಣೆಗಳನ್ನು ಜನತೆಗೆ ನೀಡುವ ಒಂದು ವ್ಯವಸ್ಥಿತ ಯೋಜನೆ. ಅಥವಾ ಇದನ್ನು ಸುಲಭವಾಗಿ ಹೇಳುವುದಾದರೆ, ಮನುಷ್ಯನಿಂದ ತಿಳಿಯಬಲ್ಲ ವಿಶ್ವದ ಬಗೆಗಿನ ಜ್ಞಾನದ ಸಮೂಹವೆ ವಿಜ್ಞಾನ. ಇಂದಿನ ಜನ ಮಾನಸದ ನಿತ್ಯ ಬಾಳ್ವೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಕ್ಷೇತ್ರವು ತನ್ನದೆ ಮಹತ್ವದ ಚಾಪು ಮೂಡಿಸಿದೆ ಹಾಗು ನಮಗೆ ಅರಿವಿಲ್ಲದಂತೆ ನಮ್ಮೆಲ್ಲ ವಿವಿಧ ಕ್ಷೇತ್ರಗಳನ್ನೂ ಸಂಪೂರ್ಣವಾಗಿ ಆವರಿಸಿದೆ. ಇದು ಪ್ರಸ್ತುತ ಕಾಲಘಟ್ಟಕ್ಕೆ ಅನಿವಾರ್ಯವು ಕೂಡ. ಭಾರತದ ಮಟ್ಟಿಗೆ ಆಧುನಿಕ ವಿಜ್ಞಾನದ ಪರಿಚಯ ಅತಿ ಹಳೆಯದೇನು ಅಲ್ಲ, ಕೇವಲ ನೂರು ವರ್ಷಗಳಿಂದೀಚೆಗೆ ಬಂದದ್ದೆ ಆದರು ಸಹ ಭಾರತ ಸ್ವಾತಂತ್ರ್ಯ ನಂತರ ವಿಜ್ಞಾನದ ಬೆಳವಣಿಗೆ ಇಮ್ಮಡಿ ಎಂದೆ ಹೇಳಬಹುದು. ಇತ್ತೀಚಿನ ದಿನಗಳಲ್ಲಿ ಅತಿ ಹೆಚ್ಚು ವಿಜ್ಞಾನಿಗಳನ್ನು ಹೊಂದಿರುವ ದೇಶಗಳ ಪೈಕಿ ನಮ್ಮ ಭಾರತವು ಒಂದು ಎಂಬುದು ಗಮನಾರ್ಹ. ಯಾಂತ್ರಿಕ ವಿಜ್ಞಾನ, ವೈಮಾನಿಕ ವಿಜ್ಞಾನ, ಗಣಕ ವಿಜ್ಞಾನದಂತಹ ಆಧುನಿಕ ವಿಜ್ಞಾನಗಳು ಅತ್ಯಂತ ಜನಪ್ರಿಯವೆನ್ನಿಸಿದರೂ ಸಹ ಮೂಲ ವಿಜ್ಞಾನದ ಆವಿಷ್ಕಾರಗಳಿಗೇನು ಕೊರತೆಯಿಲ್ಲ. ಆಧುನಿಕ ವಿಜ್ಞಾನವು ನವನಾಗರೀಕತೆಯ ಬೆಳವಣಿಗೆಗೆ ಹಿಡಿದ ಕನ್ನಡಿಯಾಗಿದೆ. ಮೂಲ ವಿಜ್ಞಾನದಲ್ಲಿ ಹತ್ತು ಹಲವಾರು ವಿಭಾಗಗಳಿದ್ದು, ಪ್ರತಿಯೊಂದು ವಿಭಾಗವು ಸಮಾಜದ ಒಳಿತಿಗಾಗಿ ಉಪಯೋಗಕ್ಕೆ ಬರಬಲ್ಲವು. ಒಂದು ಉತ್ತಮ ಉದಾಹರಣೆ ಎಂದರೆ, ಜನತೆಯ ಪ್ರತಿ ನಿತ್ಯದ ಜೀವನದಲ್ಲಿ ರಸಾಯನ ಶಾಸ್ತ್ರದ ಬಳಕೆ. ರಸಾಯನ ಕ್ರಿಯೆ ಇಲ್ಲದ ಅಥವಾ ಇದರ ಕಾರ್ಯವ್ಯಾಪ್ತಿ ಇಲ್ಲದ ಜಾಗವೆ ಇಲ್ಲ ಎಂದು ಹೇಳಿದರೆ ಅತಿಶಯೋಕ್ತಿಯಾಗದು. ನಮ್ಮ ನಿತ್ಯ ಜೀವನ ಬಹುಪಾಲು ಆನ್ವಯಿಕ ರಸಾಯನ ಶಾಸ್ತ್ರದ ಮೇಲೆಯೆ ಅವಲಂಬಿತವಾಗಿದೆ. ಹಾಗೆಯೆ ವಿಜ್ಞಾನದ ಇತರೆ ವಿಭಾಗಗಳ ಪ್ರಾಧಾನ್ಯ ಇತ್ತೀಚೆಗೆ ಹೆಚ್ಚಾಗಿದ್ದು ಅಡ್ವಾನ್ಸ್ಡ್ ರೀಸರ್ಚ್ ಮೂಲಕ ಮಾನವ ಕುಲದ ಒಳಿತಿಗಾಗಿ ಇದರ ಉಪಯೋಗವಾಗಬೇಕು. ಯಾಂತ್ರಿಕ ವಿಜ್ಞಾನವಂತು ಹೊಸದೊಂದು ರೊಬಾಟಿಕ್ ಲೋಕವನ್ನೆ ಸೃಷ್ಠಿಸಿದೆ. ವೈಮಾನಿಕ ವಿಜ್ಞಾನದಲ್ಲಿ ದಿನಕ್ಕೊಂದು ಹೊಚ್ಚ ಹೊಸತರ ಆವಿಷ್ಕಾರಗಳು ದೇಶದ ಅಭಿವೃದ್ಧಿಯ ದಿಕ್ಕನ್ನೆ ಬದಲಿಸುವಂತಿವೆ. ಇನ್ನು ಮ್ಯಾಕ್ರೊ ಟು ಮೈಕ್ರೊ ಎಂಬ ಮಾತಿನಂತೆ ನ್ಯಾನೊ ವಿಜ್ಞಾನವು ಈ ಯುಗದ ಸೊಗಡು, ಎಲೆಕ್ಟ್ರಾನಿಕ್ ಜಗತ್ತನ್ನೆ ತನ್ನ ತೆಕ್ಕೆಯಲ್ಲಿ ಇರಿಸಿ ನಾಗಾಲೋಟದಲ್ಲಿ ಓಡುತ್ತಿರುವ ವಿಜ್ಞಾನದ ವಿಭಾಗವೆಂದರೆ ಅದು ನ್ಯಾನೊ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ. ಈ ಜಮಾನದಲ್ಲಿ ನ್ಯಾನೊ ಮತ್ತು ಇನ್ನು ಚಿಕ್ಕದಾದ ಕ್ವಾಂಟಮ್ ಡಾಟ್ಸ್ ರೂಪದಲ್ಲಿ ವಿಜ್ಞಾನದ ಸಾಧನಗಳನ್ನು ಮತ್ತು ಸಾಧನೆಗಳನ್ನು ಅನುಭವಿಸುತ್ತಿದ್ದೇವೆ. ತೊಟ್ಟಿರುವ ಬಟ್ಟೆಯ ಮೇಲೆ ಕೊಳೆ ಕೂರದ ರೀತಿ, ವಾಹನದ ಮೇಲೆ ಧೂಳು ಕೂರದ ರೀತಿ, ನೀರಿನ ತಂತ್ರಜ್ಞಾನದಲ್ಲಿ ಬೆಳ್ಳಿಯ ನ್ಯಾನೊ ಕಣಗಳ ಚಮತ್ಕಾರ, ದೀಪ್ತಿಶೀಲ (ಫೋಟೊಲ್ಯುಮಿನಿಸೆನ್ಸ್) ಕ್ಷೇತ್ರದಲ್ಲಿ ಸತುವಿನ ಆಕ್ಸೈಡ್ ನ್ಯಾನೊ ಕಣಗಳ ಚತುರತೆ, ವೈದ್ಯಕೀಯ ಕ್ಷೇತ್ರದಲ್ಲಿ ಫುಲ್ಲರೀನ್ಸ್ (ಇಂಗೋಲಿ) ಕಣಗಳ ಮಹತ್ವ, ಇಂಗಾಲದ ನ್ಯಾನೊ ಕೊಳವೆ (ಇನ್ಯಾಕೊ) ಗಳ ಮೂಲಕ ದೇಹದ ವಿವಿಧ ಅಂಗಗಳಿಗೆ ಔಷಧೋಪಚಾರ, ಗಣಕ ವಿಜ್ಞಾನದಲ್ಲಿ ಕಲ್ಪನೆಗೂ ಮೀರಿದ ಆವಿಷ್ಕಾರಗಳು, ಗಜಗಾತ್ರದ ಎಲೆಕ್ಟ್ರಾನಿಕ್ ಉಪಕರಣಗಳು ಹಿಡಿಗಾತ್ರಕ್ಕೆ ಬಂದ ರೀತಿಗಳನ್ನು ನೋಡಿದರೆ, ಜನತೆಗೆ ಆಧುನಿಕ ವಿಜ್ಞಾನದ ಕೊಡುಗೆ ಅಪಾರವೆನ್ನಬಹುದು. ಈ ಎಲ್ಲಾ ವಿಜ್ಞಾನವು ಜನತೆಗಾಗಿಯೆ ಜನ್ಮವೆತ್ತಿದ್ದು ಎನ್ನಬಹುದು. ನ್ಯಾನೊ ವಿಜ್ಞಾನ ಅಭಿವೃದ್ದಿ ಕುರಿತು ಸಾಕಷ್ಟು ಅಪಸ್ವರಗಳಿವೆಯಾದರೂ ಈ ಮೇಲಿನ ಎಲ್ಲಾ ವಿವರಣೆಗಳು ಜನತೆಗಾಗಿ ವಿಜ್ಞಾನ ಎಂಬ ಮಾತನ್ನು ಸಾಕ್ಷಿಕರಿಸುವಂತಿವೆ.

ಇನ್ನು ವಿಜ್ಞಾನಕ್ಕಾಗಿ ಜನತೆ ಎಂಬುದರ ಅರ್ಥ ಅಪಾರವಾದುದು. ತಿಳುವಳಿಕೆಗಳು ಅಳವಡಿಕೆಯಲ್ಲಿ ಸೋಲುತ್ತವೆ ಎಂಬ ಮಾತಿನಂತೆ, ಇಂದಿನ ಜನತೆ ಓದಿದ್ದೆ ಒಂದು ಮಾಡುವುದು ಇನ್ನೊಂದು. ಮೂಲ ವಿಜ್ಞಾನ ಅಥವಾ ಆನ್ವಯಿಕ ವಿಜ್ಞಾನದಲ್ಲಿ ಪದವಿ ಗಳಿಸಿದರೂ ಸಹ ಅಥವಾ ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರಾಗಿ ವಿಜ್ಞಾವವನ್ನೆ ಮಕ್ಕಳಿಗೆ ಬೋಧಿಸುತ್ತಿದ್ದರೂ ಸಹ ಅದನ್ನು ಕೇವಲ ದುಡಿಮೆಗಾಗಿ ಎಂದು ಅರ್ಥೈಸುವವರೆ ಹೆಚ್ಚು. ದುಡಿಮೆಯ ನಂರ್ತರದ ಜೀವನಶೈಲಿಯೆ ಬೇರೆಯಾಗಿರುತ್ತದೆ. ಅನವಶ್ಯಕ ಮೂಢನಂಬಿಕೆಗಳಿಗೆ, ಕಂದಚಾರಗಳಿಗೆ ಮಾರು ಹೋಗುವುದನ್ನು ನೋಡಬಹುದು. ಪ್ರತಿಷ್ಠಿತ ವಿಜ್ಞಾನ ಕೇಂದ್ರಗಳು ಕೇವಲ ಹಣಗಳಿಕೆಯ ಮೂಲವಾಗದೆ, ಸಮಾಜದ ಒಳಿತಿಗಾಗಿ ಕಾರ್ಯ ನಿರ್ವಹಿಸಬೇಕು. ವಿಜ್ಞಾನಿಗಳು ಈಗಾಗಲೆ ಚಂದ್ರನನ್ನು ತಲುಪುವಲ್ಲಿ ಯಶಸ್ವಿಯಾಗಿದ್ದಾನೆ. ಹಾಗಿದ್ದರು ಕೂಡ ಗ್ರಹಣಗಳ ಮೇಲಿನ ಮೂಢನಂಬಿಕೆ ಮಾತ್ರ ಮಾಸಿಲ್ಲ. ಕ್ಯಾನ್ಸರ್ ನಂತಹ ಮಾರಕ ಕಾಯಿಲೆಗಳಿಗೆ ಆಸ್ಪತ್ರೆಗಳಿಗಿಂತ ಹೆಚ್ಚಾಗಿ ಅನ್ಯ ಮಾರಗ್ (ಪವಾಡ) ಅನುಸರಿಸುವವರಲ್ಲಿ ಅವಿದ್ಯಾವಂತರಿಗಿಂತ ವಿದ್ಯಾವಂತರೆ ಹೆಚ್ಚು. ಈ ರೀತಿಯ ಮನೋಭಾವನೆಗಳು ಮೊದಲು ಬದಲಾಗಬೇಕು. ಹಲವಾರು ವರ್ಷಗಳಿಂದ ಎದುರಿಸುತ್ತಿರುವ ಜಟಲ ಮತ್ತು ಸೂಕ್ಷ್ಮ ಸಮಸ್ಯೆಗಳಿಗೆ ವೈಜ್ಞಾನಿಕ ಮಾರ್ಗಗಳಿಂದ ಮಾತ್ರ ಪರಿಹರಿಸಲು ಸಾಧ್ಯ ಎಂಬ ಅರಿವು ಮೂಡಿಸಬೇಕು. ವಿಜ್ಞಾನದ ಅವಶ್ಯಕತೆ, ಅರಿವುಗಳು ಜನಸಾಮಾನ್ಯರ ಬಳಿಗೆ ತಲುಪಿಸುವ ವ್ಯವಸ್ಥೆಯಾಗಬೇಕು, ವಿಜ್ಞಾನವನ್ನು ತಮ್ಮ ತಮ್ಮ ಮಾತ್ರ ಭಾಷೆಯ ಮೂಲಕ ಸರಳ ರೀತಿಯಲ್ಲಿ ಕೆಲಿಸುವ ಕೆಲಸವಾದಾಗ ಮಾತ್ರ, ಸುಲಭವಾಗಿ ಜನತೆ ವಿಜ್ಞಾನದ ಕಡೆ ಗಮನ ಹರಿಸುತ್ತಾರೆ. ಸಮಾಜದ ಸುಧಾರಣೆಯಲ್ಲಿ ವಿಜ್ಞಾನ ಕಲಿತವರ ಪಾತ್ರ ಹಿರಿದಾದುದು. ಪ್ರಾಥಮಿಗ ಶಾಲಾ ಮಟ್ಟದಿಂದಲೆ ವಿದ್ಯಾರ್ಥಗಳಿಗೆ ವಿಜ್ಞಾನವನ್ನು ಅರಿಯುವಂತಾಗಬೇಕು. ಈಗಾಗಲೆ ಮೊಬೈಲ್ ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ಇದರ ಬಳಕೆ ಪ್ರತಿ ಹಳ್ಳಿ ಹಳ್ಳಿಯ ಮೂಲೆಯನ್ನು ಸೇರಿದ್ದಾಗಿದೆ, ಹೀಗೆಯೆ ಪ್ರತಿಯೊಂದು ಜನಪ್ರಿಯ ವಿಜ್ಞಾನವು ಜನಸಾಮಾನ್ಯರ ಕೈ ಸೇರಬೇಕು ಮತ್ತು ಅದರ ಅರಿವು ಇರಬೇಕು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಾಗಲಿ, ಬೋಧಕರಾಗಲಿ, ವಿಜ್ಞಾನಿಗಳಾಲಿ ಅಥವಾ ಪೋಷಕರಾಗಲಿ ವಿಜ್ಞಾನದ ಅವಶ್ಯಕತೆಗಳನ್ನು ಅರಿತು ಅದನ್ನು ತಮ್ಮ ಜೀವನದಲ್ಲಿ ಧನಾತ್ಮಕವಾಗಿ ಅಳವಡಿಸಿಕೊಂಡಿದ್ದೆ ಆದಲ್ಲಿ ವಿಜ್ಞಾನದ ಉಪಯೋಗ ಸಾರ್ಥಕವಾಗುವುದರಲ್ಲಿ ಯಾವುದೆ ಸಂದೇಹವಿಲ್ಲ. ಒಟ್ಟಾರೆ ಜನತೆಯಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ದೃಷ್ಠಿಕೋನ ಹೆಚ್ಚಾಗಬೇಕು. ಈ ಮೇಲಿನ ವಿವರಣೆ ವಿಜ್ಞಾನಕ್ಕಾಗಿ ಜನತೆ ಎಂಬ ಮಾತನ್ನು ಸಾಕ್ಷಿಕರಿಸುತ್ತವೆ.

ಕೊನೆಯ ಮಾತು, ವಿಜ್ಞಾನ ಸಮಾಜಕ್ಕೆ ಎಷ್ಟು ಪೂರಕವೊ ಅಷ್ಟೆ ಮಾರಕವು ಹೌದು! ಸಮಾಜದ ಒಳಿತಿಗಾಗಿ, ದೇಶದ ಅಭಿವೃದ್ಧಿಗಾಗಿ ವಿಜ್ಞಾನವನ್ನು ಉಪಯೋಗಿಸಿದ್ದೆ ಆದರೆ ವಿಜ್ಞಾನ ಪೂರಕವೆ ಹೊರತು ಮಾರಕವಾಗದು.

> ಆರ್.ಎಸ್. ರವೀಂದ್ರ ರಸಾಯನ ಶಾಸ್ತ್ರ ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು

ಯಾರು ಈ ಹುಡುಗ ಗೊತ್ತೇ?

Loch ಕಗ್ಗತ್ತಲೆಯ ರಾತ್ರಿ, ಸಾಮಾನ್ಯ ಅಂಗಿ ಪಂಚೆ ತೊಟ್ಟು, ಕಾಲಿಗೆ ಚಪ್ಪಲಿಯೂ ಇಲ್ಲದೆ ೧೫ ವರ್ಷದ ಹುಡುಗನೊಬ್ಬ ನಿರ್ಭೀತಿಯಿಂದ ಬೆಂಗಳೂರು – ಚಿಕ್ಕಬಳ್ಳಾಪುರ ಮಾರ್ಗದಲ್ಲಿ ನಡೆದು ಬರುತ್ತಿರುತ್ತಾನೆ. ಮಧ್ಯ ರಾತ್ರಿಯ ಸಮಯಕ್ಕೆ ತನ್ನ ಚಿಕ್ಕದಾದ ಮುರುಕಲು ಮನೆ ಮುಂದೆ ನಿಂತು ಬಗಿಲು ತಟ್ಟಿದ. ಮಗನ ಧ್ವನಿಯನ್ನು ಕೇಳಿದ ತಾಯಿ ಬಂದು ಬಾಗಿಲು ತೆರೆದಳು. ತನ್ನ ಮಗ ವಾಹನದಲ್ಲಿ ಬರಲು ಹಣವಿಲ್ಲದೆ, ಇತರರನ್ನು ಕೇಳದೆ ನಾಚಿ, ಸ್ವಾಭಿಮಾನದಿಂದ ಬೆಂಗಳೂರಿನಿಂದ ತನ್ನ ಹಳ್ಳಿಯ ಮನೆಯವರೆಗೆ ಸುಮಾರು ೪೫ ಮೈಲಿ ಕಾಲುನಡಿಗೆಯಿಂದಲೇ ನಡೆದು ಬಂದ ವಿಚಾರ ತಿಳಿದು, ತಾಯಿ ತನ್ನ ಅಸಹಾಯಕ ಸ್ಥಿತಿ, ಬಡತನ, ಮಗನ ದೀನ ಅವಸ್ಥೆಯನ್ನು ಕಂಡು ಬಿಕ್ಕಿ ಬಿಕ್ಕಿ ಅಳುತ್ತಾಳೆ. ಮನಸ್ಸು ಸ್ವಲ್ಪ ಹಗುರವಾದ ನಂತರ ಮಗನ್ನು ಕೇಳುತ್ತಾಳೆ; ಇಂಥಹ ಕಡುರಾತ್ರಿಯಲ್ಲಿ ಒಬ್ಬಂಟಿಯಾಗಿ ಏಕೆ ಬಂದೆ ಮಗನೆ ಎಂದು. ಅದಕ್ಕೆ ಹುಡುಗ ಹೇಳುತ್ತಾನೆ; ಅಮ್ಮ ನಾಳೆ ೧೧ ಗಂಟೆಯೊಳಗೆ ಮೆಟ್ರಿಕ್ಯುಲೇಷನ್ ಪರೀಕ್ಷೆಗೆ ೧೨ ರೂಪಾಯಿ ಕಟ್ಟಬೇಕು ಇಲ್ಲದಿದ್ದರೆ ಒಂದು ವರ್ಷದ ಓದು ವ್ಯರ್ಥವಾಗುತ್ತದೆ ಎಂದು ಹೇಳುತ್ತಾನೆ. ಹುಡುಗನ ತಂದೆ ಕೂಡ ಸತ್ತು ಹೋಗಿರುತ್ತಾರೆ.

ಕೈಯ್ಯಲ್ಲಿ ಬಿಡಿಗಾಸು ಇಲ್ಲದ ತಾಯಿ ಹತಾಶಳಾಗಿ ಕುಳಿತಳು. ಅದಕ್ಕೆ ಮಗನು ಅಮ್ಮ ಪಕ್ಕದ ಮನೆಯ ಶೆಟ್ಟರು ತುಂಬಾ ಒಳ್ಳೆಯವರು, ಕೇಳಿ ನೋಡಮ್ಮ ಎಂದು ಸಲಹೆ ಕೊಡುತ್ತಾನೆ. ಅದರಂತೆಯೇ ತಾಯಿ – ಮಗ ಇಬ್ಬರೂ ಮಧ್ಯರಾತರಿಯಲ್ಲಿಯೇ ಶೆಟ್ಟರ ಮನೆ ಬಾಗಿಲು ತಟ್ಟಿದರು. ಶೆಟ್ಟರು ಸದ್ಗುಣಿಗಳು ಮಾತ್ರವಲ್ಲದೆ ಉದಾರಿಗಳು ಕೂಡ ಆಗಿದ್ದರು. ವಿಚಾರವನ್ನು ತಿಳಿದು ೧೫ ರೂಪಾಯಿಗಳನ್ನು ತಾಯಿಯ ಕೈಗಿತ್ತರು.

ಮಗ, ತಾಯಿಯ ಸಲಹೆಯಂತೆ ಒಂದೆರೆಡು ಗಂಟೆ ವಿಶ್ರಾಂತಿ ಪಡೆದು, ಸ್ನಾನ ಮುಗಿಸಿ, ಉಪಹಾರ ಸ್ವೀಕರಿಸಿ, ಹಣದೊಂದಿಗೆ ಬೆಂಗಳೂರಿಗೆ ಹೊರಟ. ಆದರೆ ಆ ಹುಡುಗನ ಸಾಹಸ ವ್ಯರ್ಥವಾಗಿತ್ತು. ೧೧ ಗಂಟೆಯೊಳಗೆ ಪರೀಕ್ಷೆಯ ಅರ್ಜಿ ಮತ್ತು ಹಣ ಕೊಡಲು ಸಮಯ ಮೀರಿ ಹೋಗಿತ್ತು. ಹುಡುಗ ತನ್ನ ಕಷ್ಟವನ್ನು ಹೇಳಿಕೊಂಡು ಅಲ್ಲೇ ಅಳುತ್ತ ಕುಳಿತಿದ್ದ. ಅದೇ ಸಮಯಕ್ಕೆ ಸರಿಯಾಗಿ ಅಲ್ಲಿಗೆ ಬಂದ ಮೇಲಧಿಕಾರಿಯೊಬ್ಬರು ಹುಡುಗನ ಪರೀಕ್ಷೆಯ ಅರ್ಜಿ ಮತ್ತು ಹಣ ತೆಗೆದುಕೊಳ್ಳುವಂತೆ ಆಜ್ಞೆ ಮಾಡಿದರು. ಹುಡುಗನಿಗೆ ತುಂಬಾ ಸಂತೋಷವಾಯಿತು. ಪರೀಕ್ಷೆ ಮುಗಿದು ಪಲಿತಾಂಶವು ಪ್ರಕಟವಾಯಿತು. ಮೈಸೂರು ಸಂಸ್ಥಾನಕ್ಕೆ ಪ್ರಥಮ ಶ್ರೇಣಿಯಲ್ಲಿ ತೇರ್ಗಡೆ ಹೊಂದಿದ್ದ ಆ ಹುಡುಗ. ಅದೇ ಹುಡುಗ ಮುಂದೆ ಜಗದ್ವಿಖ್ಯಾತ ಇಂಜಿನಿಯರ್ ಆದ. ಆ ಮಹಾ ಪುರುಷನೇ ಡಾ. ಸರ್. ಎಂ. ವಿಶ್ವೇಶ್ವಯ್ಯ!

> ಬೆಂ.ಸು. ಬದರೀ ನಾರಾಯಣ ಪಾಂಶುಪಾಲರ ಆಪ್ತ ಸಹಾಯಕರು

ಕನ್ನಡ ಸಾಹಿತ್ಯ ಮತ್ತು ಚರಿತ್ರೆ

ಕನ್ನಡ, ಕರ್ನಾಟಕದಲ್ಲಿ ಉಪಯೋಗಿಸುವ ಭಾಷೆ ಹಾಗೂ ಕನ್ನಡವು ಕರ್ನಾಟಕದ ಮಾತೃಭಾಷೆಯಾಗಿದೆ. ಕನ್ನಡ ಭಾಷೆಯು ದ್ರಾವಿಡ ಭಾಷ ಬಳಗಕ್ಕೆ ಸೇರುತ್ತದೆ. ಈ ಭಾಷೆಯು ಆಧುನಿಕ ಭಾರತದಲ್ಲಿ ಪ್ರಚಲಿತವಿರುವ ಭಾಷೆಗಳಲ್ಲಿ ಎರಡನೇ ಅತಿ ಹಳಿಯ ಭಾಷೆಯಾಗಿ ಬೆಳೆದು ಬಂದಿದೆ. ಕನ್ನಡ ಭಾಷೆಯು ಪ್ರಸಿದ್ಧವಾದ ಬಾದಮಿ ಶಾಸನಗಳಲ್ಲಿ ಕಂಡು ಬರುತ್ತದೆ. ಕವಿರಾಜಮಾರ್ಗ ಎಂಬ ಪುಸ್ತಕವು ಕನ್ನಡ ಭಾಷೆಯ ಮೊದಲ ಪುಸ್ತಕವಾಗಿದೆ. ಈ ಪುಸ್ತಕವನ್ನು ಅಮೋಘವರ್ಷ ನೃಪತುಂಗ ಎಂಬ ರಾಜ ಒಂಬತ್ತನೇಯ ಶತಮಾನದಲ್ಲಿ ಬರೆದಿದ್ದನ್ನು. ಈ ಪುಸ್ತಕವು ಕಾವ್ಯ, ಕನ್ನಡ ನಾಡು, ಮತ್ತು ಕನ್ನಡ ಸಂಸ್ಕೃತಿಯ ಬಗ್ಗೆ ತಿಳಿಸುತ್ತದೆ.

ಹಲ್ಮಿಡಿ ಶಾಸನ: ಈ ಶಾಸನವು ಕನ್ನಡ ಭಾಷೆಯ ಮೊದಲ ಶಾಸನವಾಗಿದೆ.ಈ ಶಾಸನವನ್ನು ಕನ್ನಡ ಲಿಪಿಯಲ್ಲಿ ರಚಿಸಲಾಗಿದೆ. ಈ ಶಾಸನವು ಹದಿನಾರು ಸಾಲುಗಳನ್ನು ಹೊಂದಿದೆ ಹಾಗೂ ಈ ಶಾಸನವನ್ನು ಮರಳು ಶಿಲ್ಪದ ಮೇಲೆ ಕೆತ್ತಲಾಗಿದೆ. ಈ ಶಾಸನವು ಹಳಗನ್ನಡ ಮತ್ತು ಬ್ರಾಹ್ಮೀ ಲಿಪಿಯನ್ನು ಹೋಲುತ್ತದೆ.ಈ ಶಾಸನವು ಹಾಸನ ಜಿಲ್ಲೆಯ ಹಲ್ಮಿಡಿ ಎಂಬ ಗ್ರಾಮದಲ್ಲಿ ಕಂಡುಬರುತ್ತದೆ.

ಕನ್ನಡ ಸಾಹಿತ್ಯ ಮತ್ತು ಚರಿತ್ರೆಯನ್ನು ಮೂರಾ ಘಟ್ಟಗಳಾಗಿ ವಿಂಗಡಿಸಬಹುದು ಅವುಗಳಿಂದರೆ ಹಳಗನ್ನಡ,ನಡುಗನ್ನಡ, ಮತ್ತು ಆಧುನಿಕ ಕನ್ನಡ. ಹಳಗನ್ನಡ: ಈ ಕಾಲದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಆದಿ ಕಾವ್ಯ ಎಂದು ಕರೆಯುತ್ತಿದ್ದರು.ಈ ಕಾಲದಲ್ಲಿ ಕನ್ನಡ ಭಾಷ ಸಾಹಿತ್ಯವು ಜೈನಧರ್ಮವನ್ನು ಅವಲಂಬಿಸಿತ್ತು. ಈ ಕಾಲದ ಪ್ರಸಿದ್ಧ ಕವಿಯಾದ ಪಂಪ ಹಾಗೂ ಈತನು ರಚಿಸಿದ ಪಂಪಭಾರತ ಅಥವಾ ವಿಕ್ರಮಾರ್ಜುನವಿಜಯ ಎಂಬ ಕೃತಿಯೂ ಅತಿ ಹೆಚ್ಚು ಮನ್ನಣೆ ಪಡೆದಿದೆ. ಹಾಗೂ ಈ ಕಾಲದ ಪ್ರಸಿದ್ಧ ಕವಿಗಳು ಎಂದರೆ ರನ್ನ ಮತ್ತು ಪೊನ್ನ. ಈ ಕಾಲದಲ್ಲಿ ಇವರು ಕನ್ನಡಕ್ಕೆ ಕೊಟ್ಟ ಕೊಡುಗೆ ಅಪಾರ.

ನಡುಗನ್ನಡ: ಈ ಕಾಲದಲ್ಲಿ ಭಾಷೆಯು ಸಹ ಕನ್ನಡದ ಒಂದು ಭಾಷ ವರ್ಗಕ್ಕೆ ಸೇರುತ್ತಿತ್ತು. ಹಾಗೂ ಈ ಕಾಲದಲ್ಲಿ ಹೊಸ ಸಾಹಿತ್ಯಗಳು ಬೆಳಕಿಗೆ ಬಂದವು. ಅವುಗಳಿಂದರೆ ರಗಳಿ, ಸಾಂಗತ್ಯ ಪದ್ಯಗಳು ಮುಂತಾದವುಗಳು.ಈ ಕಾಲದ ಪ್ರಮುಖ ಲೇಖಕರು ಎಂದರೆ ಹರಿಹರ ಮತ್ತು ರಾಘವಾಂಕ. ಹರಿಹರ ಎಂಬ ಕವಿಯು ರಗಳಿ ಸಾಹಿತ್ಯವನ್ನು ಹಾಗೂ ರಾಘವಾಂಕ ಎಂಬ ಕವಿಯು ಪಟ್ಟದಿ ಸಾಹಿತ್ಯವನ್ನು ಪರಿಚಯಿಸಿದರು. ಈ ಕಾಲದಲ್ಲಿ ಇನ್ನೂ ಅನೇಕ ಸಾಹಿತ್ಯಗಳು ಬೆಳಕಿಗೆ ಬಂದವು ಅವುಗಳಿಂದರೆ ವಚನ ಸಾಹಿತ್ಯ ಮತ್ತು ದಾಸ ಸಾಹಿತ್ಯ.

ವಚನ ಸಾಹಿತ್ಯ: ಈ ಸಾಹಿತ್ಯದಲ್ಲಿ, ಬರುವ ಪ್ರಮುಖ ಸಾಹಿತಿಗಳು ಎಂದರೆ ಬಸವಣ್ಣ, ಅಕ್ಕಮಹಾದೇವಿ, ಸರ್ವಜ್ಞ, ಮುಂತಾದವರು, ವಚನ ಸಾಹಿತ್ಯಕ್ಕೆ ಇವರು ಕೊಟ್ಟ ಕೊಡುಗೆ ಅಪಾರ ಮತ್ತು ತನ್ನದೇ ಆದ ಶಕ್ತಿಯನ್ನು ಹೊಂದಿದೆ.

ಬಸವಣ್ಣ: ಬಸವಣ್ಣ ಇವರು ವಚನ ಸಾಹಿತ್ಯದ ಹರಿಕಾರರು.ಇವರನ್ನು ವಚನ ಸಾಹಿತ್ಯದ ಪಿತಾಮಹ ಎಂದು ಸಹ ಕರೆಯುತ್ತಾರೆ.

ಇವರು ರಚಿಸಿರುವ ವಚನಗಳು ಮುಕ್ತ ಛಂದಸ್ಸಿನಲ್ಲವೆ. ಹಾಗೂ ಇವರ ವಚನಗಳನ್ನು ಶಾಸ್ತ್ರೀಯ ಸಂಗೀತದಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ.

ಇವರ ಮುಖ್ಯ ಭೋಧನೆ ಎಂದರೆ ಕಾಯಕವೇ ಕೈಲಾಸ.

ದಾಸಸಾಹಿತ್ಯ: ದಾಸಸಾಹಿತ್ಯವು ವಚನ ಸಾಹಿತ್ಯದ ನಂತರ ಬಂದ ಒಂದು ಪ್ರಮುಖ ಸಾಹಿತ್ಯ.

ಇದನ್ನು ಭಕ್ತಿ ಸಾಹಿತ್ಯ ಎಂದು ಸಹ ಕರೆಯುತ್ತಾರೆ. ಈ ಸಾಹಿತ್ಯವು 15ನೇ ಶತಮಾನದಲ್ಲಿ ಆರಂಭಗೊಂಡಿತ್ತು.ಈ ಸಾಹಿತ್ಯವು ಅನೇಕ ಕರ್ನಾಟಕ ಸಂಗೀತಕ್ಕೆ ಹೆಚ್ಚು ಉಪಕಾರಿಯಾಗಿವೆ.ಮತ್ತು ಈ ಕಾಲದ ಪ್ರಮುಖ ಕವಿಗಳು ಎಂದರೆ ಪುರಂದರದಾಸರು ಮತ್ತು ಕನಕದಾಸರು. ಇವರನ್ನು ದಾಸಸಾಹಿತ್ಯದ ಪಿತಾಮಹರು ಎಂದು ಸಹ ಕರೆಯುತ್ತಾರೆ. ಇವರು ಕನ್ನಡಕ್ಕೆ ಕೊಟ್ಟ ಕೊಡುಗೆ ಅಪಾರ.

ಆಧುನಿಕ ಕನ್ನಡ ಅಥವಾ ನವೊದಯ ಕನ್ನಡ: ಆಧುನಿಕ ಅಥವಾ ನವೊದಯ ಎಂದರೆ ಹೊಸದಾಗಿ ಹುಟ್ಟುವುದು ಎಂದರ್ಥ. ಆಧುನಿಕ ಕನ್ನಡವು 19 ಮತ್ತು 20ನೇ ಶತಮಾನದಿಂದ ಕನ್ನಡ ಹೊಸ ಬೆಳವಣಿಗೆಗೆ ಕಾರಣವಾಯಿತು. ಏಕೆಂದರೆ ಈ ಕಾಲದಲ್ಲಿ ಅನೇಕ ಕವಿಗಳು ಮತ್ತು ಲೇಖಕರು ಬೆಳಕಿಗೆ ಬಂದರು. ಅದರಲ್ಲಿ ಪ್ರಮುಖ ಕವಿಗಳಾದ ಕುವೆಂಪು, ದ.ರಾ ಬೇಂದ್ರೆ, ಶಿವರಾಮ ಕಾರಂತ,ಮುಂತಾದ ಕವಿಗಳು ಕನ್ನಡವನ್ನು ತನ್ನದೇ ಆದ ವಿಶೇಷ ರೀತಿಯಲ್ಲಿ ಜನರಿಗೆ ಮುಟ್ಟುವಂತೆ ಬೆಳೆಸಿದರು. ಅದರಲ್ಲೂ ಕನ್ನಡಕ್ಕೆ 8 ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿ ದೊರೆತ್ತಿದ್ದು, ಕುವೆಂಪುರವರು ಕನ್ನಡದ ಮೊದಲ ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿ ಪುರಸ್ಕೃತರು ಎಂಬ ಹೆಗ್ಗಳಿಕೆಗೆ ಪಾತ್ರರಾಗಿದ್ದಾರೆ. ಹಾಗೂ ಇವರ ಶ್ರೀ ರಾಮಾಯಣ ದರ್ಶನಂ ಎಂಬ ಕೃತಿಗೆ ಈ ಪ್ರಶಸ್ತಿ ದೊರೆತಿದೆ. ಈ ಕಾಲದ ಅನೇಕ ಲೇಖಕರು, ಕವಿಗಳು ಕನ್ನಡದ ಬೆಳವಣಿಗೆಗೆ ಅತ್ಯಂತ ಮಹತ್ವದ ಪಾತ್ರವಹಿಸಿದ್ದಾರೆ.

ಕನ್ನಡಕ್ಕೆ ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿ ತಂದುಕೊಟ್ಟ ಕವಿಗಳಿಂದರೆ			
	ಕವಿಗಳು/ಲೇಖಕರು	ವರ್ಷ	ಕೃತಿಗಳು
	ಕುವೆಂಪು	1967	ಶ್ರೀ ರಾಮಾಯಣ ದರ್ಶನಂ
	ದ.ರಾ.ಬೇಂದ್ರೆ	1973	ನಾಕುತಂತಿ
	ಶಿವರಾಮ ಕಾರಂತ	1977	ಮೂಕಜೆ _ಟ ಯ ಕನಸುಗಳು
	ಮಾಸ್ತಿ ವೆಂಕಟೇಶ್	1983	ಚಿಕ್ಕವೀರ ರಾಜೇಂದ್ರ
	ಅಯ್ಯಂಗಾರ್		
	ವಿ.ಕೃ.ಗೋಕಾಕ್	1990	ಭಾರತ ಸಿಂಧುರಶ್ಮಿ
	ಯು.ಆರ್. ಅನಂತಮೂರ್ತಿ	1994	ಸಮಗ್ರ ಸಾಹಿತ್ಯ
	ಗಿರೀಶ್ ಕಾರ್ನಾಡ್	1998	ಸಮಗ್ರ ಸಾಹಿತ್ಯ
	ಚಂದ್ರಶೇಖರ್ ಕಂಬಾರ	2010	ಸಮಗ್ರ ಸಾಹಿತ್ಯ

ಈ ಭಾಷೆಯನ್ನು ಕವಿಗಳು ತನ್ನದೇ ಆದ ರೀತಿಯಲ್ಲಿ ವರ್ಣಿಸಿ ಅದರ ಬೆಳವಣಿಗೆಗೆ ಕಾರಣವಾಗಿದ್ದಾರೆ.ಅದೇ ರೀತಿ ಕನ್ನಡವನ್ನು ಪ್ರತಿಯೊಬ್ಬ ಕನ್ನಡಿಗರು ಮಾತನಾಡುವುದು ಮತ್ತು ಕನ್ನಡವನ್ನು ಬೆಳೆಸುವುದು ನಮ್ಮೆಲ್ಲರ ಕರ್ತವ್ಯ.

ಸಿರಿಗನ್ನಡಂಗೆಲ್ಗೇ, ಸಿರಿಗನ್ನಡಂ ಬಾಳ್ಗೇ

ತರತ್ ಎಚ್. ಆರ್. 6ನೇ ಸೆಮಿಸ್ಟರ್ ಸಿವಿಲ್ ಇಂಜಿನಿಯರಿಂಗ್

ದುಮ್ಮಾನ

ಸಾವಿರ ಕಥೆಗಳನ್ನು ಹೇಳುತ್ತವೆ ಕಣ್ಣುಗಳು ಕಥೆಗಳನ್ನು ಒದುತ್ತವೆ ಹೃದಯಗಳು ಕಣ್ಣೀರಾಗಿ ಹರಿಯುತ್ತವೆ ಕಥೆಗಳು ಇವುಗಳ ನಡುವೆ ಸದಾ ನಗುತ್ತವೆ ತುಟಿಗಳು

> Amrutha P 2nd SEM, ECE-B

ಕನ್ನಡ ನಾಡು

ಕನ್ನಡ ನಾಡಿನ ಸುಂದರ ಸೊಬಗಲಿ ಚೆಲಾವಿನ ಚಿತ್ತಾರ ಚೆಲ್ಲಾತಿದೆ| ಹಸಿರು ಸಿರಿಯಲಿ ನದಿಯು ಬಳುಕಲಿ ನಾಡಿನ ಹಿರಿಮೆಯು ಬೆಳಗುತಿದೆ|| ಒಲವಿನ ಚೆಲಾವಿನ ನೋಟವ ಸವಿಯಲಾ ಧಾವಿಸಿ ಬರುವರು ಮುದದಿಂದ| ಕವಿಗಳ ಬೀಡನಾ ಶಿಲ್ಪದ ಕಲೆಯನಾ ನೋಡುತ ಪಡುವರು ಆನಂದ|| ವಿಧವಿಧ ತರಾಲತೆ ಸಾಮಧಾರ ಸಾಮಗಳು ತವರಿದು ನಮ್ಮೀ ಕನ್ನಡ ನಾಡು| ನವಿಲಿನ ನರ್ತನ ಕೋಗಿಲೆ ಗಾಯನ ನವರಸ ಬೆರೆತಿಹ ನೆಲೆವಿಡು|| ಸಾಹಿತ್ಯ ಲೋಕ ನಾಡಿನ ದೊರೆಗಳು ಸರ್ವಕಾಲಕ್ಕೂ ಪೂಜನೀಯರು| ಶರಣದಾಸರು ಸಾಧ ಸಂತರು ನಾಡ ಕೀರ್ತಿಯ ಬೆಳಗಿಹರು|| ಬನ್ನಿರಿ ಗೆಳೆಯರೆ ಸಿರಿಗನ್ನಡ ನಾಡಿನ ಗತವೈಭವವನು ತಿಳಿಯೋಣ| ಕನ್ನಡ ಸಂಸಕೃತಿ ಮಹಿಮೆಯ ಅರಿತು ಮಣ್ಣಿನ ಋಣವನು ಕಳೆಯೋಣ||

ವಿದ್ಯಾಶ್ರೀ.ಎಸ್, 6th SEM, ECE-B

ಸಂದೇಹ

ನಮಗೆ ಯಾರ ಮೇಲಾದರು ಸಂದೇಹ ಬರುವುದು ಸಹಜ, ಸಂದೇಹಪಡಲು ನಮ್ಮ ಮನಸ್ಸಿಗೆ ಯೋಚನೆ ಬಂದರೆ ಮಾತ್ರ ಅದಕ್ಕೆ ನಾವು ಪ್ರತಿಕ್ರಿಯಿಸಬೇಕು. ಬೇರೆಯವರು ನಮ್ಮನ್ನು ಪ್ರತಿಕಿಯಿಸಲು ಹೇಳಿದರೆ ಅದಕ್ಕೆ ನಾವು ಮುನ್ನುಗ್ಗಿ ಸಂದೇಹಪಟ್ಟರೆ ನಮ್ಮ ಮನಸ್ಸು ಚೂರಾಗುವುದರಲ್ಲಿ ಸಂದೇಹವಿಲ್ಲ.

ಭವಿಷ್ಯ

ಜೀವನದಲ್ಲಿ ನಮ್ಮ ನಡೆಯು ಹೇಗೆ ಚಲನೆಯಾಗುತ್ತದೆಯೋ ಹಾಗೆಯೇ ನಮ್ಮ ಭವಿಷ್ಯವನ್ನು ಕೂಡ ಒಂದು ಹೆಜ್ಜೆ ಮುಂದೆ ಹೋಗಿ ನಿರಂತರ ಪ್ರಯತ್ನಿಸುತ್ತಿರಬೇಕು ಅವಾಗಲೇ ನಮ್ಮ ಭವಿಷ್ಯದ ಜೀವನವು ಉತ್ತಮ ರೀತಿಯಲ್ಲಿರುತ್ತದೆ.

ವ್ಯರ್ಥ ಮನಸ್ಸುಗಳು

ಬದುಕಿನಲ್ಲಿ ಸಾಧಿಸದಿದ್ದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ ಇರುವವರೆಲ್ಲ ನಮ್ಮವರಾಗದಿದ್ದದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ ಕನಸುಗಳನ್ನು ಸಾಕಾರಗೊಳಿಸದಿದ್ದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ ನಮ್ಮವರಲ್ಲದವರನ್ನು ನೆನಪಿಸಿಕೊಳ್ಳುವುದು ಬಲು ವ್ಯರ್ಥ ಮನಸ್ಸುಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳದವರಿದ್ದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ ದುಡಿಮೆಯನ್ನು ಶ್ರಮ ಪಟ್ಟು (ಶೃದ್ಧೆಯಿಂದ) ದುಡಿಯದಿದ್ದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ ಮುಂದಿನ ದಿನಗಳನ್ನು ಬಯಸದಿದ್ದರೆ ಜೀವನ ಬಲು ವ್ಯರ್ಥ

ಜೀವನದ ಗುರಿ

ಜೀವನದಲ್ಲಿ ಕೆಲವರು ಗುರಿ ತಲುಪಿದೆವು ಎಂದು ಖುಷಿಪಡುತ್ತಿರುತ್ತಾಢಿ ಕೆಲವು ಗುರಿಗಳನ್ನು ತಲುಪಿದಾಗ ಹೆಚ್ಚು ಸಂತೋಷವುಂಟು ಮಾಡಿದರು ಅದು ಕ್ಷಣಿಕ ಮಾತ್ರ. ನಮ್ಮ ಗುರಿ ಇರುವುದು ನಮ್ಮ ದಿನನಿತ್ಯದ ಜೀವನದಲ್ಲಿ ನಿರಂತರವಾಗಿ ಅನುಭವಿಸುವುದು ಅಥವಾ ಪ್ರಯತ್ನ ಪಡುವುದು.

ಜೀವನದ ಉನ್ನತ ಹಾದಿಗಳು

ನಮ್ಮ ಕಣ್ಣಿಗೆ ಕಾಣುವ ದಾರಿಯು ನೋಡಲು ಹರುಷ ತರುತ್ತದೆ, ಆ ದಾರಿಯನ್ನು ನಿರ್ಮಿಸಲು ಎಷ್ಟೋ ಕಾಣದ ಸಮಯ ಮತ್ತು ಶ್ರಮವಿರುತ್ತದೆಯೋ, ಹಾಗೆಯೇ ನಮ್ಮ ಜೀವನ ರೂಪಿಸಲು ಪರಿಶ್ರಮವು ಅತಿಮುಖ್ಯವಾದ ಬದಲಾವಣೆ ಅವಶ್ಯಕ.

ಮನಸ್ಸಿನ ನೋಟಗಳು ಜೀವನದಲ್ಲಿ ಪ್ರಬುದ್ಧತೆಯನ್ನು ಕಾಣಲು ಮತ್ತು ಬೆಳೆಸಲು ದಾರಿಯನ್ನು ತೋರಿಸುತ್ತಿರುತ್ತದೆ. ದೈನಂದಿನ ಸಮಯವು ನಿಧಾನವಾಗಿ ಚಲಿಸುತ್ತಿರುತ್ತದೆ ಆದರೆ ಕೆಲವರಿಗೆ ಅದು ಅತ್ಯಮೂಲ್ಯವಾದ ಜೀವನ ರೂಪಿಸಲು ಮತ್ತು ಉನ್ನತಮಟ್ಟಕ್ಕೆರಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುತ್ತಿರುತ್ತದೆ.

ಹಣ ಗಳಿಕೆಗೆ ನಮ್ಮ ಜೀವನದ ಹೆಚ್ಚು ಸಮಯವನ್ನು ಯೋಚನೆಯಲ್ಲಿಯೇ ಕಳೆಯುತ್ತಿರುತ್ತೇವೆ, ಆ ಯೋಚನೆಯನ್ನು ಕಾರ್ಯರೂಪಕ್ಕೆ ತರಲು ಹೆಚ್ಚು ಸಮಯವನ್ನು ವಿದ್ಯಾರ್ಜನೆಗೆ ಸಮರ್ಪಿಸಬೇಕು. ಇದರಿಂದ ವ್ಯಕ್ತತ್ವವು ಕೂಡ ಮೌಲ್ಯುಯುತವಾಗಿರುತ್ತದೆ.

> ನವೀನ್ ಕುಮಾರ್. ಹೆಚ್.ಸಿ. ಸಹಾಯಕ ಗ್ರಂಥಪಾಲಕರು

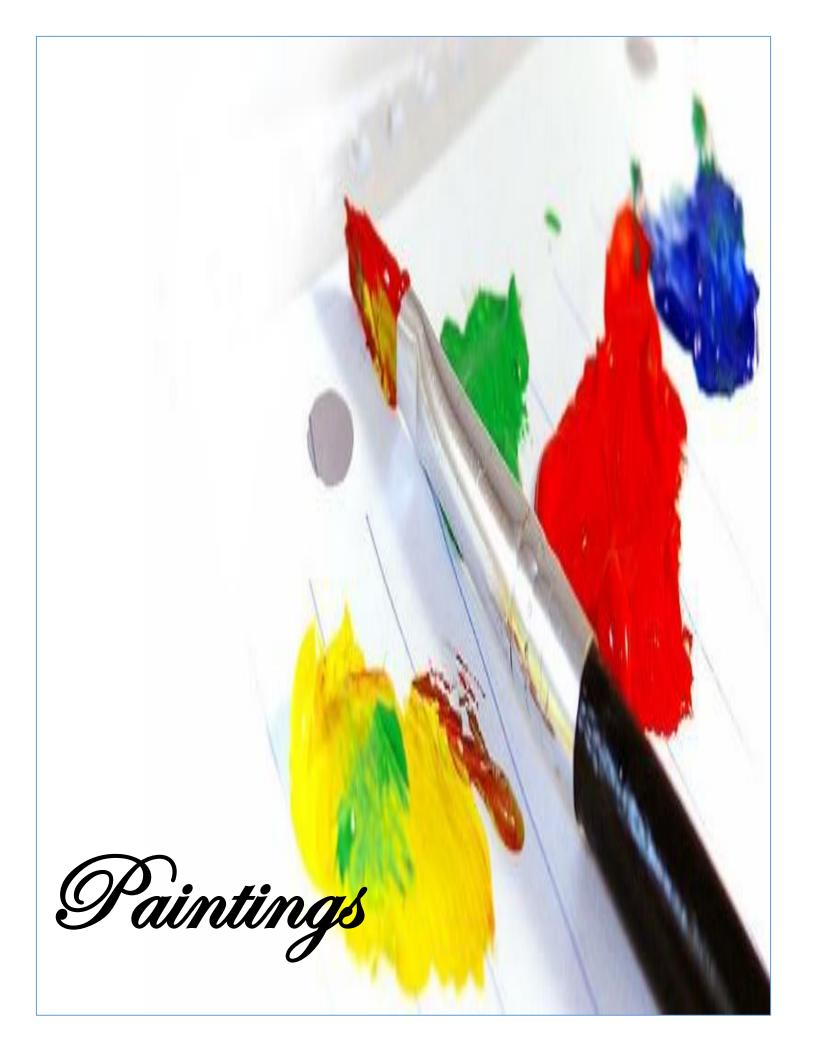
ಆವ್ಲು ಜನಕ (ಆಕ್ಸಿಜನ್)

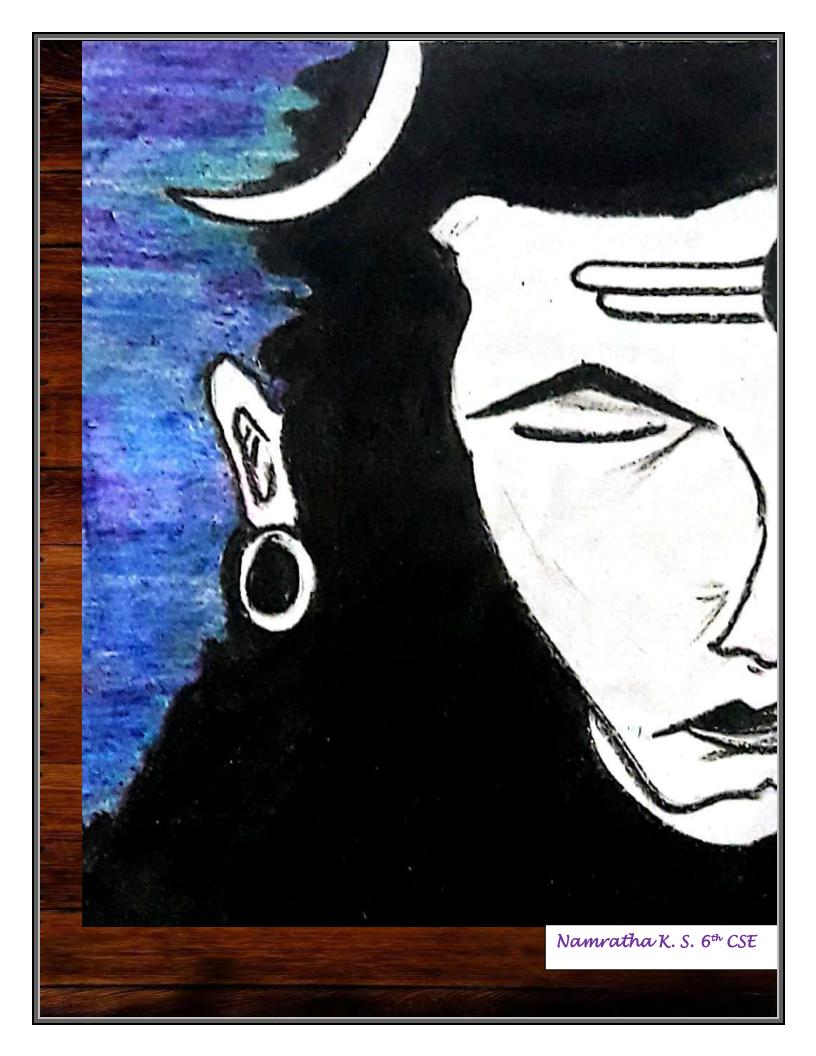
ಅನಿಲ ರೂಪದ ಅತಿ ಮುಖ್ಯ ಮೂಲಧಾತು ಬದುಕಲಾರವು ನೀನಿಲ್ಲದೆ ಯಾವುದೇ ಜೀವಜಂತು ನಿನ್ನಯ ಪರಮಾಣು ಸಂಖ್ಯೆ ಎಂಟು ಜಗದ ಜೀವಿಗಳೆಲ್ಲದರ ಜೊತೆ ನಿನ್ನ ನೆಂಟು. ಸಿಲಿಕೇಟ್, ಆಕ್ಸೈಡುಗಳೆ ನಿನ್ನ ಆಕರ ನಿನಗಿಲ್ಲ ಯಾವುದೆ ನಿರ್ದಿಷ್ಟ ಆಕಾರ ಒರೋನ್ ರೂಪದಿ ನೀ ಭೂಮಂಡಲ ರಕ್ಷಕ ನಿನಗೊಂದು ನಾಮ ಆಮ್ಲಜನಕ. ಸಾವಯವ ಸಂಯುಕ್ತಗಳಿಗೆ ನೀನೆ ಮೂಲ ಸೇವಿಸುತ್ತಿರಬೇಕು ನಿನ್ನ ಸದಾ ಕಾಲ ಆಮ್ಲ, ಪ್ರತ್ಯಾಮ್ಲಗಳ ಜೊತೆ ನಿನ್ನ ಒಡನಾಟ ನೀ ಮುನಿದರೆ, ಮುಗಿಯಿತು ನಮ್ಮ ಉಸಿರಾಟ. ಪ್ರತಿ ಉಸಿರಿಗೂ ನೀನೆ ಜನಕ ಸಕಲ ಜೀವ ರಾಶಿಗೆ ನೀ ಕನಕ ನೂರಾರು ಮೂಲಧಾತುಗಳಿಗೆ ನೀ ಪ್ರೇರಕ ಸಾವಿಲ್ಲ ನಿನಗೆ ಭುವಿ ಇರುವ ತನಕ.

ಗಂಧಕ (ಸಲ್ಫರ್)

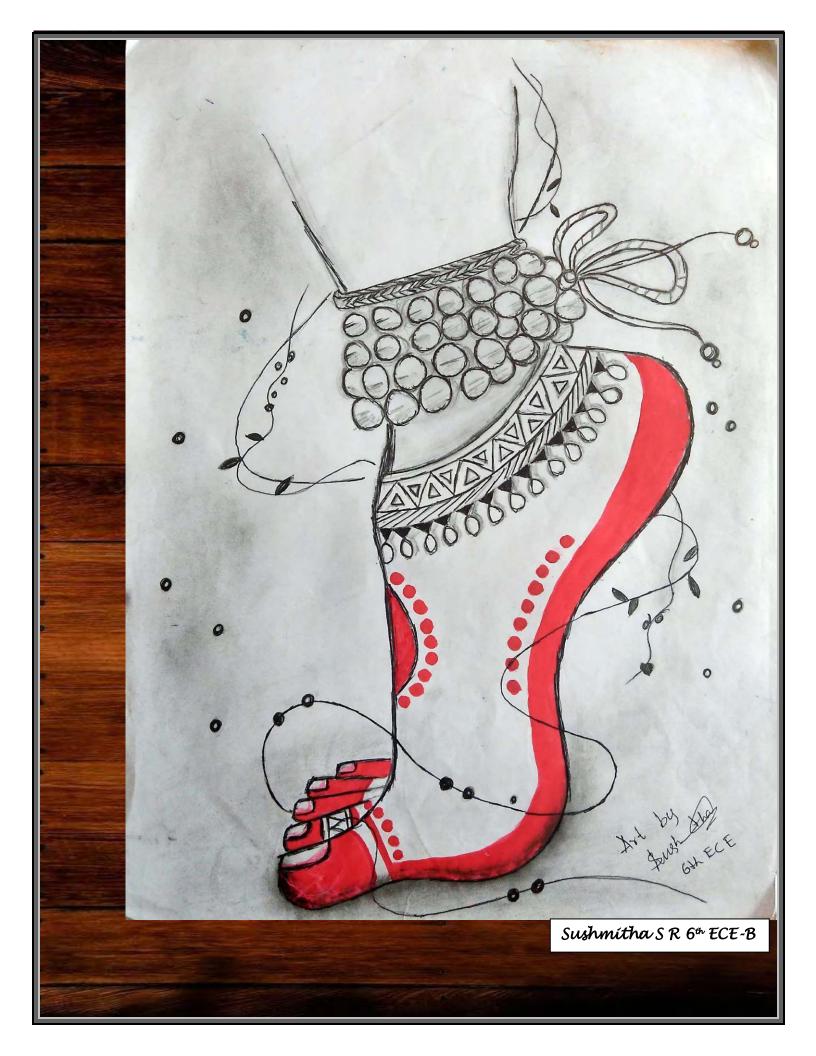
ವಾಸನೆಯಾಗಲಿ, ರುಚಿಯಾಗಲಿ ಇಲ್ಲದ ಸ್ಪಟಿಕ ರೂಪ, ಹಳದಿ ಬಣ್ಣವಿದ್ದರು ಚಿನ್ನವಲ್ಲದ ಚಂದದ ಹೆಸರುಳು ಇದು ಗಂಧಕ ಹಲವು ಔಷಧಗಳಿಗಿದು ಪ್ರೇರಕ. ೧೬ ಇದರ ಪರಮಾಣು ಸಂಖ್ಯೆ ಕ್ರಿ.ಪೂ. ೨೦೦೦ಕ್ಕೂ ಮೊದಲೆ ನಡೆದಿತ್ತು ಇದರ ತನಿಖೆ. ಎಂದೂ ನೀರಿನಲ್ಲಿ ಕರಗದವ ಸಾವಯವ ದ್ರಾವಣದಿ ಮಾತ್ರ ಕರಗುವ. ಇದಕ್ಕುಂಟು ಆಕ್ಸೈಡು, ಸಲ್ಪೈಡು ರಸಾಯನ ಉದ್ಯಮದಿ ಬಲು ಮುಖ್ಯ ಆಕ್ಸಿ ಹ್ಯಾಲೈಡು. ಸಕಲ ಜೀವ ಕೋಶಗಳಿಗೂ ಅವಶ್ಯಕ ಬಹುಪಯೋಗಿ ಈ ಗಂಧಕ. ತ್ರಿರೂಪವಿಹುದು ಆಲ್ಪಾ, ಬೀಟಾ, ಗಾಮಾ ಜೈವಿಕ ಕ್ರಿಯೆಯಲ್ಲಿ ಇದರ ಹಾದಿ ಸುಗಮ. ಈರುಳ್ಳಿ ಬೆಳ್ಳುಳ್ಳಿಯಲ್ಲು ನಿನ್ನ ಉಸಿರು ಅದಕ್ಕೆ ಏನೊ ಕತ್ತರಿಸಿದಾಗ ತರಿಸುವೆ ಕಣ್ಣೀರು.

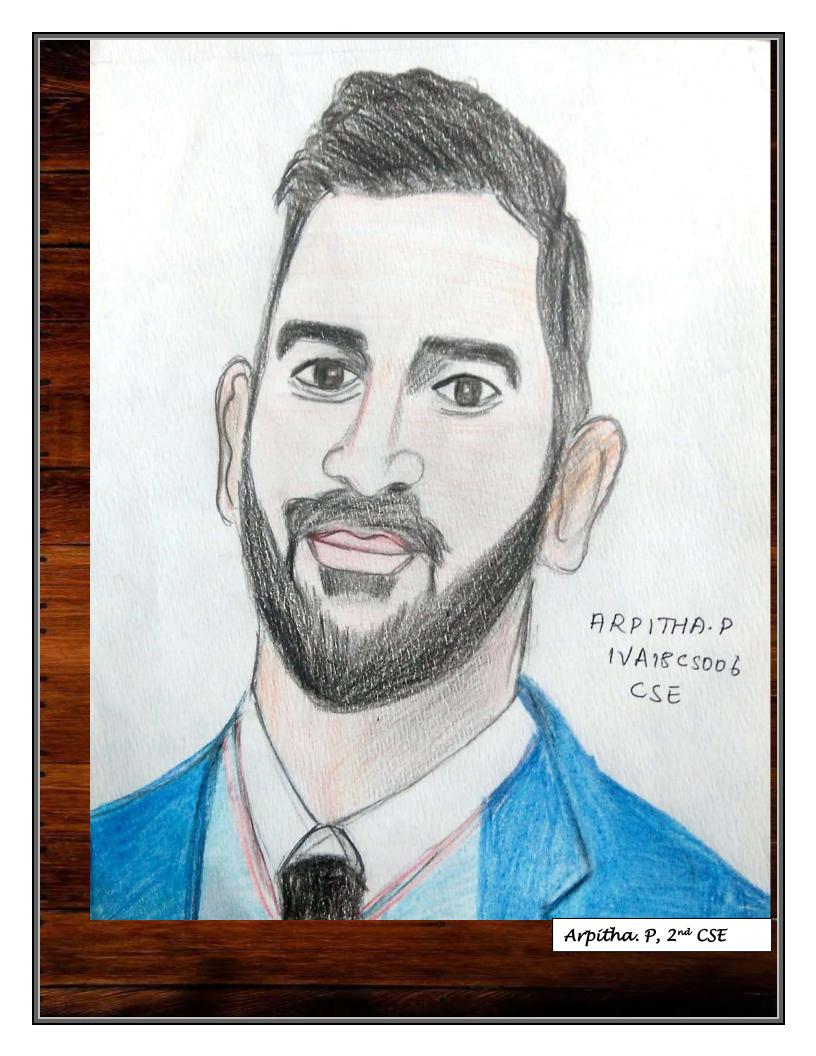
> ಆರ್.ಎಸ್. ರವೀಂದ್ರ ರಸಾಯನ ಶಾಸ್ತ್ರ ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು





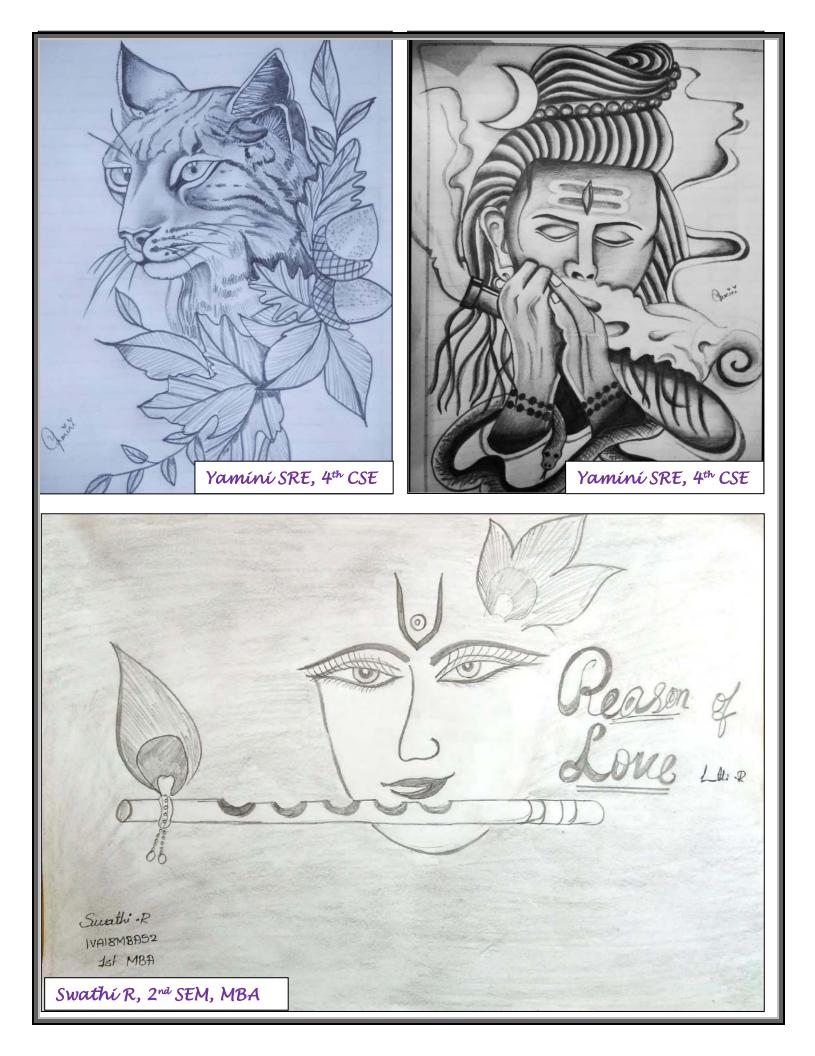
















PHOTOGRAPHY

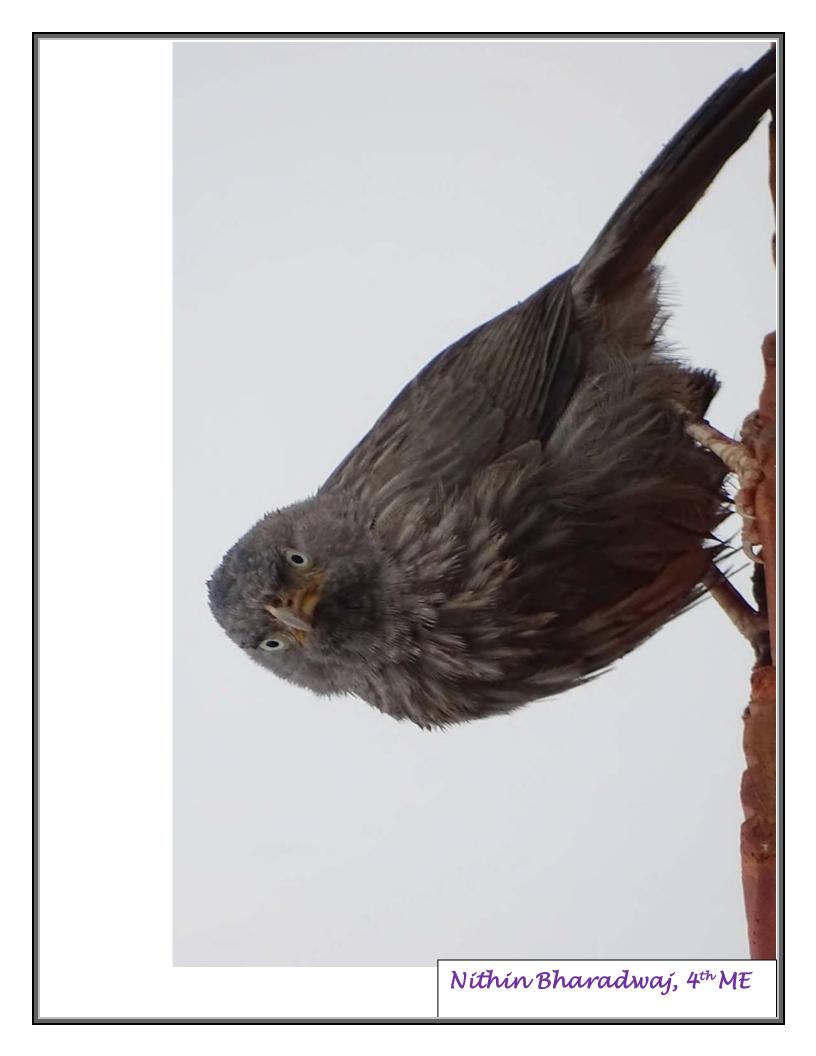


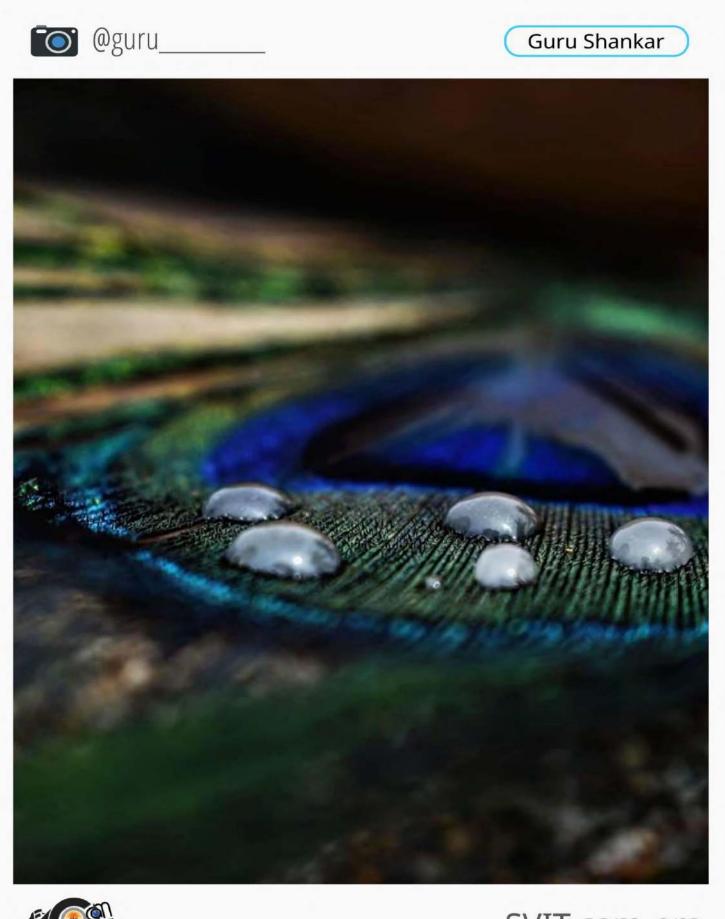






RAKSHITHRVAIDYAM

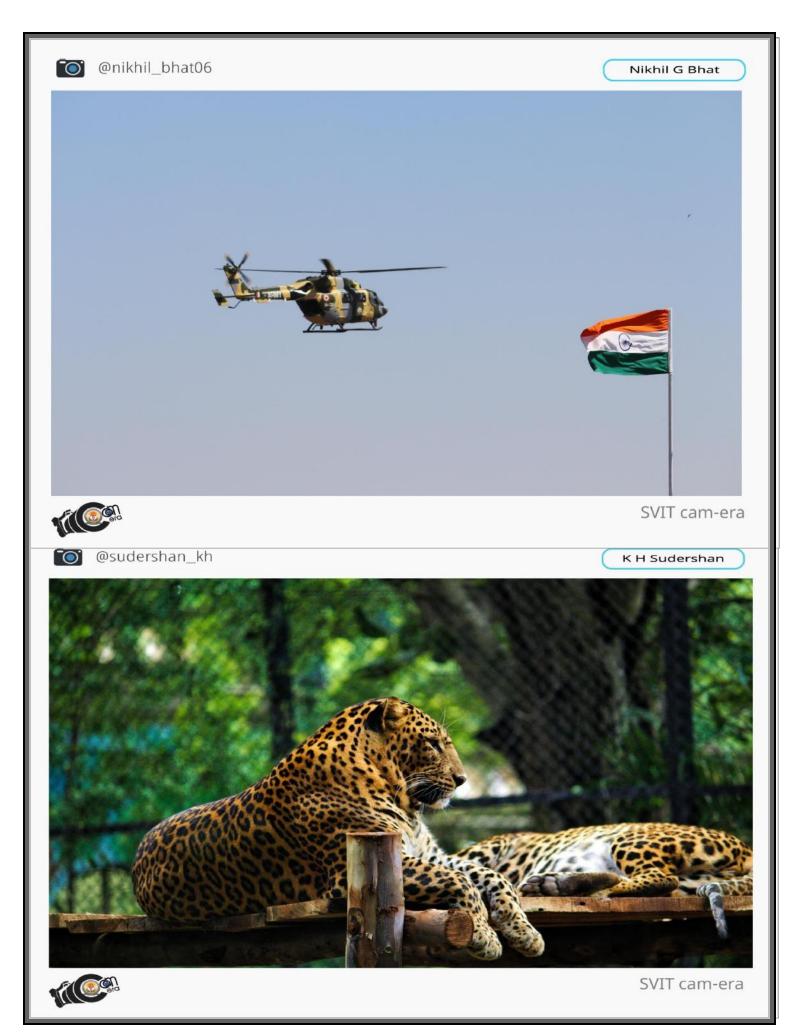






SVIT cam-era





ನಾಡ ಗೀತೆ

ಜಯ ಭಾರತ ಜನೆನಿಯ ತೆನೆಂಜಾತೆ, ಜಯಪೇ ಕರ್ನಾಟಕ ಮಾತೆ! ಜಯ ಸುಂದರೆ ನೆದಿ ವನಗಳ ನಾಡೇ, ಜಯಪೇ ರೆಸೆಯೆಪಿಗಳ ಬೀಡೆ! ಜಯ ಭಾರತೆ ಜನೆನಿಯೆ ತೆನೆಂಜಾತೆ, ಜಯಪೇ ಕರ್ನಾಟ ಕಮಾತೆ!

ಭೂದೇವಿಯಮ ಕುಟದ ನವಮಣಿಯೆ, ಗಂಥದ ಚಂದದ ಹೊನ್ನಿನ ಗಣಿಯೆ; ರಾಘವ ಮಧುಸೂಧನ ರವತರಿಸಿದ ಭಾರತ ಜನನಿಯ ತನುಜಾತೆ ! ಜಯ ಭಾರತ ಜನನಿಯ ತನುಜಾತೆ, ಜಯಪೇ ಕರ್ನಾಟಕ ಮಾತೆ!

ಜನನಿಯ ಜೋಗುಳ ವೇದದ ಘೋಪ, ಜನನಿಗೆ ಜೀವವು ನಿನ್ನಾವೇಶೆ, ಹಸುರಿನ ಗಿರಿಗಳ ಸಾಲೇ, ನಿನ್ನಯ ಕೊರಳಿನ ಮಾಲೆ, ಕೆಪಿಲ ಪತೆಂಜಲ ಗೌತಮ ಜಿನೆನುತೆ, ಭಾರತ ಜನೆನಿಯ ತೆನುಜಾತೆ !

ಜಯೆಹೇ ಕರ್ನಾಟಕ ಮಾತೆ! ಜಯ ಭಾರತ ಜನೆನಿಯ ತೆನೆಂಜಾತೆ, ಜಯೆಹೇ ಕರ್ನಾಟಕ ಮಾತೆ!

ಶಂಕರ ರಾಮಾನುಜ ವಿದ್ಯಾರಣ್ಯ, ಬಸವೇಶ್ವರ ಮಧ್ವರ ದಿವ್ಯಾರಣ್ಯ ರನ್ನ ಪಡೆಕ್ಷರಿ ಪೊನ್ನೆ, ಪಂಪ ಲಕುಮಿಪತಿ ಜನ್ನೆ ಕುಮಾರವ್ಯಾಸರ ಮಂಗಳಿಧಾಮೆ, ಕವಿ ಕೋಗಿಲೆಗಳ ಪುಣ್ಯಾರಾಮ ಸಾನೆಕೆ ರಾಮಾನೆಂದೆ ಕೆಬೀರೆರೆ ಜಯೆಹೇ ಕರ್ನಾಟಕೆ ಮಾತೆ!

ಜಯ ಭಾರತ ಜನೆನಿಯ ತೆನೆಂಜಾತೆ, ಜಯಹೇ ಕರ್ನಾಟಕ ಮಾತೆ!

ತೈಲಪ ಹೊಯ್ಸುಳರಾಳಿದ ನಾಡೇ, ಡೆಂಕಣ ಜಕಣರ ನೆಚ್ಚಿನ ಬೀಡೆ ಕೈಷ್ಟೆ ಶೆರಾವತಿ ತುಂಗಾ, ಕಾವೇರಿಯ ವರರಂಗಾ ಚೈತನ್ಯ ಪರಮಹಂಸ ವಿವೇಕರ, ಭಾರತ ಜನೆನಿಯ ತೆನುಜಾತೆ !

ಜಯೆ ಹೇ ಕರ್ನಾಟಕೆ ಮಾತೆ! ಜಯ ಭಾರತ ಜನೆನಿಯೆ ತೆನೆಂಜಾತೆ, ಜಯೆ ಹೇ ಕರ್ನಾಟಕೆ ಮಾತೆ!

ಸರ್ವಜನಾಂಗದ ಶಾಂತಿಯ ತೋಟ, ರಸಿಕರ ಕಂಗಳ ಸೆಳಿಯುವ ನೋಟ ಹಿಂದೂ ಕ್ರೈಸ್ತೆ ಮುಸೆಲ್ಮಾನೆ, ಪಾರಸಿಕ ಜೈನೆರುದ್ಯಾನೆ ಜನಕನ ಹೋಲುವ ದೊರೆಗಳ ಧಾಮ, ಗಾಯಕ ವೈಣಿಕರಾರಾಮ

ಕನ್ನೆಡೆ ನೆಂಡಿಕುಣಿದಾಡುವೆ ಗೇಹೆ, ಕೆನ್ ನಡ ತಾಯಿಯ ಮೆಕ್ಕಳಿದೇಹ ಭಾರತೆ ಜನೆನಿಯ ತೆನೆುಜಾತೆ, ಜಯಹೇ ಕೆರ್ನಾಟಕೆ ಮಾತೆ ಜಯ ಸುಂದರೆ ನೆದಿವೆನೆಗಳ ನಾಡೇ, ಜಯಹೇ ರೆಸೆಯೆಷಿಗಳ ಬೀಡೆ!

ಜಯ ಭಾರತ ಜನೆನಿಯ ತೆನೆುಜಾತೆ, ಜಯಹೇ ಕರ್ನಾಟಕ ಮಾತೆ|

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