Rector's Message

It is with immense joy that I write these few lines as a message for the College Annual 2016-17. The year was full of blessings from God. The annual report tells the countless blessings the College received during this academic year. At the beginning of the year, we inaugurated the new bicentenary building and the new entrance to the College. We launched digitalization of all the administration processes.

We began the restructuring process in the College which brought about a fine academic programme which would be introduced from next year. These are major events but there are many other programmes which were carried out throughout the year as stated in the College report. The credit goes to the entire team of management, staff members both teaching and non-teaching and the student leaders. This magazine will show the creative and thought provoking articles on various issues.

I appreciate the Principal, Additional Principal and the team of editors of the magazine for their tireless work to bring out this magazine on time. As we read through the pages, let us remember all those who have made the life in the College pleasant and successful.

May this magazine inspire other educational institutions and many more young people to contribute to the life and mission of the College.

Rev. Dr. C. Antonyraj, SDB
Rector & Secretary

Principal's Message

Dear Friends and Delegates,

It's my delight and pleasure to pen these words for the College Annual that encompasses our academic and non-academic achievements and the milestones we have reached.

I thank God for His continued blessings and guidance for making this institution a beacon of quality and excellence, thus realizing the dream and mission of our founder, Father St. Don Bosco who still lives in the smiles of countless young men and women graduating as professionals from this institution.

"The value of education is not only learning of many facts, but training the minds to think" says Albert Einstein. I am sure the efforts we undertook last year would have borne fruit in the minds of many young people and this magazine catches a few glimpses of it. I would like to appreciate each and every member of Sacred Heart family for making the year so eventful and fun filled. I also thank all those who brought laurels to this great institution by their significant achievements.

The expert in anything was once a beginner and here in our College we continue to grow nurturing young minds to become responsible and learned citizens of our country. Though we face challenges and struggles, we don't deter us. But instead they impart in us so much of strength and patience to continue our journey of perfection and excellence.

I sincerely acknowledge all the noble minds who have worked for the glory of this institution and especially worked hard to bring out this magazine in its present shape. I wish you all a wonderful and fruitful year ahead and may God Bless Sacred Hearts.

With Wishes and Prayers.

Rev.Dr.D.Maria Antony Raj, SDB
Principal

Additional Principal's Message

Dear Friends,

Greeting! Happy to meet you through this college magazine, an annual feature!

Congratulations to all the contributors of this magazine. Write, write, keep writing, your writing gets better and better!

We are at the far end of this academic year. I thank God for the wonderful year that has been so far. Dramatic political upheavals and spontaneous students' uprising are the two major events. The students' uprising combined with their discipline brings hope to our minds. Our youngsters are still responsible and think outside their immediate interests. Their far-sighted thinking is going to be very beneficial to the state, the country and the world. They managed to bring together people from every part of the world. Congrats!

No one can see the future, yet we all must make guesses about it in order to make decisions and be better prepared for what comes our way. The guesses that we make aren't based on seeing the future, but on our knowledge and past experiences, with a little bit of insight mixed in. If you don't want to be blindsided by the future and want to feel ready for whatever challenges life may throw at you, then you have to become a master at thinking ahead.

Think of your future. Think of your priorities in life. While you are in the college, study but think beyond your studies. Prepare yourselves for what is coming. Time is very short. Make the best use of the opportunities provided to you.

THINK BIG...THINK FAST...THINK AHEAD

Rev. Dr. K. A. Maria Arokiaraj, SDB
Additional Principal

From the Editor's Heart

The college annual, which is a catalyst to kindle the staff and students' creative beat of mind, very often, goes unnoticed. The annual of 2016-17 houses with it wide spectrum of articles ranging from the marvels of computer to health tips and startling facts about life. The spontaneous students' protest to restore the cultural right hasn't featured in any one of the articles.

The usual features of a college annual-snippet, tit-bits, funs and riddles- are conspicuously absent. There is quite a number of articles on the marvels of computer. Health tips are useful too.

A common feature of an annual is that there will be poems from budding poets, especially from the creative pens of students of English is very much missing. Appeals to the students of English to pour forth then 'spontaneous overflow of powerful feelings' in the years to come, preferably on the evils of the society and the current problems that are gripping it. For you know, literature 'holds mirror to the society.'

I thank the editorial board and a few others Mr. G. Sounder and Mr. J. Antony Amalraj for having been with me to carry out the proof reading painstakingly.

The Principal, true to his nature, has been very zealous in bringingout the annual ontime, certainly not compromising on quality. The editorial board makes yet another appeal to the staff and students of higher learning. Let us not hesitale or feel shy to contribute our mite to our college magazine. We shall draw fulfilment and pride in finding our own contributions in our own magazine.

Drought of this year is looming large and threatening every one of us Scorching and sweltering heat sips our copious sweat. Let us pray fervently and ardently for sufficient showers. Besides this primary duty, let us seriously plan out affortestation and desist the deeds that harm the ecology.

Best of Luck

Prof. N. Arul Doss
Chief Editor & Head, Dept. of English

Editorial Board
1. Prof. N. Arul Doss
2. Prof. V. Madhan Kumar
3. Dr. G. Mohan Gandhi
4. Dr. A. Dhayal Raj
5. Dr. V. Collins Arun Praksh
6. Mr. G. Sounder
7. Mr. J. Antony Amalraj

Dear Delegates and Friends,

Respected Rev.Fr.Rector, Distinguished chief guests of this day Dr.M.A.Jayaraj, the Joint Director of Collegiate Education, Vellore Region, Guest of Honour Shri. D.S.Antuvan, Senior Scientist & Project Director (HWTP) Vikaram Sarabhai Space Centre, ISRO - Thiruvananthapuram, Additional Principal Rev.Dr.K.A.Maria Arokiaraj,SDB, Vice Principals of Shift–I & II, Deans, HODs, faculty members, parents, friends well- wishers, people from press and media and my dear beloved students. I extend my warmest welcome, to all of you, to this joyous occasion of 66th College Day celebrations of Sacred Heart College. As I have been entrusted with this responsibility of leading the College as the Principal, I have the privilege and joy to present to you the annual report of this institution.

It seems unbelievable to recount what God has done for this institution for the past 65 years. The Sacred Heart of Jesus through this Sacred Heart College has prepared us for all great things and I am sure we have grasped enough the opportunities laid open to us in pursuit of becoming better and better in every walk of our life.

God says "**I will never leave you nor forsake you**" and yes we have witnessed God's promises being fulfilled in the personal and corporate life of this College. Our father and founder St. Don Bosco said "Let us go on as we have done so far and leave everything to God's hands". So we keep trusting our Lord and continue joyfully journeying in our pursuit of excellence.

On this remarkable day, I wish to acknowledge the support and guidance rendered by our former college chairman Rev.Dr.Raphael Jayabalan, SDB who served as our provincial of Chennai province for the past six years and gave his unstinted support in taking special care in the growth of this institution. I thank him profoundly for his impeccable contribution to our College.

Also I would like to extend my sincere thanks to our present chairman and the provincial of our Chennai Province Rev.Fr.K.M.Jose,SDB for his wonderful support and guidance which was so evident when he served as the Rector of this institution during the years 2008 to 2014. On behalf of the college, I whole heartedly congratulate him on assuming his office recently.

Rev.Dr.C.Antonyraj,SDB, our beloved Rector, a stalwart in administration and academics, is always willing to help us and guide when we need him the most. I should also mention that he shows keen interest in the growth of the college in all aspects and stands second to none. I sincerely thank him for all that he is to us.

I thank and congratulate Rev.Dr.Maria Arokiaraj,SDB for his wonderful support and administrative help for the successful functioning of Shift – II.

The Vice Principals, Rev.Dr.Praveen Peter,SDB (Shift- I) and Rev.Dr.G.Theophil Anand,SDB (Shift-II) have done a commendable job in conducting all the programmes of the College in an extraordinary way. I thank in a special way Rev. Dr.Praveen Peter,SDB who holds an additional responsibility of Controller of Examinations. He has conducted all the exams excellently and published the results on time.

The progress of an educational institution rests on people like committed faculty members, non-teaching staff, support staff, quality infrastructure, large pool of learning resources and responsible students. I thank all heads of the Departments, deans, other office bearers and staff for their contribution during this year.

New Initiatives

More than being assured of its standing and credibility in and around this part of the country, our college is making vast progress in several areas of learning and the credit must go to all of us who have worked untiringly to make this possible. Here are our new initiatives introduced during the academic year 2016-17.

New HODs

To be a leader in many ways means paving the way for pioneering efforts that will have an impact on our community and nation.

I congratulate the new Heads of Depts Dr.P.Balasubramanian - UG Tamil Literature, Mrs.J.Mary Jenif - English (UG Shift - II), Mr.J.Missiadoss - PG Economics, Dr.A.Xavier Susairaj - UG Economics, Dr.A.George Maria Selvam - PG Mathematics (Shift -I), Dr.R.Murali - UG Mathematics (Shift-I), Dr.G.Britto Antony Xavier - PG Mathematics (Shift-II) Mr.S.U.Vasanth Kumar - UG Mathematics (Shift-II), Mr.R.Veerappan - BBA and Mr.A.John Martin - Software Technology, on taking up the responsibility of leadership to help the smooth running of the departments.

Congratulations dear sirs and madam and I wish you all the very best in your endeavours.

New Teaching and Administrative Staff

The achievements of the College do not come easy. The drive for excellence permeates deeply in to the culture of the College and I take this opportunity to sincerely thank the entire staff for their professionalism and commitment in building the college. Here are the new staff who joined us this year and I wish them all a great success in their career. Dr.A.Prabu, Dr.T.A.Ramesh, Dr.A.Muthaiyan, Mr.K.Anbarasu, Dr.S.Ambethkar of Tamil, Mr.A.Sadhamusain, Miss U.Anto Maria Eusobia, Miss V.R.Anukirthana, Mr.S.Saravanan, Miss A.Vimala Johnshi Rani of English, Dr.D.Valarmathi, Mr.G.Rajkumar of B.Com (CA), Dr.D.Ajay, Dr.N.Nithya Priya, Mrs.T.G.Gerly, Mr.M.Meganathan, Rev.Sr.Nirmal Jothi, Mr.J.Prabu of Methamatics, Rev. Fr.K.S.Martin, Dr.N.Vilvamani, Dr.Nahren Manuel Mascarenhas, Mrs.C.Elavarasi of Chemistry, Mr.A.Joshuv Victor of Business Administration, Dr.Clayton Michael Fonceca of Social Work, Miss V.Ahalya, of Counselling Psychology, Miss R. Deepika of BCA, Miss M.Naramadha, Mrs.R.Hemasaveni of Communicative English and Mr.A.Vijay of Chemistry Lab Assistant.

Doctoral degrees of our Staff

Our College is extremely proud to present to you the young doctorates who have successfully defended their thesis and obtained their Ph. D degree.

1. Dr. S. Sasikumar   -   Dept. of Management Studies

2. Rev. Dr. G. Theophil Anand -   Dept. of Physics

3. Dr. A. Merceline Anita   -   Dept. of Mathematics

4. Rev. Dr. Praveen Peter	-	Dept. of Chemistry
5. Dr. P. Balasubramanian	-	Dept. of Tamil
6. Dr. U. Ramesh	-	Dept. of Economics
7. Dr. A. Mekala	-	Dept. of BCA
8. Dr. D. Valarmathi	-	Dept. of Commerce
9. Dr. G. Devi	-	Dept. of Commerce
10. Dr. B. Chandra Sekar	-	Dept. of Mathematics
11. Rev.Dr.K.A. Maria Arokiaraj	-	Dept. of English

Congratulations on your achievement and we wish you a successful and bright future ahead.

Silver Jubilee

Let me mention specially a few of our staff members who have come a long way since their appointment in this college. They have worked hard to build a conducive environment to nurture and mould passionate learners and responsible citizens. Yes, here are our Silver Jubilarians who have successfully completed their 25 years of endless efforts towards excellence.

- Dr. D. Leslin   -   Dept. of Histroy
- Dr. K. A. Maria John Joseph   -   Dept. of Commerce
- Dr. R. Murali   -   Dept. of Mathematics
- Mr. G. Govindaraj   -   Office Staff
- Mr. R. Srinvasan   -   Office Staff

Hearty congratulations sirs. May your Silver turn Gold.

Farewell

"Only in the agony of parting do we look into the depths of love" says George Elliot. It's true with our retirees this year.

- ❖ Mr. K. Selvaraj, Associate Professor, Dept. of Economics
- ❖ Dr. J. Henry Rozario, Head, Dept. of Social Work
- ❖ Mr. A. Susai, Office Assistant

Dear Sirs, a good bye is never painful, unless you're never going to say hello again. The College will miss you but yet we'll cheerfully remember you and your contributions to the growth of this institution.

Rest in Peace

The opposite of life is not death but a part of it! Yes, we witnessed two of our fathers graciously entering in to eternal life **Fr.P.M.Thomas,SDB and Fr.Pailo,SDB**. We remember the lives and works of these cheerful priests in this campus and we pray that their souls may rest in peace.

Publication of Books and Articles in Research Journals

Discovering and redefining are sparkles that illuminate research. Publications made in national and international journals by our staff members had added jewels in our crown and I am happy to announce that in the last academic year alone our staff members have excelled in publishing nearly 80 national, 253 international papers in reputed journals, besides publishing 20 books.

Projects

If you are persistent you will get it and if you are consistent you will keep it. I would like to congratulate the following staff members on receiving the research grants from many funding agencies.

Name of the Convener	Dept.& Amount	Topic
Dr. Nahren Manuel Mascarenhas	35,00,000	Multiscale Modelling to Gain Mechanistic Insights into Glucose Transporters
Dr. J. Henry Rozario	9,91,950	Enhancing Employability Skills Among Student Youth
Dr. M. Jose	3,19,000	Investigation of Third Order Non-Linearity of DSTMS Single Crystals Using z-Scan Technique
Dr. R. Jude Vimal Michael	2,60,000	Spectroscopic Evaluation of Novel Semiconductor Nanomaterial Architectures and their Catalytic and Energy Conversion Applications
Dr. S. Sagayaraj	2,16,000	Automatic Clustering for User Personalization in Semantic Web Services Created by Converting Web Services and Resulting for Academic and Software Development
Dr. M. Wilson Bosco Paul	1,50,000	Development of Metal Complexes Using Compartmental Ligands Bridged with Fluorescent Probes.
Dr. J. Jacob Stanley Inbaraj	1,30,000	Feasibility and Pertinence of Precision Farming in Vellore District of Tamil Nadu.
Dr. P. Balasubramanian	1,05,000	A Study on the Contemporary Neithal Literary Works in the Southern Parts of Tamil Nadu.
Dr. G. Mohan Gandhi	1,00,000	Myth and Archaeology Evidences in the Religious Belief of Yelagiri Tribal People.
Dr. K.A. Maria John Joseph	1,00,000	The Impact of Group Based Microfinance Schemes of Rural Households in Vellore District

Training and Workshop

A special funding for "Training of Life Skills for College Students" was received by Dr.J.Henry Rozario to the tune of Rs.2,50,000.

Quality Services

Quality is never an accident; it is the fruit of the consistent and conscious effort. We, in Sacred Heart always keep our eyes on improving the overall quality of the institution on par with the top institutions in our country.

Memorandum of Understanding

I am glad and proud to announce to you that our College has signed the **Memorandum of Understanding (MoU)** with the following reputed institutions in this country and abroad.

- ❖ MoU with Alcala University, Madrid, Spain
- ❖ MoU with International Federation of Catholic Universities (IFCU), Rome.
- ❖ MoU with SSN College, Chennai
- ❖ MoU with Rajiv Gandhi National Institute for Youth Development (RGNIYD), Sriperumbudur.
- ❖ MoU with Loyola Academy, Hyderabad, Andhra Pradesh.
- ❖ As yet another feather in the cap, our College has successfully launched five on-line journals with ISBN number for receiving and publishing scientific articles in the following disciplines:
  - Journal of Computing and Intelligent Systems (JCIS)
  - Journal of Computational Mathematics
  - Journal of Functional Materials and Biomolecules
  - The Journal of Management and Social Science Research,
  - Pudhiya Avaiyam for Tamil
- ❖ We are building partnerships with a number of nationally reputed institutions such as Indian Institute of Science, Indian Institute of Public administration etc to sensitize a strong research ambience in the campus.
- ❖ To ensure quality and its sustenance in our endeavours especially in research, we have purchased a plagiarism software - Turnitin the only College in Tamilnadu to have one such and let's be proud of it.
- ❖ Many of our students continue to receive summer research fellowships and other fellowships from nationally reputed laboratories across India.
- ❖ They attend conferences and seminars organized at national and international levels and engage in knowledge dissemination.
- ❖ This year we have taken a significant step in upgrading the present syllabus and implementation of new curriculum for the upcoming batch 2017-18. The curriculum also carries with it the unique module of choice based credit system (CBCS) under which an aspiring student will have wonderful options to choose subjects of their choice.
- ❖ The College Management has taken upon itself to restructure and revamp its academics and administration in tune with changing times to an extent

where these efforts in a longer run would help the growth of this institution.

❖ We are sensitive to the needs of our neighbours and the **Institutional Social Responsibility (ISR)** drive that was carried out this year would definitely bear fruit in enlightening the lives of under-privileged people living in the "Idaya Nagar". I am glad to announce that Rs. 4,50,214/- has been contributed to the welfare of Idaya Nagar community.

❖ In order to encourage friendly relations among staff members, an international tour to Thailand was arranged and 20 of our staff members along with their families participated in this maiden effort in the last 65 years. I thank and appreciate Dr.S.R. Xavier Rajarathinam, Head, Dept. of Chemistry for all the arrangements and leadership.

Infrastructural Developments

It is imperative for an institution like ours to have adequate infrastructural facilities and this year we have the following additional facilities:

✓ The completion of "Don Bosco Bicentenary" building which adds pomp and grandeur to the other infrastructure.

✓ Construction of a spacious new entrance has become a trademark of Tirupattur town.

✓ Construction of new two wheeler parking.

✓ Construction of bus shelter and car parking.

✓ Sun shade in front of the Carreno Hall

✓ Construction of a new book stall inside the campus.

✓ Availability of photocopying facility within the college premises.

✓ Strengthening of CCTV facility all over the campus for surveillance.

✓ Quality service at the college canteen to provide healthy and sumptuous food.

Quality Enhancement

Rev. Fr. Principal attended a conference organized by **IUS, Rome from 3rd to 7th July 2016.**

Rev. Fr. Principal and Rev. Fr. Additional Principal attended a conference organized **by DBHEI, on 18, 19 and 20 November 2016 at Shillong.**

Counselling Centre

The college is concerned about the emotional and psychological needs of the students too. The College counselling centre is rendering its service to all the students under the leadership of Rev. Fr. Rector and his team. A dedicated centre and counselor are available for the students to help them cope up with difficulties and challenges.

Work Scholarship for Students

Work scholarship for students, another flag-ship programme of our College was carried out with much care and concern. 200 poor and deserving students benefited this year. This is done to assist the students financially and to

make them recognize the dignity of labour. Scholarship is also given to orphans and semi-orphans for their upliftment.

IGNOU

Indira Gandhi National Open University functioning in our College offers a rare opportunity to pursue additional diploma and certificate courses along with the regular one. About 746 students have availed themselves of this opportunity to equip themselves with additional knowledge through the classes conducted during the weekends.

Placement Activities

Placement of students is one of the primary concerns and objectives of the College and the placement team headed by Rev.Fr.Daniel Ambrose,SDB works vibrantly with many of the companies and agencies untiringly to see our students placed in reputed companies even before they finish their academic programme. I profoundly thank them for their noble work.

Overview

Under the noble guidance of Rev.Fr.Daniel Ambrose,SDB the department of training and placement has taken new initiatives for the skills and career development of the students. The department believes that this could be achieved only through a continuous and systematic process. To ensure this, the department has initiated;

➢ Career Orientation for UG I Year Students

➢ Career Guidance for UG II Year Students

➢ Employability Skills, Skill (Choice Based) Training and Placement for UG III Year Students.

Career Orientation: (For UG I Year Students)

According to NAASCOM report, most of the rural students are not exposed to or aware of their dream career. Because of this, most of the students fail to understand the objective of their study and obviously it results in a pool of semi and unskilled professionals.

The department of training and placement has realized the importance of giving our students career orientation at the right beginning. This orientation began on 17th October, 2016 and went on till 21st October, 2016. Special attention was given on each department to made the students very clear of their goals, skills needed for job market and available job opportunities. In which 1185 students benefited.

Career Guidance: (For UG II Year Students)

Every job demands a specialized skill. It is important for every student to choose his/her dream job and strive towards it. This is the continuation of career orientation where the department of training and placement staff would meet the II year students individually and guide them towards their dream job. This is an ongoing programme. Totally 87 students benefited.

Skills Training and Placement: (For UG III Year Students)

Once the orientation and guidance has been given to the students, the department of training and placement is moving forward towards the Skills Training and Placement of the final year students. Nearly 450 UG final year

students have undergone Bosco Employability Skills Training (BEST) between 17 and 21 August, 2016.

My Quest; My Career (For PG Final Year Students)

This year, the department has initiated a new programme for PG final year students called "My Quest: My Career" in association with Quest Alliance and Don Bosco Vazhikaatti, Chennai. This is a career based training programme conducted by the special trainers using well designed work book, materials and digital tool kits. Totally 252 students are undergoing this training programme at present.

Placement Programmes conducted in 2016-17

S.No	Date	Programme	Beneficiaries	No. of Students Benefited
1	17-21.08.2016	Bosco Employability Skills Training Programme (BEST)	UG Final Years	450
2	16.09.2016 Onwards	My Quest; My Career	PG Final Year Students	252
3	17-21.10.2016	Career Orientation Programme	UG First Year Students	1185
4	25.01.2017	Career Opportunities	B.Sc. (Biochemistry) Final Year Students	55
			Total Number of Beneficiaries	**1942**

Number of students placed in 2016-17 through on & off Campus Placement Drives:

S.No	Date	Programme	Beneficiaries	No. of Students Placed
1	28.09.2016	Surya Informatics Solutions	III MCA & II MBA	5
2	14.10.2016	TNQ Books and Journals (P) Ltd.,	III UG & II PG Years	17
3	10.11.2016	JMA IT Solutions Inc.,	MBA	3
4	26.11.2016	ISSM Business School	MBA	5
5	27.11.2016	HCL Technologies	B.Sc. (CS)	1
6	12.01.2017	Software Hulchul (P) Ltd.	MBA	10
		Hinduja Global Solutions (HGS)	UG & PG Final Year Students	37

9	28.01.2017	Visual Infotech (P) Ltd.,	MCA	3
10	28.01.2017	Sutherland Global Service	III B.Sc. CS	1
11	28.01.2017	Indo Euro Organization	III B.Sc. CS	1
12	28.01.2017	ALLSEC Technologies Ltd	III BCA	1
13	29.01.2017	Hindustan Infotech (P) Ltd.,	III MCA	9
14	25.02.2017	Sri Krishna Textiles	III UG Years	34
15	25.02.2017	Inspire Academy	III UG Years	10
16	25.02.2017	IDBI	III UG Years	35
17	25.02.2017	Eureka Forbes	III UG Years	12
18	25.02.2017	Innoc Source	III UG Years	78
19	25.02.2017	First Source	III UG Years	70
Total Number of Students Placed				**332**

Upcoming Event

Job Fair 2017 has been scheduled on 25th February, 2017 for which 548 students (UG & PG) have registered.

Significant Events

The academic year just coming to a close was not devoid of colourful programmes:

❖ The coulorful Annual Sport Meet was held on 23rd July 2016. The Chief Guests were Mr.N. Mohammed Riaz, Arjuna Awardee, Olympian and Former Captain Indian Hockey Team and Deputy General Manger Air India, Southern Region, Chennai

❖ Independence Day was celebrated with zeal and enthusiasm. Mr. A.Susai, Office Assistant, one of the retirees of this year was the chief guest.

❖ Teacher's Day was celebrated on 02.09.2016 and the students were generous in appreciating the staff

❖ Cultural Fest was celebrated with zest and vigour on 03.12.2016 for UG Shift-I. Renowned actor Mr. Jayabalan was present as the chief guest and the events were judged by Mr. Somasundaram, Tamil actor, Mr. Vasanath, film choreographer and Fr. Arokiadoss, SDB the Administrator of Don Bosco School of Excellence, Tirupattur. On the following day Shift-II students celebrated their cultural fest with a rainbow of events. This year a separate Cultural Fest for PG students was celebrated on 17.12.2016.

❖ Harvest festival of Tamil Nadu, Thai Pongal was celebrated on 12.01.2017 displaying the rich tradition and culture of the state.

- ❖ Republic Day was celebrated on 26th January 2017. Dr. J. Henry Rozario was the chief guest and hoisted the national flag.

- ❖ The last Sunday of January (29.01.2017) was observed as Alumni Day and 250 of our past pupils visited their alma mater to relive their college days.

- ❖ The Feast for our Father and founder St. John Bosco was celebrated on 31.01.2017.

Convocation Day

The 40th Graduation Day was held in our College on 19.03.2016. Rev.Dr.P.P.George,SDB former Principal of our college was the chief guest for the historical day in the lives 1149 graduates of 2015-16.

Staff Development Activities

We believe that staff development is an imperative and integral part of development of the College and hence the college concentrated substantially to enhance the quality of the staff. Many staff development initiatives have been carried out in the past one year.

- ❖ A two day intensive orientation programme was conducted for all the staff members to equip them in personal and social skills at the beginning of the academic year.

- ❖ To train the leaders, an exclusive training programme for HODs was conducted on 8th and 9th of June at Yelagiri Hills.

- ❖ During staff meeting, the staff were given quality inputs regarding the updates and recent developments in the field of higher education.

- ❖ Two day spiritual retreat was organized for Teaching Staff on 27th and 28th October 2016.

- ❖ One day picnic for Non-Teaching staff to Coimbatore was organized.

Student Development Activities

- ➢ Bridge course in English and various subjects was held in the beginning of the academic year for the first year UG students to enable them to be college-ready and to start the journey of higher education

- ➢ Orientation for Class Quality Circles was conducted in June 2016.

- ➢ SGP which was conducted for I UG students is now reintroduced as **SHAPE (Sacred Heart Accompaniment Programme)** for an effective follow up and guidance for the students.

- ➢ Parents meeting for all UG students was held in June & July 2016.

- ➢ Health checkup was carried out for first year students of UG & PG.

- ➢ Media Education for I UG students was conducted on 21st July, 2016.

- ➢ Retreat for Catholic students was organized on 7th to 9th July, 2016.

- ➢ Industrial visits were held for various departments.

- ➢ Students Insurance for all first year UG & PG was done.

- ➢ SC, ST & OBC minority students were chosen to stay in Govt. free hostel.

- Applying for leave and bonafide certificate is also made online for easy access of students.
- SHELTERS associations programmes were conducted meticulously covering a wide spectrum of issues and challenges to enable the students to perform in co-curricular activities.
- Programmes organized by all the department associations paved way for out of the class learning.

Scholarship for Students

I am glad to announce to you the scholarship details for the academic year 2016-17.

IVDP Scholarships for Students

As a new initiative, a special scholarship from IVDP (Integrated Village Development Project) was given to the orphan and semi-orphan students of our college to the tune of 5.6 lakhs. We wholeheartedly thank Mr. Kulandai Francis for being so generous.

Further, 41 orphans and semi orphans of the SHG members were given scholarships of 1.7 lakhs and 32 children of the SHG members who have passed 10th and 12th scoring more than 85% in the public exams were awarded with prizes worth 34000/-. The parents and children wholeheartedly thanked the management.

Students

Students are our great strength. The strength of each department is displayed:

U.G. Students Strength (Shift - I & II)

Department	I Year		II Year		III Year		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
B.A. Economics	51	18	22	2	35	14	108	34
Commerce	110	44	92	43	90	44	292	131
Mathematics	73	80	69	82	63	87	205	249
Physics	57	50	55	55	64	42	176	147
Chemistry	59	50	54	52	58	43	171	145
Computer Science	70	40	56	48	64	34	190	122
BBA	60	14	41	17	38	21	139	52
Biochemistry	22	31	22	28	18	32	62	91
B.A. English	63	90	63	64	26	46	152	200
BCA	33	20	35	20	35	14	103	54
B.Com (CA)	53	23	25	20	37	23	115	66
B.A. Tamil	19	55	21	24	14	40	54	119
Total	**670**	**515**	**555**	**455**	**542**	**440**	**1767**	**1410**

P.G. Students Strength (Shift - I & II)

Departments	I Year		II Year		III Year		Total	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
M.A. Economics	12	2	4	3	-	-	16	5
M.Sc. Mathematics	16	70	23	59	-	-	39	129
MSW	26	17	27	14	-	-	53	31
M.Com	6	12	10	21	-	-	16	33
M.A. Tamil	1	1	2	4	-	-	3	5
M.A. English	8	35	14	30	-	-	22	65
M.Sc. Physics	11	17	6	20	-	-	17	37
M.Sc. Chemistry	12	15	13	17	-	-	25	32
M.Sc. Comp.Science	5	21	5	18	-	-	10	39
M.Sc. Software Technology	5	7	3	4	-	-	8	11
M.Sc. Biochemistry	5	12	6	7	-	-	11	19
M.Sc. Counseling Psychology	14	6	7	2	-	-	21	8
MCA	12	11	31	34	23	28	66	73
MBA	36	23	27	29	-	-	63	52
PGDCA	3	-	-	-	-	-	3	-
Total	172	249	178	262	23	28	**373**	**539**

M.Phil. Scholars

Department	Male	Female	Total
M. Phil Tamil	2	6	8
M. Phil English	1	2	3
M. Phil Commerce	1	2	3
M. Phil Mathematics	4	7	11
M. Phil Physics	1	5	6
M. Phil Chemistry	3	7	10
M. Phil Computer Science	3	5	8
M. Phil Management Studies	2	0	2
M. Phil Computer Applications	0	1	1
Total	17	35	**52**

Ph.D. Scholars

Department	Male	Female	Total
Ph.D. Tamil	8	9	17
Ph.D. Economics	4	2	6
Ph.D. Commerce	2	1	3
Ph.D. Mathematics	13	3	16

Ph.D. Physics			10	2	12
Ph.D. Chemistry			2	2	4
Ph.D. Computer Science			3	2	5
Total			42	21	**63**

Total Students   - 4204

Male Students   -   UG: 1767   PG: 373   M.Phil.: 17   Ph.D.: 42

Female Students   -   UG: 1410   PG: 539   M.Phil.: 35   Ph.D.: 21

Teaching Staff Strength

Total Staff Members   -   197

Aided Staff   -   40

Management Staff   -   157

Administrative Staff Strength

Total Administrative Staff   - 83

Aided Administrative Staff   - 12

Management Administrative Staff   - 71

Results

       Facts and figures don't make a college. Grades do not make a scholar. It is really the dynamic programmes, the quality of instruction and the nurturing relationship between teachers and students that enable all to constantly grow in capacity. It is the extra that students of Sacred Heart pack into their lives and bring to the lives of others that sets them apart from other students. Here are the results of our students achieved during the past academic year.

April 2016 Semester Examination Results

S.No	UG Classes	Shift	Year	Appeared	Passed	Percentage
1	B.Sc. Mathematics	I	I	72	61	84.72
			II	72	59	81.94
			III	70	60	85.71
		II	I	78	55	70.51
			II	77	52	67.53
			III	67	49	73.13
2	B.Sc. Physics	I	I	55	27	49.09
			II	54	38	70.37
			III	48	36	75.00
		II	I	54	38	70.37
			II	50	38	76.00
			III	48	33	68.75

S.No	UG Classes	Shift	Year	Appeared	Passed	Percentage
3	B.Sc. Chemistry	I	I	55	52	94.55
			II	53	43	81.13
			III	52	51	98.08
		II	I	53	30	56.60
			II	49	35	71.43
4	B.Sc. Computer Science	I	I	55	31	56.36
			II	49	37	75.51
			III	51	32	62.75
		II	I	50	35	70.00
			II	54	30	55.56
			III	52	38	73.08
5	B.Sc. Biochemistry	II	I	51	26	50.98
			II	49	45	91.84
			III	46	32	69.57
6	BCA	II	I	55	24	43.64
			II	50	34	68.00
			III	54	35	64.81
7	BBA	II	I	64	22	34.38
			II	59	28	47.46
			III	60	53	88.33
8	B.Com	I	I	72	28	38.89
			II	72	32	44.44
			III	61	40	65.57
		II	I	66	27	40.91
			II	61	30	49.18
			III	63	33	52.38
9	B.A.Economics	I	I	25	06	24.00
			II	47	16	34.04
			III	43	18	40.86
10	B.A. English	I	I	54	26	48.15
		I	I	75	51	68.00
		II	II	74	43	58.11
			III	73	66	90.41

S.No	UG Classes	Shift	Year	Appeared	Passed	Percentage
11	B.Com (CA)	II	I	48	13	27.08
			II	58	21	36.21
			III	63	44	69.84
12	B.A. Tamil	II	I	45	18	40.00
			II	55	35	63.64

S.No	PG Classes	Shift	Year	Appeared	Passed	Percentage
1	M.A. Economics	I	I	07	07	100.00
			II	11	11	100.00
2	M.Sc. Mathematics	I	I	42	33	78.57
			II	44	42	95.45
		II	I	39	26	66.67
3	MSW	I	I	41	37	90.24
			II	41	36	87.80
4	M.Com	II	I	32	19	59.38
			II	16	13	81.25
5	M.Sc. Physics	II	I	26	20	76.92
			II	28	22	78.57
6	M.Sc. Chemistry	II	I	30	16	53.33
			II	21	19	90.48
7	M.Sc. Computer Science	II	I	23	20	86.96
			II	27	25	92.59
8	M.A. Tamil	II	I	06	05	83.33
			II	10	08	80.00
9	M.A. English	II	I	45	42	93.33
			II	44	42	95.45
10	M.Sc. Biochemistry	II	I	13	08	61.54
			II	21	21	100.00
11	M.Sc. Software Technology	II	I	08	03	37.50
			II	18	18	100.00
12	M.Sc. Counselling Psychology	II	I	09	09	100.00
			II	03	03	100.00
13	MBA	II	I	55	31	56.36
			II	60	59	98.33

S.No	PG Classes	Shift	Year	Appeared	Passed	Percentage
14	MCA	II	I	33	14	42.42
			II	39	27	69.23
			III	51	51	100.00
15	MCA (Lateral Entry)	II	II	12	08	66.67
			III	12	12	100.00

November 2016 Semester Examination Results

S.No	UG Classes	Shift	Year	Appeared	Passed	Percentage
1	B.Sc. Mathematics	I	I	77	65	84.42
			II	73	64	87.67
			III	72	45	62.50
		II	I	77	65	84.42
			II	78	50	64.10
			III	77	52	67.53
2	B.Sc. Physics	I	I	54	26	48.15
			II	55	41	74.55
			III	53	50	94.34
		II	I	55	39	70.91
			II	54	39	72.22
			III	51	47	92.16
3	B.Sc. Chemistry	I	I	55	43	78.18
			II	55	50	90.91
			III	52	45	86.54
		II	I	55	41	74.55
			II	51	33	64.71
			III	48	41	85.42
4	B.Sc. Computer Science	I	I	55	36	65.45
			II	55	37	67.27
			III	47	28	59.57
		II	I	55	36	65.45
			II	49	32	65.31
			III	53	34	64.15

S.No	UG Classes	Shift	Year	Appeared	Passed	Percentage
5	B.Sc. Biochemistry	II	I	55	25	45.45
			II	49	43	87.76
			III	49	47	95.92
6	BCA	II	I	55	30	54.55
			II	54	34	62.96
			III	50	39	78.00
7	BBA	II	I	76	17	22.37
			II	58	20	34.48
			III	59	39	66.10
8	B.Com	I	I	77	18	23.38
			II	70	32	45.71
			III	72	49	68.06
		II	I	78	24	30.77
			II	61	34	55.74
			III	61	47	77.05
9	B.A. Economics	I	I	72	15	20.83
			II	23	09	39.13
			II	49	30	61.22
10	B.A. English	II	I	75	22	29.33
			II	73	45	61.64
			III	71	64	90.14
		I	I	77	42	54.55
			II	49	25	51.02
11	B.Com (CA)	II	I	77	27	35.06
			II	44	18	40.91
			III	59	38	64.61
12	B.A.Tamil	II	I	77	35	45.45
			II	44	22	50.00
			III	54	44	81.48

S.No	PG Classes	Shift	Year	Appeared	Passed	Percentage
1	M.A. Economics	I	I	15	07	46.67
			II	07	07	100.00
2	M.Sc. Mathematics	I	I	43	32	74.42
			II	43	41	95.35
		II	I	44	35	79.55
			II	39	35	89.74
3	MSW	I	I	43	40	93.02
			II	40	37	92.50
4	M.Com	II	I	18	10	55.56
			II	31	24	77.42
5	M.Sc. Physics	II	I	28	20	71.43
			II	26	20	76.92
6	M.Sc. Chemistry	II	II	27	17	62.96
			III	30	22	73.33
7	M.Sc. Computer Science	II	I	26	21	80.77
			II	23	20	86.96
8	M.A. Tamil	I	I	02	01	50.00
			II	06	05	83.33
9	M.A. English	II	I	44	24	54.55
			II	44	33	75.00
10	M.Sc. Biochemistry	II	I	17	17	100.00
			II	12	09	75.00
11	M.Sc. Software Technology	II	I	12	07	58.33
			II	08	07	87.50
12	M.Sc. Counselling Psychology	II	I	20	12	60.00
			II	09	09	100.00
13	MBA	II	I	59	25	42.37
			II	56	48	85.71
14	MCA	II	I	25	18	72.00
			II	32	19	59.38
			III	39	23	58.97
15	MCA (Lateral Entry)	II	II	33	15	45.45
			III	12	06	50.00

Scholarships 2016 – 17

S.No	Shift	No. of Students	Amount (Rs.)
1	Shift - I & II	2160	1,20,75,222

Inter Collegiate Performances

Focusing on one thing and doing it really well can get you very far. Many of our students have gone an extra mile to compete in several events held in our state and have won medals and prizes. The institution is proud of them and I thank them individually for their efforts to bring laurels to this College.

Sports

In order to succeed, the desire for winning must be greater than the fear of losing. Sports students of our college have won the following honours for our Institution.

National Level

❖ M. Krishna Kumar (AU160036), I B.A. Economics represented Tamil Nadu Team participating in the 54th Junior National Volleyball Championship held at Bangalore, Karnataka State from 12.01.2017 to 19.01.2017 and was the Runners (Silver Medal).

❖ V. Surender (BD160503), PGDCSA represented Tamil Nadu Athletic Team participating in the 3rd Federation Youth Rural Games held at Mapusa, Goa state from 25.10.2016 to 26.10.2016 and was the Winner (Gold Medal).

All India Inter University Level

❖ G. Praveen (BU141119), III B.A. English represented Thiruvalluvar University Athletics Team participating in the All India Inter University Athletic Meet held at Anna University, Chennai.

❖ K. Dinesh (BU140409), III B.Sc. Chemistry represented Thiruvalluvar University Best Physique Team participating in the All India Inter University Best Physique competition held at Panjabi University, Chandigarh.

College Library

Library is the first step to thousand journeys and a portal to thousand worlds. We are blessed to have a wonderful library under the leadership of our librarian. The following events mark the significance of our library.

❖ 2000 new books and 140 Journals were added to the library collections.

❖ 10 Ph.D. dissertations and 300 UG & PG projects were added to the Research Cell.

❖ 1000 plus published articles from peer reviewed journals were updated in the Library Software for PG and Research Scholars.

❖ Library Tour was conducted for the newcomers (UG, PG & M.Phil).

❖ Book Exhibition was conducted with the support of New Century Book House, Vellore.

- ❖ Provided a facility to access all the previous year Question Papers in digital format.

- ❖ Library Resources (AV Hall & Books) are booked in advance by sending SMS to the Librarian.

- ❖ Library Blog was created to access library related information **(https://shclibrarytpt.wordpress.com/).**

- ❖ Subject Reference e-books were collected based on the demand and shared with respective Departments.

- ❖ Collaborated with Annamalai University Library and Information Science Alumni Association (AULISAA) for organizing conferences and other research related programs.

Department of Extension Education and Services

The Extension Education and services were carried out under the able guidance of Rev.Fr.Daniel Ambrose,SDB who has improved the quality of the services offered with the help of 34 staff.

1. DBSARC

Don Bosco Social Action and Research Centre (DBSARC) - a forum that voices out the rights of the marginalized and acts as a platform for genuine dialogue has organized various programmes for motivating youth to become active agents of social change. It has organized 7 programmes this year benefitting 71 teachers and 452 students in schools and colleges covering three districts.

2. CRECHE

This programme is sponsored by Central Social Welfare Board and it is effectively functioning in 2 centres with 4 Teachers, 2 Child care helpers and 83 children. Besides this the parents have also benefitted through monthly meetings, medical camps and other child care orientations. The center at Sivarajpet has been renovated with the cost of Rs.85,000/- and the center is equipped with new learning material for children.

3. Drop Out Prevention Centers

There are 5 School Dropout prevention centers which address the menace of children dropping their education due to various reasons.   centres are operated at:

1. D.B.Centre

2. Annandapatti

3. Idaya nagar

4. Sivarajpet

5. Ismayilpet

4. Evening Tuition Centers

Evening Tuition Centres are run to offer additional coaching to the students. The college also serves to assist the poorest of these children with note books and school stationery, dress, Christmas gifts, school fees for some of

them etc. Materials for Indoor recreation and out-door Games are provided. About 8 staff members are involved in this venture. The children are given snacks and food every day.

D.B.Centre directly caters to 145 poor children and the number of indirect beneficiaries amounts to 290 parents who come for orientation and empowerment programmes twice a year.

Over 200 children participated in the summer camp organized for them.

5. Family Counselling Centre

Family Counselling continues to be a place where several men and women come to get counselling. It is supported by Central Social Welfare Board / State Social Welfare Board. It is also extended to women and children who are prone to exploitation by the members of the society at large. Distressed women are provided services like crisis intervention, investigation in dowry death cases, counselling in cases of marital, family maladjustment etc.   Efforts for reconciliation in cases of separation, out of court settlement in marital cases or referral services like short stay, legal aid, police assistance etc., are offered by trained counsellors and social workers.

Due to the able intervention of the 2 staff (Mr.Aruldoss M.A., (Economics), M.A., (Sociology) and Mrs.Tharageswari M.A., (Sociology, M.Sc., Psychology) the center has catered to more than 347 cases reaching out to more than 1230 persons.

6. Tailoring

Women Economic Empowerment through Tailoring is a programme where young women are trained to earn their livelihood. They are also prepared for Government Exams in Tailoring. Mrs.Jayaseeli the new trainer has trained 91 poor young girls benefitting 455 members in all through this programme this year.

7. Self Help Groups

Self Help Groups functioning in the campus provide loans for education of children, medical camps, women empowerment programmes and trainings towards holistic health; Income generation activities are offered to the members and their families. This programme is supported by NABFIN Pvt. Ltd., which is a subsidiary unit of the NABARD and we have facilitated loans to 129 groups during the current financial year amounting to 5.13 crores. Total amount of loans dispersed to 841 groups is 10,933 members in the past four and half years is 19.83 crores with funds from NABARD Financial Services Ltd and the total number of beneficiaries are 54,665.

Summer coaching camp was organized for the children of SHG members who are studying in 9th, 10th, 11th and 12th. 247 students benefitted from the coaching classes for 2 weeks with the help of subject experts. The first of its kind programmes for these students was much appreciated by the parents and children.

8. Solid and Liquid Resource Management (SLRM)

96 college students (UG & PG) have been trained in Solid waste management in an effort to reduce the use of water and other resources and

also to promote eco friendliness in the campus and waste segregation is undertaken in the campus and bio-degradable wastes are used as manure for the plants.

9. DEEDS (Department of Extension Education and Services)

Vision **"Transferring the Technology-Core Competency to the Neighbourhood Rural Poor" in short "Lab to Land"**

Objectives

➢ To apply the academic knowledge to the benefit of the neighbourhood.

➢ To learn the art of application of the subject matter.

➢ To develop extension service units of the department.

➢ To undertake subject related action researches.

➢ To develop solution thinking ability.

➢ To provide platform to understand the community and to have group experience.

Departments Involved

All the 18 undergraduate departments of Shift I and II participated actively in this programme.

Involvement of Students

About 1009 second year undergraduate students were involved from both the Shifts and benefitted immensely through this activity.

Villages Adopted

Total Villages: 10

Names of the Villages

Achamangalam, Subamangalam, Kakkanampalayam, Pallavelli, Jadaiyanur, Sellanthampalli, Kodumapalli, Kathirampatti, Jothimangalam and Thathavalli.

Staff Involved

• Rev. Fr. Daniel Ambrose,SDB - Director

• Staff In-charge of all the Eighteen Departments.

• Two DEEDS General Coordinators.

Activities done during this year

DEEDS programme was inaugurated on 28.06.2016 by Rev. Fr. Principal and Rev. Fr. Additional Principal for shift-I and shift-II respectively. Before the inauguration, an orientation was conducted to staff in-charge on 20.06.2016. Three-day workshop was carried out for all second year students UG from 22.06.2016 to 24.06.2016. Five departments from each shift have carried out their planned activities in their chosen village in the first semester and the other three departments from each shift carried out their activities during even semester.

Release of Newsletter

So far, five newsletters have been published and the sixth newsletter (i.e.) Volume -6, Issue-1 & II will be released on 21.02.2017.

Skill Center

Sacred Heart College, taking seriously in to consideration the alarming statistics of the graduates in the Country who remain unemployable even after securing a degree has initiated SKILL CENTER within the Campus. There are 3 full time staff and 4 part time staff who have imparted various skill trainings to 342 students (Shift I: 121, Shift II:221: Total 342) and students from the final year UG in 10 skill domains in both the shifts. This initiative has been started with an initial expense of Rs.4.5 lakhs and 20 computers, LCD Projectors and other learning materials. The Heads of the departments, staff and trainees have shown keen interest and the efforts towards imparting employability skills will be taken forward in the coming years.

Concluding Remarks

Before I conclude, I wish to assure you that we shall leave no stone unturned to equip you with best possible training and exposure so that you can shape up your career and growth for a challenging life. In this college we believe in building character, inspiring minds and about enriching experiences that lasts a lifetime. Further, in this college we attempt to inculcate values of personal excellence and concern for others so that you become wonderful and useful sons and daughters to your family and responsible citizens to our society and country at large.

By the time you complete your course in this college, you should be equipped with quality knowledge and an attitude akin to highly inspired, self motivated, having a positive mindset, devoted to the service of the society and inspired to continue to excel in your disciplines.

There is never a static or dull moment in the college. It leaves me to thank all the Salesians, the staff and students here at Sacred Hearts who constantly work hard to keep the flag flying high, who seek to define and redefine education and learning here.

The Holy Bible says "Let your Light shine before men that they may see your good works and glorify the Father." Let us keep shining as a higher institute of learning, leading the way for others.

May the Lord God Almighty, Our blessed Mother and our Father Don Bosco shower their Blessings upon us so that we will be ever growing, ever serving and ever achieving!

May God Bless Sacred Hearts!

Impact of Foreign Direct Investment (FDI) In Indian Retailing with Special Reference to Vellore District, Tamil Nadu

The Indian retail sector is divided into organized and unorganized sectors. Organized sectors are those who undertake business activities through license, pay sales tax, income tax etc. On the other hand, unorganized sectors refer to the traditional format of low-cost retailing. 90% of the Indian retail businesses are run by unorganized sectors.FDI in retailing has a greater impact on the economy, the organized global retail chains will break the traditional symbolic that exists between small producers and small retailers. Also, in the new retailing format of FDI retailers, unequal terms of trade in a monopsony like situation, small producers and suppliers are likely to suffer the most. In addition, it appears to take a rather naive and simplistic view on certain aspects, likes, myths being repeated, tend to become urban legends. On the other hand, no country can afford to take an isolationist approach.

The organized retailing has a virgin space in India. It has undergone several technological evolutions to increase efficiency, improve customer services and become more competitive. In 2006 the government allowed FDI in retail, subsequently in September 2012 government allowed 100% FDI in single brand retailing and in December 2012 it allowed 51% FDI in multi-brand retailing. They transmitted traditional market to modern market by changing the retail landscape through innovative and strategic techniques. Even though FDI is considered as a boom in developing our economy it greatly affects the business of our existing organized and unorganized retailers. Global retailers exercise their monopolistic power in buying the products on huge basis from suppliers for low prices as well as selling the same for higher prices to customers. This results in asymmetrical growth in our country and both the consumer and supplier suffer loss. They also kill local shops and millions of jobs. Due to FDI in Indian retailing, the existing organized and unorganized retailers are forced to change their existing business structure and promotional tools to attract the customers and enhance their sales. It also leads to unfair competition and ultimately results in large-scale exit of present domestic retailers, especially the small family-owned business. This study finds out the challenges faced by organized and unorganized retailers due to FDI in retailing. It also assesses the attitude and buying behaviour of customers towards FDI retail structure.

There is a significant difference among the statements of customers' preference and buying behaviour and challenges faced by them towards global retailers. There is a significant relationship among the statements of organized retailers' perception, opportunities and challenges faced by them towards global retailers. There is a significant relationship among the statements of unorganized retailers' perception, opportunities and challenges faced by them towards global retailers. It is concluded that FDI is one of the important sources of financing the development of Indian retailing sector but FDI alone is not a solution for improving transport facilities, warehousing facilities, logistics and distribution system of Indian retail sector.

Dr. S. Sasikumar
Asst.Prof. Dept. of Management Studies

Studies on Microwave Synthesis of Nanostructured $Zn_{1-x}M_xAl_2O_4$ ($0 \leq x \leq 0.5$) [M = Mn^{2+}, Co^{2+}, Ni^{2+}, Cu^{2+}, Zr^{4+}] Spinels as Room Temperature Gas Sensors

Spinel nanostructures of $Zn_{1-x}M_xAl_2O_4$ ($0 \leq x \leq 0.5$) [M = Mn^{2+}, Co^{2+}, Ni^{2+}, Cu^{2+}, Zr^{4+}] were successfully synthesized by one-pot microwave synthesis. Characterization by X-ray diffraction (XRD), Rietveld refinement analysis, Fourier transform infrared (FTIR), high resolution scanning electron microscopy (HR-SEM), energy dispersive X-ray analysis (EDX), UV-Visible diffuse reflectance spectroscopy (DRS), photoluminescence spectroscopy (PL) and vibrating sample magnetometry (VSM) were carried out to obtain the phase analysis, confirmation of formation crystal structure, morphological, elemental, optical band gap, defect states, and magnetic behaviour information respectively for the as prepared samples for the better understanding of the observed gas sensing properties. The thick films of as prepared sample powders were fabricated using screen-printing technique. The response of $Zn_{1-x}M_xAl_2O_4$ ($0 \leq x \leq 0.5$) [M = Mn^{2+}, Co^{2+}, Ni^{2+}, Cu^{2+}, Zr^{4+}] based thick films towards different reducing gases (ammonia, acetone, isopropanol, ethanol and methanol) was investigated at room temperature for five different concentrations of 10, 25, 50, 75, and 100 ppm. The sensing mechanism and the effect of doping to increase the sensitivity were also evaluated and compared. The $Zn_{1-x}Mn_xAl_2O_4$ ($x = 0.5$) sample showed higher sensitivity with quicker response and recovery and better sensor towards isopropanol than all the other nanocrystals prepared. While the $Zn_{1-x}Ni_xAl_2O_4$ ($x = 0.5$) sample showed higher sensitivity with quicker response and recovery and better sensor towards acetone than all the other nanocrystals prepared. But the $Zn_{1-x}Co_xAl_2O_4$ ($x = 0.5$) sample and $Zn_{1-x}Cu_xAl_2O_4$ ($x = 0.5$) sample showed higher sensitivity with quicker response and recovery and better sensor towards ammonia than all other nanocrystals prepared. And $Zn_{1-x}Zr_xAl_2O_4$ ($x = 0.5$) sample showed higher sensitivity with quicker response and recovery and better sensor towards methanol than all the other nanocrystals prepared. An added advantage of the materials is to detect methanol, ethanol, isopropanol, acetone and ammonia even at low concentrations (from 10 ppm) with higher sensitivity at room temperature. Among all the materials prepared $Zn_{0.5}Co_{0.5}Al_2O_4$, $Zn_{0.5}Cu_{0.5}Al_2O_4$, $Zn_{0.5}Zr_{0.5}Al_2O_4$, $Zn_{0.5}Mn_{0.5}Al_2O_4$, and $Zn_{0.5}Ni_{0.5}Al_2O_4$ with higher sensitivity factor, satisfied all essential criterion for the sensor and were found to be better candidates for sensing applications.

Rev. Dr. G. Theophil Anand
Asst. Prof. Dept. of Physics

Studies on the System Reliability and its Applications in Medicine

Reliability Theory is an Applied Mathematical discipline considered to be very important and a growing area of Application in the Probability concepts. It is a very promising approach for developing comprehensive theory in integrating Mathematical methods. The Researcher focuses mainly on System Reliability and the Reliability Models that have been developed are more application oriented, dealing with ordinary day-to-day life problems.

The Systematic Study of failure in Complex Systems will ensure their safety, availability and maintainability of Systems. The Methodology adopted in the Studies on the System Reliability is nothing but division of System into

Subsystems with various Components and functioning of the System depends on the functioning of all units or two or more units for the Successful Performance. The concept of Series and Parallel Configuration in the Systems have been introduced. The Reliability of the Systems have been found with the help of Fault Tree Analysis Approach which plays a vital role in determining and understanding the Models involved in the Research Work.

The Method used is applicable to any System with its Subsystems involving Series and Parallel Configurations. Several Reliability Models have been developed and the Variance Estimation of the System Reliability Estimates of some Complex Systems have been analyzed. It reveals that the System Reliability Estimate mainly relies on the unbiased nature of the Components irrespective of the System. The Technique of System Reliability is applied to human pathology problem. Reliability Modeling of Systems with known failure and repair rates have been dealt using Markov Approach.

The Conceptualization on the Study of Reliability Model is to help the Decision makers to obtain a Risk-Averse design and to achieve higher Reliability of the System under Consideration. The developed Reliability Models are taken into consideration on those problems, which occur in real life situations. Even though Reliability Theory finds its Applications in almost all the Fields, the Research work mainly focused dealing on the Applications in Medicine.

Dr. A. Merceline Anita
Asst. Prof. Dept. of Mathematics

Investigations on Polyoxometalates

The polyoxometalates are discrete polynuclear metal oxoanions with a fascinating variety of structures and unique physical and chemical properties. The tendency of tetraoxo anions MO_4^{n-} (where M = W, Mo, V and less frequently Nb) to increase their coordination sphere to six upon acidification in the presence of metallic or non-metallic heteroatoms, leads to the formation of polyoxometalates. Studies on polyoxometalates is of interest because of their structural versatility and application in different fields such as catalysis, material science, medicine and biology. The stability and redox behaviour of the heteropolyanions are tuned by changing the addenda atoms like V (IV), Ti(IV), Fe(III), Cu(II) etc.

Among the structurally different kinds of heteropoly compounds, the extensively studied compounds are 12-A Keggin-type tungsto- and molybdophosphates. Although various techniques are available to elucidate the structure of polyoxometalates, EPR is used as the principal experimental technique to study the structure, bonding and site symmetry of the paramagnetic center in diamagnetic lattices of polyoxometalates. Mn(IV) and Cu(II) are used as EPR probes to study electron hopping between the adjacent nuclei, host spin-lattice relaxation and dipolar interaction between two Cu(II) centers. The emphasis is mainly on the structure and uses of polyoxometalates and the application of EPR to study their structure.

Powder EPR spectra of γ-irradiated $(NH_4)_4[VMo_{11}PO_{40}].33H_2O$, $(NH_4)_5[V_2Mo_{10}PO_{40}].34H_2O$ and $(NH_4)_6[V_3Mo_9PO_{40}].33H_2O$ show that the V(V) center acts as the predominant electron trap. Analysis of single crystal EPR spectra of $(NH_4)_5[V_2Mo_{10}PO_{40}].33H_2O$ indicates the reduction of Mo(VI) to Mo(V)

in addition to the formation of V(IV) species. EPR of γ-irradiated $K_4[VW_{11}PO_{40}].2H_2O$, $K_5[V_2W_{10}PO_{40}].3H_2O$ and $K_6[V_3W_9PO_{40}].4H_2O$ species also indicate the formation of V(IV) center.

The P and k values evaluated from the spin Hamiltonian parameters indicate greater degree of electron delocalization in the tungstovanado-phosphates than the molybdovanadophosphates. Protonation of bridging oxygen in molybdovanadophosphates is speculated to account for this observation.

Rev.Dr. Praveen Peter
Asst. Prof. Dept. of Chemistry

தமிழிலக்கியங்களில் நெய்தல் நில வாழ்வியலும் சமூக உறவுகளும்

உலக இயக்கத்திற்கு இயற்கையின் பங்களிப்புத் தேவையாக இருக்கிறது. பண்டையத் தமிழ் இலக்கியங்கள் மனிதனின் இயற்கைவாழ் நிலையையும் அதனைச் சார்ந்த பிறதகவமைவுகளையும் நிலம் சார் பண்பாட்டையும் பின்புலமாகக் கொண்டு கட்டமைக்கப்பட்டிருக்கின்றன. நானிலக் கட்டமைப்பின் வழி தமிழர்களின் வாழ்வியலை அறிந்து கொள்ளமுடிகிறது. ஒவ்வொரு நிலத்தையும் மையமிட்டு இயற்றப்பட்ட முதற், கரு, உரிப்பொருள் செய்திகளை ஆழ்ந்த இலக்கிய வாசிப்பின் வழி உணரலாம். குறிப்பாக, சங்க இலக்கியத்தில் நெய்தல் நிலம் பதிவு செய்யப்பட்ட அளவிற்கு, அதனைத் தொடர்ந்து வந்த பிற இலக்கியங்களில் நெய்தல் நிலம் குறித்த சரியான பதிவுகள் இல்லை. பிற்காலத்தில், அரசன், கடவுள், வள்ளல்கள் போன்றோர் கதைத் தலைவர்களாக இலக்கியங்களில் அடையாளப்படுத்தப்பட்டனர். நெய்தல் நில மக்களின் வாழ்வியலும் அவர்களது தொழிலும் கீழானவைகளாகக் கருதப்பட்டன. தமிழிலக்கியங்களில் நெய்தல் நில வாழ்வியலையும் சமூக உறவுகளையும் குறித்துச் சிறப்பு நிலையில் செய்யப்படும் ஆய்வு இதுவேயாகும்.

சங்க இலக்கியத்திற்குப் பிறகான தமிழ் இலக்கிய வளர்ச்சிப் போக்கில் நெய்தல் நிலம் எவ்வாறு அடையாளப்படுத்தப்பட்டிருக்கிறது, அடையாளப்படுத்தாமைக்கான காரணம், சமூக மாற்றம் போன்ற தேடல்கள் குறித்துக் காணுகின்ற நோக்கில் இவ்ஆய்வு அமைகிறது.

1. தமிழில் நெய்தல் நில அறிமுகம் (தொல்காப்பியம், சங்க இலக்கியங்களில் நெய்தல் நிலத்தின் முதல், கரு, உரிப்பொருள் குறித்த பதிவுகள் ஆய்வுக்கு எடுத்துக் கொள்ளப்பட்டன)
2. பதினெண் கீழ்க்கணக்கு அகநூல்களில் நெய்தல் (அகநூல்களில் திணைக் கட்டமைப்பு, நெய்தல் நிலப்பதிவுகள்)
3. காப்பிய, சமய இலக்கியங்களில் நெய்தல் (சிலப்பதிகாரம், திருவிளையாடற் புராணம், பெரிய புராணம், தசாவதாரங்கள்)
4. சிற்றிலக்கியங்களில் நெய்தல் (பரதகுலமாலை)
5. நவீன இலக்கியத்தில் நெய்தல் (ஜோ டி குரூஸ் - ஆழிசூழ் உலகு)

எனப் பாகுபடுத்தப்பட்டு நெய்தல் நிலம் ஆய்வுக்கு உட்படுத்தப்பட்டது. இவ்ஆய்வின் தொடர்ச்சியாகத் தற்காலத்தில் நெய்தல் நிலத்தைப் பின்புலமாகக் கொண்டு படைக்கப்படுகின்ற தமிழ்ப் புதினங்களும் கவிதைகளும் திரைப்படங்களும் மேலாய்விற்கு உட்படுத்தப்பட வேண்டும் என்பதே ஆய்வின் முடிவாகும்.

முனைவர் பி.பாலசுப்பிரமணியன்
உதவிப் பேராசிரியர், தமிழ்த்துறை

A Study on Working of NGOs Managed by Christian Missionaries in the Socio-Economic Upliftment of the Weaker Sections in Vellore and Tiruvannaamalai Districts of Tamil Nadu

All over the world NGOs (Non-Governmental Organizations) are accomplishing an enormous amount of task in the society to uplift the people who are socially and economically poor by providing them basic social services. The literature on NGO does depict that the society has developed through the effective functioning of NGOs. NGOs are defined by the World Bank as "Private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development." In this context, the Christian missionaries also come under this preview by becoming service oriented NGOs in India.

The arrival of Christian missionaries in India gave birth to a new India with their innovative ideas, scientific knowledge and spiritual power. Christian missionaries indeed came to India with the sole aim of spreading Christianity but their work did not remain only with the spreading of religion but also it accomplished beyond the spiritual needs and worked for the educational, social and economic development.

Due to the untiring, dedicated and selfless service of the Catholic missionaries and their NGOs, not only the spiritual life is transformed to a great extent, but also the socio-economic life of the people of Vellore and Tiruvannamalai districts especially of the marginalized, the unreached, poor tribals and Dalit people have reached or touched a Himalayan change. They are released from blind belief, superstitions, illiteracy, utter poverty and untouchability, etc. By their unflinching and impartial love and compassion, they did away with the stigma of dreadful diseases like leprosy, cholera, small pox, etc. and treated the ill, enlightened the ignorant and fed the starved. The welfare measures like the residential schools, mid-day meals, relief measures, stipend system, and scholarship for the students, financial assistance, education, health and economic escalation that the government is doing today are only the replication of the footprint left by the missionaries in the study area. The missionaries' activities are a milestone in Vellore and Tiruvannamalai districts. The weaker sections of the communities will remain indebted for ever for the selfless services rendered by the Christian missionaries especially the Catholic missionaries' NGOs.

Dr. U. Ramesh
Asst. Prof. Dept. of Economics

A Content Extraction and Summarization Using Ontology Based Approaches

Generally the searcher either searches for exact information based on the query or just surf topics which interest them on websites. Thus, as a result, summarization is used as a technique for improving querying. The objective of this research is to propose the Topic Summarization methods which are used for efficient topic detection. In the first work, Topic Summarization and Content Anatomy (TSCAN) is presented which organizes and summarizes the content of a temporal topic described by a set of documents. TSCAN models the documents as a symmetric block association matrix, in which each block is a portion of a document, and treats each eigenvector of the matrix as a theme embedded in

the topic. In the second work, latent Dirichlet allocation (LDA) model is designed for capturing the semantic information on topic transcription. In this work, we are trying to provide automatic detection of topics to be summarized that is we can determine how many topics should be chosen for automatic summarization. In the third work, automatic term relationship and refinement ontology construction is designed for the content anatomy and topic summarization. In the fourth work, Labelled- latent Dirichlet allocation (L-LDA) is proposed that is a topic model is proposed for generating semantically labelled collection of document for each related topics. Labelled LDA confines Latent Dirichlet Allocation by defining a one-to-one association between LDA's latent topics and queried concepts. Performance investigations are carried out on the employed algorithms for evaluating the performance.

Dr. A. Mekala
Asst. Prof., Dept. of BCA

The Perception of financial experts on the role of CDS (Credit Default Swaps) in India – A study with special reference to global financial crisis

Credit Default Swaps (CDS) is an innovative credit derivative instrument that became extremely popular in the last decade and is regarded by financial experts as one of the reasons for the occurrence of global financial crisis in 2007-2008. According to Bank for International Settlement (BIS) the total notional amount of CDS was $6 trillion in 2004; it is increased to $57 trillion by June 2008. CDS are derivative contracts between the two parties in which the buyer makes a periodic payment to the seller until the end of the life of the CDS or until the occurrence of a credit event, whichever occurs earlier. The settlement in the event of a default involves either physical delivery of bonds and loans or a cash payment (John C. Hull, Sankarshan Basu, 2011).CDS helps banks and financial institutions to manage their exposures in a better way to hedge and trade the credit risk.

Many observers have argued that CDS contributed significantly to the global financial crisis of 2007-2009. Although there were several other factors caused the crisis which are numerous and complex, CDS is blamed for the crisis. In fact, "derivatives didn't cause this financial meltdown but they did accelerate it. However it is necessary to recognize the fact that it was not the instrument which was at fault but how it was used".

This study is of paramount importance particularly in the wake of global financial crisis, because the CDS can be used as an effective risk management tool to transfer the risks by the banks and financial institutions. But many observers and researchers blame the derivative instruments especially CDS that they are the main root cause for global financial crisis. In this context, the research on the CDS is very important for further development of the financial market in future. Although, RBI introduced the CDS instruments in November 2011 to transfer and effectively manage the credit risk of the banks and financial institution, it has not reached the market participants, and most of them do not know how it works and what benefits arise from the CDS instruments. In this scenario, it is very important to consider the different ways to enhance the level of knowledge, create awareness and to inform the usefulness of the CDS instruments, which has enhanced the development of the CDS market faster in

India. The outcome of the study can be used by the regulatory authorities to develop proper legal framework that could effectively regulate CDS products in the Indian financial market. And also it is useful to the financial institutions and investors to properly interpret the risk involved in exposure to the credit derivatives.

Dr. D. Valarmathi
Asst. Prof., Dept. of Commerce

Customer Satisfaction on Banking Services – A Comparative Study of Public and Private Sector Bank

The fundamental purpose of any business is to create satisfaction. When perceptions match or exceed expectation of the customer is said to be satisfied. Measuring Customer satisfaction can help service organization especially banking industry to understand the service gap. The study was made in Vellore district covering 60 branches of Public and Private Sector banks.

The first chapter consists of Introduction and meaning of Customer Satisfaction and concept of customer satisfaction. The main objective of the study was to measure the level of satisfaction among the customers of Public and Private Sector banks and also determine whether public or private sector banks satisfy their customers. It also includes the statement of the problem, hypotheses tested, research methodology, scope, significance and limitations of the study.

The second chapter revies the concept of customer perception, customer expectation, customer satisfaction evaluation models, dimensions of SERQUAL Model and service quality in banks. The third chapter presents the nature and development of banks in detail, the composition of Indian Banking system and structure of scheduled banks in India.

The fourth chapter deals with Analysis and interpretation of collected data through questionnaire with the help of statistical tools like Percentage analysis, Chi-Square test, T-Test, ANOVA and correlation analysis. The hypotheses framed for the study has been properly tested with the help of relevant statistical tools.

The last chapter consists of brief summary, findings and Conclusion of the entire study. The findings of the study shows that the customers of public sector banks are highly satisfied than private sector banks. The recommendation has been made to the banks to improve their services in order to retain their existing customers and to differentiate their service in order to have a unique identity.

Dr. G. Devi
Asst. Professor, Dept. of Commerce

A Study on Queueing Models with Subject to Breakdown and Repair Using Matrix-Geometric Methods

The matrix-geometric method is a powerful technique in solving a large number of problems arising in queueing system. By proper definition and partition of the over all system's state-space, many queueing systems problem can be shown to have the structure similar to that of M/G/1, G/M/1, M/M/1, which is key to the application of matrix-geometric technique in solving queueing

system problems. We hope that the study in the present thesis will be beneficial to system designers and engineers the better design to provide desired performance. Queues can be encountered almost everywhere in our daily life; common examples are supermarket checkout stations, help desks call centres, manufacturing assembly lines, wireless communication networks, telecommunication systems, broadcasting and multi-tasking computer.

In this thesis, we have given an overview of our contribution to the field of matrix-geometric methods in queueing system. The queueing system is based on the modelling Markovian process and PH distribution. The main goal of the thesis was to develop the models of steady-state probability.

In fact new results queueing theory have often been inspired by new technological advances in computer communications. This thesis is concerned with the analytical study of queueing models using MGM. A queueing system, consisting of several systems with finite and infinite capacities, PH service and PH repair times are studied in this thesis. Being motivated by such observation, the current research work focuses on developing a numerical method for steady-state solution of queueing models.

Dr. B. Chandrasekar
Asst. Prof. Dept. of Mathematics

Developing an Intensive English Curriculum for Rural Indian Learners to Take on Tertiary Level Studies

The Research focuses on the English language problems faced by the rural Indian learners, as they begin their tertiary level studies. The reason for their problem is mainly their lack of proficiency in English language. The findings are expected to justify the development of an Intensive English Programme (IEP) curriculum that would address the problem of lack of proficiency in English language of the rural Indian learners. Some of the research questions are:

- Is IEP curriculum prepared in the spirit of ESP and Post method pedagogy effective to enable the rural Indian learners to take on tertiary level studies?
- Is an intensive method of language teaching and learning more effective than a drip-feed method?
- Does the suggested IEP curriculum enhance the confidence level of the learners to take on the tertiary level studies paving way for an enhanced overall performance?

The researcher made a genuine attempt to design, develop, and test a new IEP curriculum for the rural Indian undergraduate learners. The researcher adopted "Hypotheses-testing, quasi-experimental method", for the study. It involves both qualitative and quantitative research methods. The findings of the study show that the new IEP curriculum greatly enhances English language proficiency in the learners and develops their self-confidence. A positive correlation has been well established between language proficiency and overall performance of learners in their area of study. Thus, the objectives of the study are fulfilled. This intensive curriculum (IEP) truly prepares the rural Indian learners to take on tertiary level studies. Besides developing language proficiency, relationship among the learners and between the learners and

teachers are strengthened. It creates a cordial environment, which makes learning a joyful experience.

The advantage enjoyed by the Indian learners in Western universities is made available to learners in rural India. The researcher looks upon the new IEP curriculum more as a process and not as a product. It would be greatly beneficial for every teacher and college management to draw rich experience from the study and create their own solutions for their contexts. As, Sacred Heart College (Autonomous), Tirupattur, Vellore Dt., is the context of the study, the researcher considers this context as a very good representative sample of rural Indian settings. Thus, the study would be of immense value to enhance the English language situation of the nation. The researcher sincerely hopes that the study contributes to the infinite discussion on how to enhance the English language proficiency of the Indian learners especially the learners of rural area.

Rev. Dr. K. A. Maria Arokiaraj, SDB
Asst. Professor, Dept. of English

Staff Articles

Lessons for Life in Football

Stadium Earth

It's a challenging task to play football in a big stadium where there are so many fans watching you. If you play well, they admire and encourage you or else they will criticize you. In the same way, you live in a big planet with loads of challenges and lots of people around to judge you.

Pitch: Competitive world

The football pitch is where you show skills and talents to win the game. Likewise, you show your talents in order to be successful in this competitive world.

Duration: Football Vs Life

In football you are given only 90 minutes or sometimes 120 minutes. With limited time you give your best in the field and score as many goals as possible to win the game. Your lifetime also is limited; you live only around 60-80 years. Within that short span you live to achieve all your goals in life.

Opponents: Football Vs Life

In football any team can be your opponent and the point is that you should defeat them. In real life, facing exams and interviews etc., are like facing the opponent team. You have to do well in these and achieve your goals.

Referees: Parents

Referees stop the game whenever someone is unfair or does something against the rules of the game. Referees sometimes punish you. If you disobey

you are either given a yellow card or a red card. They want the game to be fair. In the same way your parents stop you when you do something wrong. They might punish you if your mistakes are grave in nature. They want your life to be good and they help you to lead it in the right path.

Football (ball): Confidence

In a game when you get the ball many times, you get more chances to play and score many goals. But when you lose the ball, opponents start attacking and you have to win the ball back. Likewise, in life when you are in an interview or an exam, if you have confidence in you, you would answer the questions easily. In football you need to get the ball many times to win, in life you need to have more self-confidence to achieve.

Linesmen: Friends

When you cross the defensive line, you are caught off side by them. In life when you cross your limits, your friends are there for you.

Coach: Teachers

A coach guides a team; he helps in winning a game, gives ideas and brings the best out of players. Our teachers also do the same; they help in building one's character and skills.

Goal keeper: Knowledge

When you have a good goal keeper, he would save you till the end of the game. When you have good knowledge, it would save you till the end of your life.

Goal post: Politics

Ball is mostly deflected outside and sometimes only inside. It only favours people with luck. Likewise, politicians mostly favour people with more money and power and help them achieve their goal. If you don't have neither luck nor money, to be successful in life is not that easy.

Long range goals

Achieve with ease when you have great talents. In football, if you are able to score from any part of the pitch, you are great, much talented. In life, if you are highly talented, you can achieve your goals easily. Most important of all whenever you get the ball, either move forward on your own or pass the ball or sometimes you can shoot the goal. If you choose the right option, you will surely score a goal. Same applies to your life. Choose the right path, make the correct decision, you will surely succeed in life.

Major M. S. Alphonse
Former Director of Physical Education

Microsoft to launch a new internet browser 'Spartan' for Windows 10

Microsoft is ready to launch a brand-new internet browser for **Windows 10** and reports say that it will be similar to Google Chrome and Mozilla Firefox. Case studies have shown that people are not likely to use Internet Explorer because of its complexity, slow speed, and look. Though Microsoft's new version of Internet Explorer is very good and fast but still, Microsoft has failed to change the mentality of users about Internet Explorer.

According to a new report from Microsoft insider Mary J. Foley at Zdnet: The new browser will be similar to Google chrome and Mozilla Firebox by it's look and feel. She says that the new browser is code named as "Spartan" and it will not be an updated version of Internet Explorer. New 'Spartan' browser will use Microsoft's **Chakra Java Script Engine** and this rendering engine is described overall as a "new, light-weight browser."

<div align="right">

Mr. S. John Bosco
Asst. Prof., PG Dept. of Computer Science

</div>

Sprout Healthier With Sprouted Grains

Grains are the seeds of plants, such as those from cereal grasses. Oats, barley, wheat, corn, and rice are some examples of grains. Grains have three edible parts - the germ, endosperm, and bran. Germ is the plant embryo that feeds on the starchy endosperm. The bran layer provides nutrients and some protection, along with the outer husk (that we don't eat). There are special growth-inhibitors in the grain that hold back from sprouting and turning into a plant until the conditions are just right. When the germ, or embryo, is ready to sprout, enzymes kick in and turn the starch of the endosperm into more easily "digested" molecules to help the plant grow. When the outer bran of the seed splits open a small shoot poking out can be seen. This is what a sprouted grain looks like!

General Benefits of Sprouted Grains

➢ Increases Nutrient Absorption - B12, Iron, Magnesium and Zinc
➢ Makes Foods Easier to Digest
➢ Decreases Antinutrients & Phytic Acid
➢ Increases Protein Availability
➢ Increases Fiber Content
➢ Break Down Gluten for Easier Digestibility
➢ Helps Reduce Allergens Found in Grains
➢ Increases Enzymes & Antioxidants
➢ Decreases Glycemic Index
➢ Helps improve muscle growth

Scientifically Proven Health Benefits of Sprouted Grains

➢ Sprouted Buckwheat Extract Decreases Blood Pressure
➢ Sprouted Brown Rice Fights Diabetes
➢ Cardiovascular Risk is Reduced By Sprouted Rice
➢ Sprouted Brown Rice Gives Better Health for Nursing Mothers
➢ Sprouted Buckwheat Protects against Fatty Liver
➢ Nutrient Changes noted in Sprouted Wheat
➢ Sprouted Rye Increases and Protects Folate
➢ Sprouted Rice Reduces Common Allergens

- ➢ Sprouted Sorghum Enhances Taste and Nutrition
- ➢ Sprouted Millet is Higher in Key Nutrients like Lysine ,Tryptophan, Albumin and Globulin
- ➢ Sprouted Barley Increases Digestibility of Nutrients.

Mrs. R. Ananthalakshmi
Asst. Prof. & UG Head, Dept. of Biochemistry

Technology can create food: you have to learn it, not earn it

Think about the continuous increment of the world's population and the food that every person needs to survive. Lack of food and malnutrition will be a major factor for diseases and crisis in near future. All fruits and vegetables are contaminated in today's world. So, what's the solution?

Since, technology always finds a solution, here are some. Let us look at what we would eat in the future.

A Lab Grown Meat-Burger By Google Itself: Yes, a burger made with meat is grown in the lab with the help of just some beef stem cells. Scientists took some meat stem cells and made it grow to an unbelievable amount of 400 grams of actual meat. An animal consumes a lot of water and pounds of grains, requires vast land to graze in its whole life and then is slaughtered for meat. So, in terms of land and water it is an inefficient way to produce meat for humans. The taste of the lab grown meat has been approved as good for the first batch and may become finger-licking food in future.

The same thing is being done in the case of egg, the most consumed animal protein in the world. A powder made with peas and cereal may well replace eggs. This powder has a low value of cholesterol but contains the benefits of protein. And you can cook it like an egg.

Actually we need lipids and proteins and not milk itself, carbohydrates and fibre- not bread, vitamins and minerals not fruits and vegetables. What we eat is not what we actually require. That's why there are some engineered alternatives of the food.

Can such technological food items be sufficient for a human to survive? Is this the beginning of the end of food era? Let's Wait and watch.

Mr. S. Antony Joseph Raj
Asst. Prof. PG Dept. of Computer Science

The Future of Online Voting (E-Voting)

E-governance is gaining popularity across the world. Inspite of being the largest democracy, the voter turnout in India is around an average of 50% which is immensely poor. Such a poor voter turnout clearly states that the country can have a better leadership if more people cast their votes. A large number of voters, on account of their employment elsewhere, do not reside in their constituencies and seldom do they get the opportunity to cast their vote. It is noteworthy that in a democracy every vote counts and it is also important to

provide voters an easy way to cast their votes. While IT provides services and solutions to the whole world from automation to medical care, manufacturing industry to agriculture, it is time that we pay attention to E- voting system which would enable hundreds of thousands of people to participate in the elections.

E-voting system: The concept

Many countries have implemented a unique ID system. This can provide the base for E-voting system. Unique identification process includes biometric information that is stored in the data base. This information can be accessed for E-voting system. It will further ensure that only one vote is cast by an individual. To cater to the needs of all citizens irrespective of their level of education, there will be two channels of E-voting.

Votes on internet with UID

This is for the educated section of people who have access to internet at their homes /offices or for those who do not get an opportunity to be present in their constituencies during elections. Thus, wherever they are, they can exercise their right to vote through internet on the day of polling. They can log into the E-voting system with UID and password and cast their votes.

Votes at polling stations with UID and Biometrics

This channel is for people who do not know how to use internet or do not have access to it. Simple touch screens system and finger print scanners can be installed at polling stations, where people can swipe their fingers on scanners and get authenticated. Thus they will be able to vote by merely touching the screen to select candidate of their choice. This will enable people who are unable to use their UID and passwords to cast their vote.

To sum up, using this method each voter will be able to cast his/her vote, hence, resulting to a larger voter turnout. This will further curb the issues like proxy voting and booth capturing. This voting system will be fast, efficient and will provide a fair chance to every citizen to cast his/her vote according to his/her convenience.

Mr. R. Denis
Asst. Prof. PG Dept. of Computer Science

Interesting Facts about Chemistry

1. Learning from Others

Watson and Crick, the groundbreakers of the DNA double helix never did any experiments on themselves, rather researched into the work of others and deduced the structure.

2. The Insanity Cure

A person suffering from any form of mental illness can be cured with the help of lithium as it is known to be used for the purpose of changing one's thinking. I would personally recommend it for the terrorists for changing their outlook.

3. The Death Omen

The first X-ray was an image of a woman's hand with a ring on it. It was of Bertha Rontgen's hand. She believed that seeing her bones was a death omen and her time had arrived.

4. Drinking Health

Fresh juice has finally found its competition in the arena of being a healthy drink. People are known for drinking radioactive water from a device called the "Revigator" as it was considered to be healthy.

5. Misunderstood Diamond

Men promise their women the rarest things in return for their love. One such precious thing is considered to be diamonds. However, men have got to work harder as now diamonds being the rarest gems and have been replaced by jadeite which costs about $3 million per carat.

6. 28 Grams

Teenagers believing themselves to be the rarest on earth have to compete with astatine (used for the treatment of brain tumors and in radiation therapies) as only 28 grams of it is present in the whole wide earth.

7. Colourful Excitement

The magnificent colours of the dawn are due to the excess amount of oxygen present.

8. The Standard Oxygen

In 1961 a historical event took place when oxygen was replaced by carbon 12 to be used as the atomic weight standard for other elements.

9. The Unloved 'J'

Discrimination takes place everywhere. Be it in life or even in the periodic table where the letter J is the only letter that doesn't appear.

10. The Liquid Element

For everything there is an exception, including metals. One of the very interesting facts about Chemistry is that the metal called Gallium (Ga, atomic no. 31) can melt in your hands!

S. Baranipriya (BP150405)
II M.Sc. Chemistry

Perfection still Needs Rectification

In the past one year of my presence in Sacred Heart College, Tirupattur, I have learned and observed a lot of beautiful things from the best opportunities offered to the students.

The college has such a wonderful management, highly qualified professors, very good infrastructure and conducive atmosphere, and a lot of skill training programs offered to the students which no one can doubt.

Besides these, the sport activities and festivities are several. All for the benefit and betterment of us the students. A lot of importance has also been given towards the improvement in English communication through the department of communicative English.

Inspite of all these opportunities, still some students find it difficult to come forward or make an attempt. Many are dominated by fear and have a tendency to lower them in whatever they do. Others have become activity oriented in order to escape from their prime duty which is studies.

When hearing the views of thirty students, many of them shared that since they do not know about their future they prefer to enjoy their college life. The peer pressure is looming around and many are drawn by what is so called "Hero worship" forgetting their own personal identity. They also tend to copy whatever these heroes and heroines do, including their attire.

There is also a need to revisit the activities of the sports persons within the perimeter of their studies. Most of them rarely look into their books or attend classes in the four hours allotted to them for personal studies.

As a way forward, Student Guidance Program (SGP) is very much needed for the sports persons so that they don't forget their main purpose of being in Sacred Heart College. In general, creating more space for motivational programs and self-esteem seminars can be of great help. This can be achieved by inviting some of the personalities who have captured the attention of many, to share their personal experiences of what made them to be what they are today. Thereafter, hopefully a complete and satisfactory result of Perfection could be reached.

Abraham Kuol (AU150174)
II B.Com (Shift-I)

Interesting Fact

Consider any 4 digit number, then rewrite that number in descending order, in the same way, rewrite the number in ascending order, then subtract ascending from descending number, now we get a new four digit number. Again rewrite the new four digit number in ascending & descending order, subtract

these two, we get another four digit number, proceeding like this up to maximum of 7 steps we will get 6174 for any four digit number.

Eg: 1 5823
      8532 – 2358 = 6174
Eg: 2 1234
      4321 – 1234 = 3087
      8730 – 0378 = 8352
      8532 – 2358 = 6174
Eg: 3 6180
      8610 – 0168 = 8442
      8442 – 2448 = 5994
      9954 – 4599 = 5355
      5553 – 3555 = 1998
      9981 – 1899 = 8082
      8820 – 0288 = 8532
      8532 – 2358 = 6174

J. Vanmathi (BP150216)
II M.Sc. Mathematics (Shift–II)

Life Is a Mystery

When I was born my mother was Happy

When I started to speak for the first time my dad was Happy

When I proved good in learning Skills my Teachers were Happy

When I started helping others my Neighbours were Happy

I have Mercy and compassion But for

Myself I did not feel completely 'Happy'

Because I was looking for my Destiny

When I found my Destiny

Now I look back at my life and I do not find a real Happiness

LIFE! Still a Mystery…….

M. Maria Nivethana (BP141022)
III MCA

Ericsson 5G Plug-In

Enabling the evolution **5G plug-in**

To facilitate a rapid evolution of 5G access networks and the successful adoption of 5G services we have announced 5G Plug-In - software-driven innovations that bring essential 5G technology concepts to today's cellular networks.

The development of 5G is a perfect example of how development is now driven by new potential applications.

5G use cases will include faster and more robust high speed mobile broadband and video everywhere, a proliferation of connected sensors to support the lot and everything from driverless buses to remote surgery to immersive augmented reality.

To enable this 5G future, mobile operators need to start evolving their networks to support new 5G technology concepts, while also investing in their LTE (Long Term Evolution) networks. LTE is expected to reach 4.3 billion subscriptions by 2021 and it will play a strong role in tomorrow's 5G networks. Ericsson will continue to innovate in LTE to improve network performance and efficiency with award-winning solutions like Gigabit LTE and Ericsson Lean Carrier.

The first series of 5G Plug-In includes:

- **Massive MIMO Plug-In**

- **Multi-User MIMO Plug-In**: Multi-User or MU-MIMO provides a better user experience, enhances network capacity and coverage, and reduces interference.

- **RAN Virtualization Plug-In**: RAN Virtualization improves network efficiency and performance by enabling Virtual Network Functions (VNF) to be centralized on a common platform supporting both 4G and 5G.

- **Intelligent Connectivity Plug-In**

- **Latency Reduction Plug-In**

Ericsson 5G Plug-In is available for operator trials from 2016 and will be available for commercial networks from 2017.

D. K. Prasanth (BP151010)
II MCA

Web Search Engine

A Web Search Engine is a software system that is designed to search for information like web pages, images, documents or any type of files on the World Wide. Some search engines also mine data available in databases or open directories. Just as the web directories, which are maintained only by human editors, search engines also maintain real-time information by running an algorithm on a web crawler.

How Search Engine Operates

Search engines have two major functions:

1. Crawling and building an index

2. Providing search users with a ranked list of the websites they've determined are the most relevant.

Crawling and Indexing

Crawling and Indexing uses billions of documents, pages, files, news, videos, and media on the World Wide Web. The search engines need a way to "crawl" the entire city and find all the stops along the way with each stop representing a unique document, so they use the best path available on links.

Providing Answers

When a person performs an online search, the search engine scrubs its corpus of billions of documents and does two things: first, it returns only those results that are relevant or useful to the searcher's query; second, it ranks those results according to the popularity of the websites serving the information. It is both relevance and popularity that the process of SEO (S is meant to influence).

How do People Interact with Search Engine?

We like to say, "Build for users, not for search engines."

There are three types of search queries people generally make:

1. "Do" Transactional Queries: I want to do something; such as buy a plane ticket or listen to a song.

2. "Know" Informational Queries: I need information, such as the name of a band or the best restaurant in New York City.

3. "Go" Navigation Queries: I want to go to a particular place on the Internet, such as Facebook or the homepage of the NFL.

When visitors type a query into a search box and land on the site wanted, will they be satisfied with what they find? This is the primary question that search engines try to answer billions of times each day. The search engines' primary responsibility is to serve relevant results to their users.

Tools and Services

Search Engine Optimizing tends to use a lot of tools with various protocol

Search Engine Tools

1. Bing Webmaster Tools
2. Google Search Console
3. Moz Open Site Explorer

<div align="right">

M. Hari Ganesh (BP151071L)
III MCA

</div>

<div align="center">

Read It and Let Yourself Know

</div>

I really do not know what kind of article you are expecting here. But one thing I can make sure that after reading this short story your happiness would be high. Yes, this article is about how one can be happy. Read further if you really want to safeguard your happiness. Here is a small story of a poor sales man. Once the sales man was taking rest in a road side. A rich man came near him and asked "Why are you resting here?" The sales man said, "I have sold enough dolls today". But the rich man asked him "Why don't you sell more dolls, so that you can be rich". He replied, "What can I do being rich?" The rich man said "You can buy whatever you want, own a house, a car and so on". The sales man asked "Why should I own all those things? What would it give me?" The rich man said, "It will bring lots of happiness to you". The sales man asked "Am I not happy now?" Will richness make one happy? No, you don't have to wait for tomorrow to be happy. You don't need to possess anything to be happy. Enjoying one's own life is the way to happiness. You don't even need to be rich. Life is all about THIS MOMENT.

Sometimes life does not go as we want it to be. Sometimes we feel that life consists of a lot of difficult situations to live with. Our reactions to these

situations are regarded as problems. But the truth is that problem arises only from our minds and not from the outer world. Suppose we respond to those situations with positive and peaceful mind, they would melt away from our mind. Both happiness and suffering originate only from our minds, not from the external world.

For instance when anger corrupts our view about others they seem to be bad. Actually, there is no extremely good or extremely bad person in the world. It depends on the view we look at them. If we like ice cream, it seems to be too good for us. The truth is ice cream is neither good nor bad, but our view towards it is good. All the joyful situations in this way create happiness within us. Hence, our minds should not be made to suffer or be suppressed by stress, anxiety or confusion. All these negative feelings should be replaced by happiness.

Smile, love to live, accept a compliment and erase bad moments from your heart and mind. "LIVE IT, LOVE IT AND FEEL IT BECAUSE WE ONLY LIVE ONCE".

Road to Success

The road to success is not straight

There is a curve called failure

A loop called confusion

Speed bumps called friends

Red light called enemies

Caution lights called family

And you will have flats called jobs

But….it you have a spare called Determination

An engine called Perseverance

Assurance called Faith

And a driver called God,

You can go to a

Place called "Success"!!!

P. Fayeeqha Suman (BP150304)
II M.Sc., Physics

Backed by Physics…

❖ One solar flare can release as much energy as one billion hydrogen bombs. That energy is enough to power the world for more than 1,00,000 years.

❖ A bolt of lightning is 5 times hotter than the surface of the sun.

❖ Human brain produces enough electricity to power a 40 watt light for 24 hours.

❖ The brain continues to send out electric wave signal until approximately 37 hours after death.

❖ If you yell for 8 years 7 months 6 days, you would produce just enough sound energy to heat up one cup of coffee.

❖ The brightest star can be million times brighter than the sun, but since they burn much faster, they have short life.

- ❖ The Dead Sea is so dense with salt; you can easily float in it without drowning.
- ❖ On a clear day a beam of sunlight can be reflected on a mirror and seen up to 25 miles away.

<div align="right">
D. Siva Priya (BP160301)
I MSc Physics
</div>

Satellite Launching Using RSLV

Aryabatta was India's first satellite, named after an Indian Astronomer.

Launch:

It was launched by India on 19th April 1975 from Kapustin Yar using a Kosmos -3M launch vehicle. It was built by the Indian Space Research Organization (ISRO) to gain experience in building and operating a Satellite in space. The launch came from an agreemet between India and the Soviet Union directed by Dr. U.R. Rao and was signed in 1972.

In return for launching Indian Satellite allowed the USSR to use Indian ports for tracking ships and launching vessels. On 19th April 1975, the satellite's 94.46 minute orbit had an apogee of 611 kilometres (380 mi) and a perigee of 568 kilometres (353 mi), at an inclination Physics.

The spacecraft was a 26- sided polyhedron with 1.4 metres (4.6ft) diameter. All faces (except the top and bottom) were covered with solar cells. According to soviet media reports, the satellite continued to function and transmit information for some time. The satellite returned to the earth's atmosphere on 11th February 1992. It was one of the best satellites ever launched by India.

Mission type: Astrophysics

Operator: ISRO

COSPAR ID: 1975-0.33A

SATCAT NO: 7752

Mission duration: in 4 days.

Space Craft Properties

Launch date: 19th April 1975, 07.30 UTC
Rocket: Kosmos - 3M
Launch site: Kapustin Yar 107/2.

End of Mission

Last contact: 24th April 1975.
Decay date: 12th February 1992.

India's Rocket Launch

ISRO successfully tested fire scramjet engine on 29th August 2016. The Scramjet engine will help in bringing down the cost of launching by reducing the amount of oxidiser to be carried along with the fuel.

High Lights

India is the 4th country to demonstrate flight testing of Scramjet engine. The engine uses hydrogen as fuel and the oxygen from the atmospheric air. India on 28.08.2016 (Sunday) successfully tested its own Scramjet or air breathing engine with the launch of a rocket, said a senior official of Indian Space Research Organization (ISRO).
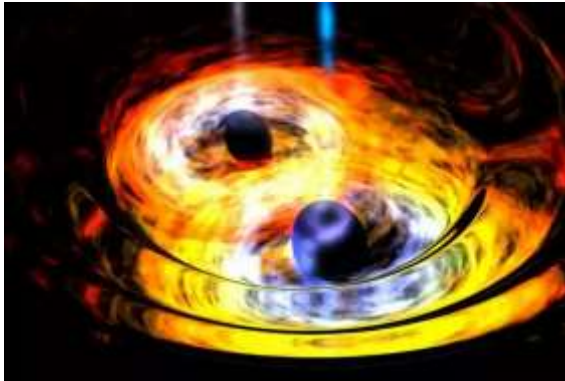
The mission was successful. Two Scramjet engines were tested during the flights, the official told IANS.

He said that as scheduled at 6 am, the two stage/engine RH-560 sounding rocket took off from the rocket port located at Satish Dhawan Space Centre (SDSC) in Sriharikota in Andhra Pradesh.

He said the two air breathing engines were like hugging the rocket on it's sides and normally when the rocket reaches a height of 11km the Scramjet engines would start breathing air.

Uses

The Scramjet engine, used only during the atmospheric phase of the rocket's flight will help in bringing down the launch cost by reducing the amount of oxidiser to be carried along with fuel.

With this flight, critical technologies such as ignition of air breathing engines at supersonic speed, holding the flame at supersonic speed, air intake mechanism and fuel injection systems have been successfully demonstrated.

T. Viji (BP150313)
II M.Sc., Physics

Ligo - a probe for searching for a background buzz of gravitational waves "The center of the system of the world is immovable" says Newton

Newton's quotes stimulated many scientists to find more about the Gravitational force and waves which are in the universe. The abbreviation of LIGO is Laser Interferometer Gravitational Wave Observatory. The LIGO is a recent finding and it is very interesting to know more about black holes.

The time you take to finish your launch, several pairs of black holes will merge somewhere in the universe. That's the incredible picture emerging from early insights by the Laser Interferometer Gravitational- Wave Observatory (LIGO).

In February, LIGO announced the first detection of gravitational waves, confirming the first detection of gravitational waves, confirming a key prediction of Albert Einstein's theory of general relativity. That historic wave reached Earth at light speed on September 14, 2015, from a pair of black holes that collided 1.3 billion light years away.

But LIGO heard another suspected gravitational wave signal that got less attention. Though it wasn't as strong, it looked promising.

The Other Collision

The analysis of that event, labelled LVT 151012, has shown with 90 percent certainty that it also came from a pair of collided black holes. That's not sufficient for scientists to deem it a "detection", but the LIGO team is confident enough that they're using it to start piecing together a picture of black holes in the universe.

"The best guess we have is that binary black holes merge in our universe at the rate of a few per hour", says LIGO scientist Jolien Creighton of the university of Wisconsin Milwaukee.

Assuming LIGO's early data are not exceptional, scientists will soon piece together the first black hole census. Extrapolating from those two mergers in 16 days to the larger universe beyond what LIGO can see, the team calculates that a few binary black holes should merge every hour in cosmos.

"It does imply that we should have tens of detections over the next few years, and hundreds through the end of the decade", says Hanna. "That's enough to do some pretty significant astronomy. That's a big population".

Based on the signals seen so far and the sensitivity of LIGO's detectors, scientists estimate that they will see between 10 and 100 black hole mergers during the instrument's next observing run, which begins in late summer.

"When the second science run turns on, we'll be seeing more systems at rates of once every few days or weeks", Creighton adds. "And the run will also last longer, so we will be collecting more and more events".

D. Suganya (BP150327)
II M.Sc., Physics

God Particle

The "god particle" is the nickname of a subatomic particle called Higgs boson. In layman's terms, different subatomic particles are responsible for giving matter different properties. One of the most mysterious and important properties is mass. Some particles, like protons and neutrons have mass, others like photons do not.

What exactly is the Higgs boson?

The Higgs boson (or Higgs particle) is a particle that gives mass to other particles. Peter Higgs was the first person to think of it, and the particle was found in March 2013. It is part of the standard model in physics, which means it is found everywhere.

Who found the god particle?

Stephen Hawking says that "god particle" could wipe out the universe stimulated data from the large Hadron collider particle (LHS) shows the Higgs boson produced after two protons collide.

On 4th July 2012, The ATLAS and CMS experiments at CERN's LHS announced that they had each observed a new particle in the mass region

around 126Gev. This is consistent with the Higgs boson predicted by the standard model.

What is god particle?

The Higgs boson or "god particle", is believed to be the particle which gives mass to matter. The "god particle" nickname grew out of the long, draw out struggles of physicists to find this elusive piece of the cosmic puzzle.

The "Standard model" of particle in physics is a system that attempts to describe the forces, components, and reactions of the basic particles that make up matter. It not only deals with atom and their components but also with the pieces that compose some subatomic particles. This model does have some major gaps, including gravity, and some experimental contradictions.

The model predicts that there are certain elementary particles even smaller than the protons and neutrons. Each of the subatomic particle contributes to the form that causes all the matter of interactions, which are most important.
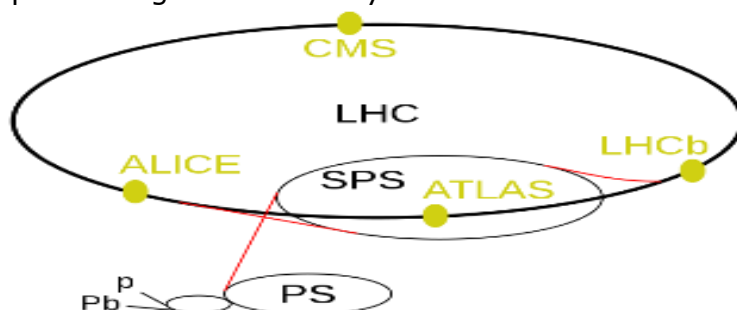
Conclusion

Science is not entirely sure. Why, some particles are seen mass-less, like photons and "massive". The standard model predicts that there is an elementary particle, the "Higgs bosons", which would produce the effect of mass. Confirmation of the Higgs boson would be a major milestone in our understanding of physics.

<div align="right">

M. Raajini (BP160328)

I M.Sc., Physics

</div>

The Large Hadron Collider

The Large Hadron Collider (LHC) is the world's largest and most powerful particle accelerator. It first started up on 10th September 2008, and remains the latest addition to CERN's accelerator complex. The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way.

Inside the accelerator, two high-energy particle beams travel at close to the speed of light before they are made to collide. The beams travel in opposite directions in separate beam pipes – two tubes kept at ultrahigh vacuum. They are guided around the accelerator ring by a strong magnetic field maintained by superconducting electromagnets. The electromagnets are built from coils of special electric cable that operates in a superconducting state, efficiently conducting electricity without resistance or loss of energy. This requires chilling the magnets to -271.3°C, a temperature colder than outer space. For this reason, much of the accelerator is connected to a distribution system of liquid helium, which cools the magnets, as well as the other supply services.

Thousands of magnets of different varieties and sizes are used to direct the beams around the accelerator. These include 1232 dipole magnets 15 meters in length which bend the beams, and 392 quadrupole magnets, each 5–7 meters long, which focus the beams. Just prior to collision, another type of magnet is used to "squeeze" the particles closer together to increase the chances of collisions. The particles are so tiny that the task of making them collide is akin to firing two needles 10 kilometers apart with such precision that they meet halfway.

All the controls for the accelerator, its services and technical infrastructure are housed under one roof at the CERN Control Centre. From here, the beams inside the LHC are made to collide at four locations around the accelerator ring, corresponding to the positions of four particle detectors – ATLAS, CMS, ALICE and LHCB.

T. Kamalesh (BP150314)
II M.Sc., Physics

Why don't people get cancer in the heart?

Normally cancer does not affect the heart, but there could be some exceptions. Tumours are classified as benign (non-cancerous) and malignant (cancerous).

Cardiac Tumours can arise from the wall of the heart chambers and also from the heart muscle. Analytical studies show that 72% of heart tumours are benign and the remaining 28% are malignant. Commonly occurring benign tumours of the heart are Myxoma (40.8%), Lipoma (14.1%), Rhabdomyoma (11.3%), Fibroma (5.3%) and Heamangioma (4.7%).

Common malignant tumours are, angiosarcoma (31.2%) Mesothelioma (15.2%), Fibro sarcoma (11.2%) and Hymphoma (5.6%).

Secondary malignant Tumours can spread through the blood stream to the heart from the kidneys, uterus, stomach, volon and lungs.

After the complete removal of benign tumours under open heart surgery, the cure rate is almost 100%, whereas the success rate is limited in malignant tumours depending upon the further spread of this tumour to other vital organs.

Why does apple turn brown on being cut?

Apple contains iron in the form of ferrous ions. These ferrous ions easily oxidize into ferric ions. This ions in the ferric state is brown in colour. When the apple is cut open the ferrous ions on the cut surface are exposed to the air. Air oxidizes them and the resulting ferric ions turn the surface brown. If cut apple is dipped in an ascorbic acid solution browning of the cut surface can be prevented as the acid inhibits activity of the enzymes.

V. Manimegalai (AU140422)
III B.Sc., Chemistry (Shift- I)

The Aroma of Rain

What causes the smell before & after rainfall?

Compounds from Bacteria

Soil dwelling bacteria called actinomycetes secrete the compound geosmin, which has an earthy aroma, when they produce spores. Rain can disturb the compound from the soil. Human nose can detect it at less than 5 parts per trillion equivalents to a teaspoon in 200 Olympic swimming pools.

Volatile Oils Secreted By Plants

Plants secrete oils in dry periods, which accumulate in rocks & soil. Rain then causes smaller, volatile compounds within them, likely created by oxidation of fats, to refer to this smell. Scientists think that the purpose of these compounds is to prohibit growth during dry periods, and limit competition for water.

Production of Ozone

In stormy weather, electrical charge can split nitrogen and oxygen in the atmosphere into individual atoms and these can combine to form nitric oxide, NO, which create other chemicals in the atmosphere. One of the chemicals that can be produced is ozone, which can be carried down from high altitudes by thunder storms, giving the 'pre-rain' smell.

Reference:www.compoundchem.com/2014/05/thesmellof rain

<div align="right">

F. Anjum Firdose (BU140454)
III B.Sc., Chemistry (Shift-II)

</div>

Newly developed dissolution of Silver by Glucose in the presence of carbonates and phosphates by IIT-Madras Researchers

In a finding that may have many implications IIT Madras researchers have found that silver can slowly dissolve in, if heated about 70^0 Celsius in the presence of glucose. As much as 0.5 weight per cent of a silver-plate can be dissolved in glucose water within a week.

Prof. T. Pradeep from the Department of Chemistry, IIT Madras and his team found that silver atoms get released from a plate in a simple, two step mechanism. Silver ions are first formed at the metal surface, which later form specific metal complexes with sugar. "Atoms are highly reactive on the surface of the metal as they are less connected and less bound and this allows the atoms to be release" said Prof. T. Pradeep. Metal dissolution leads to corrosion of the plate and nonsocial pits get formed on the plate. Further dissolution occurs at the pits and as a result the pits get bigger, making a polished silvery metal appear black. Under favourable conditions up to 10% of the metal can be dissolved in 90 days. "We have been studying the effect of metals in food and how toxic metals get into our food chain from soil, water and fertilizers," he said. Silver foils are used to decorate sweets and often such foils are eaten along with the sweets. In the past silver vessels were used for cooking and even today silver plates are used.

"So, we are curious to know the interaction of silver with foods, especially sweets. This prompted us to study the interaction of sugar with silver," said Prof. T. Pradeep.

Dissolution of silver by glucose directly from the metallic state gets enhanced in the presence of ions such as carbonates and phosphates. The study found an enhancement of silver dissolution in glucose as about 10 and 7 times in the presence of 50ppm of phosphate and carbonate respectively.

But in the absence of Glucose, phosphate and carbonate were found to have no significant effect on silver dissolution.

"We store water in vessels made of different metals. We don't know what happens to that after. When we cook food especially, with lot of spices which are highly reactive we may be consuming some metal that would damage the health of our population by using poor quality vessels", he warned.

"Chemistry of sugar on metal surface can have tremendous impact on our population. Ingredients of steel, copper and brass can dissolve in water and get accumulated in our food. "The extent to which dissolution occurs is much larger than the permissible limits of many metals in water," he stressed.

The newly developed method can extract silver effectively by a simple and green method. It does not require any harmful chemical or high temperature or expensive set up.

Reference: The Hindu dated 6th June, 2016.

R. Sangeetha Priya (BU140425)
III B.Sc., Chemistry (Shift-II)

Learning Styles and Teaching Styles

Learning Styles

Learning styles differ from one individual to another in learning. An individual's learning style **"is the way he or she concentrates on, processes, internalizes, and remembers new and difficult academic information or skills"**. Individuals' approach to learning differently is due to differences in their learning styles.

According to Sarasin, **"teaching cannot be successful without the knowledge of learning styles and a commitment to matching them with teaching styles and strategies"**.

Some research has found a relationship between occupational preferences and learning style type. Individuals pursuing careers in information technology (IT) typically encounter a professional work environment that exploits extensive problem solving which draws upon their abilities with a kinesthetic learning style.

Characteristics of Learners

- Visual
- Tactile/Kinesthetic
- Abstract/Sequential
- Random/Concrete
- Cognitive

- Perceptual
- Behavioural/Affective
- Analytic
- Imaginative
- Dynamic
- Reflective
- Active

Teaching Styles

The idea of teaching styles is quite different from the method of instruction used by a teacher. It refers to a classroom mode, a pervasive way of approaching the learners that might be consistent with several modes of teaching.

Characteristics of Teachers

- Authoritative or lecture style
- Demonstrator or coach style
- Facilitator or activity style
- Delegator or group style
- Hybrid or blended style

Should Instructors Change Their Teaching Styles?

The following points illustrate some of the concerns instructors have about learning styles and teaching:

- Students should be responsible for their own learning.
- Most instructors teach as they were taught.
- Changing one's teaching style may not benefit many students.
- Changing one's teaching style may limit the instructor's ability to impart all the information that is necessary.

Teachers must recognize that there are differences in the ways that students learn. If instructors cannot justify changes in their own teaching styles, they should help their students understand how some learning styles can be adapted to their own teaching styles.

Teaching & Learning

A mismatch between the teaching style of a faculty and the learning style of the students has been shown to display the difference between how the faculty teaches and how students learn. This mismatch results in an ineffective learning process in the classroom.

Teachers must understand the learner (students) and be learner - centered. The increasingly diverse student body requires the use of a wide variety of teaching methods and materials.

Four steps for teaching more effectively at the post secondary level.

- Firstly, teachers must understand how they learned.
- Secondly, teachers must consider how they teach since they tend to teach towards then own learning preferences.

- Thirdly, teachers must assess how their students learn. And must find ways to accommodate their students' learning styles.
- Finally, when students understand their learning style preferences, research has shown that they become successful learners.

When teachers and students understand how they learn and their preferred ways to learn, the probability for learning increases.

I wish all of you to have a wonderful teaching and learning experience in our esteemed institution.

V. Divya (AU140514)
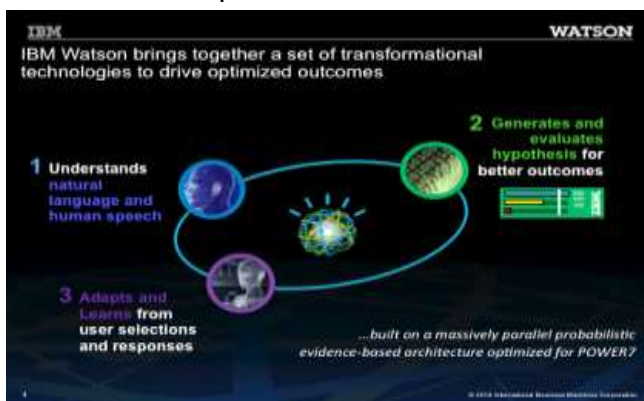III B.Sc., Computer Science (Shift-I)

IBM Watson

IBM Watson is a technology platform that uses natural language processing and machine learning to reveal insights from large amounts unstructured data. Watson is an IBM supercomputer that combines Artificial Intelligence (AI) and sophisticated analytical software for optimal performance as a "question answering" machine. The super computer is named after IBM's founder, Thomas J. Watson. The Watson supercomputer processes at a rate of 80 teraflops (trillion floating-point operations per second). To replicate (or surpass) a high-functioning human's ability to answer questions, Watson accesses 90 servers with a combined data store of over 200 million pages of information, which it processes against six million logic rules. The device and its data are self-contained in a space that could accommodate 10 refrigerators.
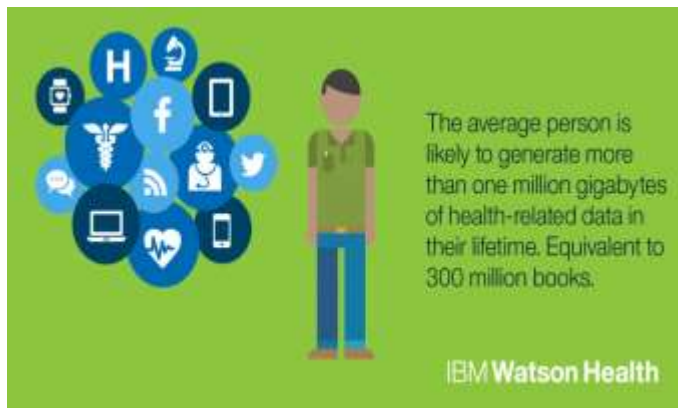
Data Analysis Computing

Watson represents an innovation in Data Analysis Computing. It means Watson can parse natural language better than anything out there. In the system we use today, the user formulates a question, pulls out 2-3 keywords, sends them to a search engine which gets documents with the keywords present within and sends them back to the user, who reads the document and analyzes the results. All of the real "work" is done by the user. But a better system is one in which the user asks a natural language question,

- ➢ The "expert" understands the question,
- ➢ Produces answer and evidence,
- ➢ Analyzes the results,
- ➢ Produces a statement about how confident it is in the answer,
- ➢ And returns its findings to the user.

This "expert" role is used to be filled by librarians. Watson is capable of doing this in less time and with a much larger set of resources than any human librarian could.

Automatic Open-Domain Question Answering

This type of computing is called Automatic Open-Domain Question Answering. Given a natural language question and resources, it should return

- ➢ Precise answers,
- ➢ Accurate confidence,
- ➢ Justifications,
- ➢ And a fast response.

Before Watson, the best a programme could do would either be the first two of these, or the last, but rarely all four.

Watson in Health Care

One such use of Watson is in the health care system. Medicine is the ultimate information-based profession. Medical students are required to memorize thousands of facts and terms. Especially in the field of differential diagnosis, the ability to quickly access any of those thousands of facts can make or break a case. IBM is currently working on a programme to assist doctors in the differential diagnosis process. Not only does it take input of symptoms from the doctor, it looks through the patient's file for important details like age, trips out of the country, family history, or critical things like pregnancy, and prompts to ask further questions about the patient. Then it can suggest a list of possible diagnoses with their relative confidences and justifications. This is especially important in differential diagnosis because Watson would not return one answer, but a group with varying statistical probability. After all, the most statistically likely disease is not necessarily the one the patient has.

Watson in Higher Education

Watson can be used in higher education. Higher education is essential for a flourishing economy. People with less schooling put a drag on the workforce. Higher education produces people who are capable of being the "expert" though education takes years to create a talented person like the one that could be utilized by companies similar to IBM. Like a single person with a high school diploma working on a system like a Watson could do the work of a college intern. By using Watson, one could expand the effective talent base, improving the economy and thus the government. With a stronger and well-funded country there would be more support for utilities, healthcare, and public education, starting the cycle again.

D. Revathy (AU140543)

III B.Sc., Computer Science (Shift -I)

Big Data and Agriculture

As we wait with baited breath for the Green Revolution 2.0, it is time to see 'Big' in agriculture. 'Big' not just in terms of investment, infrastructure and production but also in terms of data. We don't live in an era where a farm in the isolated hinterlands of Karnataka would rely on luck to plan their sowing or harvesting schedules. Today, farmers the world over are adapting to, what is called 'precision agriculture'. As we gear up to become home to 9.2 billion people by 2050, economies are also preparing to increase their food production by almost 70%. In such cases, science and technology are the only way that one can prepare for the future. If we are going to leave our next generations with the burden of mouths to feed, we must also leave them with the solution to such problems. Using science and technology, especially the newly evolved 'big data' & analytics tools, farmers can be equipped with the knowledge on weather, soil quality, seed quality and best of farming techniques.

This will help them undertake farming against a pre-determined schedule, than just doing a trial and relying on luck! That is what is known as precision farming. **Bigdata** can turn simple information into great insights for everyone to rely on. It facilitates connection of people i.e., farmers, communities and markets to exchange information and solutions. More importantly it can help families move away from hit and trial methods of sowing, and rather make decisions that are based on specific scientific evidence and insights. Big data analytics can usher in an era where our farmers will be devoid of myths and superstitions, an era when plain, simple, data based verifiable facts will govern their decision making. Often misunderstood as highly complex. Big data is actually large and diverse data sets, which are generated from farm instruments, internet transactions and other digital sources. This data then can be churned effectively using analytical software technology to map information on parameters like monsoon trends, soil quality, use of pesticides etc. and convert them into meaningful information.

But with farmers progressing to mobile phones and social media, we are in the process of generating those diverse data sets. The need of the hour is that farmers are given accurate weather forecasts, agriculture models and accurate information on the inputs they are relying on. Especially, use of pesticide levels can be definitely better monitored using big data technology.

Imagine a time when farmers can grow crops that fit beautifully with what nature has to offer, where farmers know in advance when it would rain, and when they would benefit from low costs of production. Big Data analytics ensures that such structured and systematic interventions can be achieved sooner than later.

<div style="text-align:right">

V. Infant Sasi Kumar (BR160501)
M.Phil., Computer Science

</div>

Internet of Things

The Internet of Things (IoT) is an emerging topic of technical, social, and economic significance. Consumer products, durable goods, cars and trucks, industrial and utility components, sensors, and other everyday objects are being combined with Internet connectivity and powerful data analytic capabilities that promise to transform the way we work, live and play.

The Internet of Things raises significant challenges - headlines about the hacking of Internet-connected devices, surveillance concerns, and privacy fears already have captured public attention. Technical challenges remain and new policy, legal and development challenges are emerging.

IoT Definitions

The term Internet of Things generally refers to scenario where network connectivity and computing capability extends to objects, sensors and everyday items not normally considered computers, allowing these devices to generate exchange and consume data with minimal human intervention. There is, however, no single, universal definition.

Enabling Technologies

The concept of combining computers, sensors, and networks to monitor and control devices has existed for decades. The recent confluence of several technology market trends, however, is bringing the Internet of Things closer to widespread reality. These include *Ubiquitous Connectivity*, *Widespread Adoption of IP-based Networking*, *Computing Economics*, *Miniaturization*, *Advances in Data Analytics*, and the *Rise of Cloud Computing*.

Connectivity Models

IoT implementations use different technical communication models, each with its own characteristics. Four common communication models described by the Internet Architecture Board include: *Device-to-Device, Device-to-Cloud, Device-to-Gateway*, and *Back-End Data-Sharing*. These models highlight the flexibility in the ways that IoT devices can connect and provide value to the user.

Key IoT issue areas

Security: While security considerations are not new in the context of information technology, the attributes of many IoT implementations present new and unique security challenges. Addressing these challenges and ensuring security in IoT products and services must be a fundamental priority. Users need to trust that IoT devices and related data services are secure from vulnerabilities, especially as this technology become more pervasive and integrated into our daily lives. Poorly secured IoT devices and services can serve as potential entry points for cyberattack and expose user data to theft by leaving data streams inadequately protected.

Privacy: The full potential of the Internet of Things depends on strategies that respect individual privacy choices across a broad spectrum of expectations. The data streams and user specificity afforded by IoT devices can unlock incredible

and unique value to IoT users, but concerns about privacy and potential harms might hold back full adoption of the Internet of Things. This means that privacy rights and respect for user privacy expectations are integral to ensuring user trust and confidence in the Internet connected devices, and related services.

Inter-operability/Standards: Full interoperability across products and services is not always feasible or necessary; purchasers may be hesitant to buy IoT products and services if there is integration inflexibility, high ownership complexity, and concern over vendor lock-in. In addition, poorly designed and configured IoT devices may have negative consequences for the networking resources they connect to and the broader Internet. Appropriate standards, reference models, and best practices also will help curb the proliferation of devices that may act in disrupted ways to the Internet. The use of generic, open, and widely available standards as technical building blocks for IoT devices and services (such as the Internet Protocol) will support greater user benefits, innovation and economic opportunity.

Legal, Regulatory and Rights: The use of IoT devices raise many new regulatory and legal questions as well as amplifies existing legal issues around the Internet. The rapid rate of change in IoT technology frequently outpaces the ability of the associated policy, legal, and regulatory structures to adapt. One set of issues surrounds cross border data flows, which occur when IoT devices collect data about people in one jurisdiction and transmit it to another jurisdiction with different data protection laws for processing. Further, data collected by IoT devices is sometimes susceptible to misuse, potentially causing discriminatory outcomes for some users. Other legal issues with IoT devices include the conflict between law enforcement surveillance and civil rights; data retention and destruction policies; and legal liability for unintended uses, security breaches or privacy lapses. While the legal and regulatory challenges are broad and complex in scope, adopting the guiding Internet Society principles of promoting a user's ability to *connect, speak, innovate, share, choose*, and *trust* are core considerations for evolving IoT laws and regulations that enable user rights.

Emerging Economy and Development Issues: The Internet of Things holds significant promise for delivering social and economic benefits to emerging and developing economies. This includes areas such as sustainable agriculture, water quality and use, healthcare, industrialization, and environmental management, among others. The broad scope of IoT challenges will not be unique to industrialized countries. Developing regions also will need to respond to realize the potential benefits of IoT. In addition, the unique needs and challenges of implementation in less-developed regions will need to be addressed, including infrastructure readiness, market and investment incentives, technical skill requirements, and policy resources.

<div style="text-align: right">

S. Subashini (BR160502)
M.Phil., Computer Science

</div>

To search the web more effectively

Now a days, we are all using web search very often and we do not get accurate result in a short time. It consumes more time and cost. So, use the following tips to search the web more effectively:

Key Word	Definition	Example
define	It provides a definition of a word.	define:computer
related	It finds pages related to or similar to the mentioned site	related:www.wikipedia.com
filetype	It searches for a particular type of file, (eg) power point (ppt) or Adobe (pdf) or Word (doc) and etc. Here the search word is organizational behaviour.	organizational behaviour filetype:ppt
site	It searches a specific website or part of a domain (eg. com, in, edu, org and etc.,)	www.shctpt.edu site:edu
inurl	It searches the URL of a page	inurl:communication
intitle	It searches for a word in the title of a page	intitle:computer
allintitle	It searches for more than one word in the title of a page	allintitle:the great saint

OR

Use this link to search: https://www.google.co.in/advanced_search

C. Sathishkumar (BR160503)
M.Phil., Computer Science

Blue Brain

It is the name of the world's first virtual brain, a machine that can function as human brain. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man. So, even after the death of a person we will not lose the knowledge, intelligence, personality, feelings and memories of that man which can be used for the development of the society. No one has ever understood the complexity of human brain. It is complex than any circuitry in the world. "Is it really possible to create a human brain?" The answer is "Yes". Till recent years man has created all without computer which means he followed only natural ways. Technology is growing faster than everything. IBM is now in research to create a virtual brain, called "Blue brain". If possible, this would be the first virtual brain of the world. Within 30 years, we will be able to scan ourselves into the computers. Is this the beginning of eternal life?

Why do we need Virtual Brain?

Intelligence is the inborn quality that cannot be created. Some people have this quality, so that they can think up to such an extent where others cannot reach. Human society is always in need of such intelligence. But the intelligence is lost along with the body after death. The virtual brain is a solution to it. The brain and intelligence will be alive even after death. Such as people's names, their birthdays, and the spellings of words, proper grammar, important dates, history, facts, etc.

<div align="right">

R. Celestin Monica (BR160504)
M.Phil., Computer Science

</div>

5 PEN PC

NEC Corporation is on the way to invent five pen PC which is commonly known as P-ISM i.e. Pen-style Personal Networking Package. The concept of the pen computer was given in 2003. It was featured at ITU Telecom World which took place in Geneva, Switzerland.

Five pens correspond to five functions: a camera, virtual keyboard, CPU, pen with a cellular phone and a projector. The display is an LED projector having A4 size (Approx. 1024 x 768) pixel value size. It has a virtual keyboard with 3D IR sensor. We have a digital camera used for video recording and video conferencing. The purpose of communication is to exchange information with wireless connection. The size of the battery is small and can be used for more than 6 days once it is fully charged. These five parts are connected to each other with a short-range wireless technology. Cellular phone helps to connect the device to the internet.

It is practical, easily portable, based on electronic perception technology and Wi-Fi technology. Though the concept has already been given the device has not reached the consumer till now. The cost will be too high to afford for a common man.

<div align="right">

R. Manju (BR160505)
M.Phil., Computer Science

</div>

ZIGBEE

ZigBee is an open technology developed by the ZigBee Alliance to overcome the limitations of BLUETOOTH and Wi-Fi. ZigBee is an IEEE 802.15.4 standard for data communications with business and consumer devices. It is designed around low-power consumption allowing batteries to essentially last forever. BLUETOOTH as we know was developed to replace wires and Wi-Fi to achieve higher data transfer rate, as such till now nothing has been developed for sensor networking and control machines which require longer battery life and continuous working without human intervention. ZigBee devices allow batteries to last up to some years using primary cells (low cost) without any chargers (low cost and easy installation).

The ZigBee standard provides network, security, and application support services operating on top of the IEEE 802.15.4 Medium Access Control (MAC) and Physical Layer (PHY) wireless standard. It employs a suite of technologies to enable scalable, self-organizing, self-healing networks that can manage various

data traffic patterns. The network layer supports various topologies such as star, clustered tree topology and self-healing mesh topology which is essential in Smart dust. Apart from easy installation and easy implementation ZigBee has a wide application area such as home networking, industrial networking, Smart dust and many more, having different profiles specified for each field.

K. Subalakshmi (BR160507)
M.Phil., Computer Science

Machine Learning

Machine learning is a subfield of computer science that evolved from the study of pattern recognition and computational learning theory in artificial intelligence In 1959, Arthur Samuel defined machine learning as a "Field of study that gives computers the ability to learn without being explicitly programmed". Machine learning explores the study and construction of algorithms that can be learned from and make predictions on data. Such algorithms operate by building a model from example inputs in order to make data-driven predictions or decisions, rather than following strictly static program instructions. Machine learning is employed in a range of computing tasks where designing and programming explicit algorithms is unfeasible. Example applications include spam filtering, optical character recognition (OCR) search engines and computer vision. Machine learning is sometimes conflated with data mining where the latter sub-field focuses more on exploratory data analysis and is known as unsupervised learning.

There are 3 Types of Machine Learning Algorithms

1. Supervised Learning

How does it work? This algorithm consists of a target/outcome variable which is to be predicted from a given set of predictors. Using these set of variables, we generate a function that maps inputs to desired outputs. The training process continues until the model achieves a desired level of accuracy on the training data. Examples of Supervised Learning: Regression, Decision Tree, Random Forest, KNN, Logistic Regression etc.

2. Unsupervised Learning

How does it work? In this algorithm, we do not have any target or outcome variable to predict estimate. It is used for clustering population in different groups, which is widely used for segmenting customers in different groups for specific intervention.

3. Reinforcement Learning

How does it work? Using this algorithm, the machine is trained to make specific decisions. It works this way: the machine is exposed to an environment where it trains itself continually using trial and error. This machine learns from past experience and tries to capture the best possible knowledge to make accurate business decisions. Example of Reinforcement Learning: Markov Decision Process

Applications for machine learning include the following,

- Adaptive websites
- Affective computing
- Bio-informatics

- Brain-Machine Interfaces
- Chem-informatics
- Classifying DNA sequences
- Computational Anatomy
- Computer Vision, including Object Recognition
- Detecting credit card fraud
- Game Playing
- Information Retrieval
- Internet Fraud Detection
- Marketing
- Machine Perception
- Medical Diagnosis
- Natural Language Processing
- Natural Language Understanding
- Optimization And Metheuristic
- Online Advertising
- Recommender Systems
- Robot Locomotion
- Search Engines
- Sentiment Analysis (Or Opinion Mining)
- Sequence Mining
- Software Engineering
- Speech and Handwriting Recognition
- Stock Market Analysis
- Structural Health Monitoring
- Syntactic Pattern Recognition

M. Anjali (BR160508)
M.Phil., Computer Science

3D Printing a Special Hand

3D printing is reaching new heights and will expand possibility in ways we never dreamed.

Take a hard look at the hand you used an instant ago to click on this website. Now consider trying to work through the last 15 minutes of your life without that hand. No really… take a moment!

I just got up, made my bed, made coffee, brushed my teeth, changed my clothes and sat down to write this article before the kids got up. In a few minutes I'll need to zoom around getting breakfast for everyone, watering some fragile garden plants on my deck, fold one load of laundry, and sort through months of bills to find two pieces of mail so my daughter can go to get her driver's license renewed today.

Nothing I just mentioned, or the typing I used to mention it, could be done easily or quickly if I were missing a hand.

It could be argued that after the part of our brain that allows us to think critically, our hands are our highest evolutionary advantage. The world is our oyster as long as we have hands to shape our future.

And even if I could afford to get an advanced prosthesis of some sort, I would have to spend hundreds of thousands of dollars which is way outside the reach of most.

Not anymore

The Open Hand Project plans to revolutionize this industry by creating prosthetic limbs using a – 3D PRINTER. At 23 years robotics expert Joel Gibbered came up with a genius alternative which would cost around $1000.

The first-class engineering graduate has created *The Dextrus* hand; a fully-working prototype built using a 3D printer. Dextrus works like a human hand, using electric motors instead of muscles and steel cables instead of tendons. The 3D printed plastic parts work like bones and a rubber coating acts as the skin. It takes around eight hours to print one and it looks like genius!

Made to Endure

One of the most expensive aspects of leading robotic prosthetic hands is the materials that are used to create them. Titanium and Carbon fiber enable these devices to be used all day and not wear out after a few months, but when designing on a budget these luxuries aren't available. ABS plastic will be used to create the majority of the parts in the Dextrus hand. That's the same tough, durable material that Lego is made from.

The plastic parts are created using 3D printers. In the past couple of years there has been a revolution in 3D printing, a worldwide community of enthusiasts has brought the price of these devices down. With this collective experience they've created accurate, high resolution 3D printers that are capable of making the intricate parts required to build a device like this at an affordable cost. This means that if a part does wear or break, a replacement can simply be printed and it can be replaced. The parts are so cheap that you can even have a handful of spare fingers just in case. The Dextrus hand is designed to make replacing parts quick and easy.

The fact is that this technology is an opening source and will expand exponentially. Fabulous! Good news for a change! (The only kind you'll get on Ever Widening Circles!)

That's all for now on EWC. Now with a spring in your step and knowing that the world is still an amazing place, head out! Stay open, stay curious and stay hopeful!

C. Bharathi (BP160504)
I M.Sc., Computer Science

Emerging Technologies

Cloud Jacket

Cloud jacket is a beautiful emerging technology developed by Alabama university researchers. The main goal is to provide local cloud computing service. Cloud Jacket is developed by Rahip Haasen and Rasip Khan. It includes 10 micro-chip computers. We can send information through mobile, smart watch, tablet etc. The information will be stored in micro-chip computers. It is possible to share information with locally connected instruments. It provides fast service and can be worn anywhere. It has 10 GB RAM, 320 GB Hard disk, Bluetooth and Wi-Fi facility. If two or more jackets are in the same place connecting those jackets it is possible to develop a big cloud service.

60 Tera-byte Hard drive

Seagate company has introduced 60 tera-byte storage capacity smart SSD. Nowadays people mostly like to watch videos. They need more storage space, the main problem is there is no storage space. One of the top most and the world's largest storage capacity hard drive is by Seagate Company. It has the capacity to store 12000 DVD and 40 crore photos.

Laser TV:

Laser TV replaces LCD and LED TV. Nowadays most people are using LED TV in their houses. In future laser TV will replace this. Laser TV is developed by Highsense company in China. It is a kind of project which shows the scene in large screen compared to LED and LCD TV.In 2013, LG developed a laser projector but it shows only limited scenes. If we change the size of the China projector it adapts the change, it gives the fairly accurate scene. Approximation was tested many times. The cost of this Laser TV is 10,000 dollars.

D. Divya (BP150526)
II M.Sc., Computer Science

Google Driverless Car

Google Self-Driving Car is an autonomous car, developed by Google X as part of its project to develop technology, mainly for electric cars. An automatic car, also known as a driverless car, self-driving car and robotic car, is an automated or autonomous vehicle capable of fulfilling the main transportation capabilities of a traditional car. As an autonomous vehicle, it is capable of sensing its environment and navigating without human input. The team developing this car consists of 15 engineers working for Google.

Google Self-Driving Car, commonly abbreviated as SDC, is a project by Google X that involves developing technology for autonomous cars, mainly electric cars. The software powering Google's cars is called Google Chauffeur. Lettering on the side of the car identifies it as a "self-driving car.

Miles has the Google car

Google's self-driving cars, of which there are usually a dozen on the roads of California and Nevada at any given time, have now logged **700,000 miles** of awesome accident-free autonomous driving.

Cost of self-driver car

According to a recent study, "Emerging Technologies: Autonomous Cars Not If, But When," IHS Automotive forecasts that the price for the self-driving technology will add between **$7,000** and **$10,000** to a car's sticker price in 2025, a figure that will drop to around **$5,000** in 2030 and about **$3,000** in 2035, the year when safety is the unifying principle behind the engineering and design of Google's car, that applies to the size, shape, materials and even the lack of horsepower.
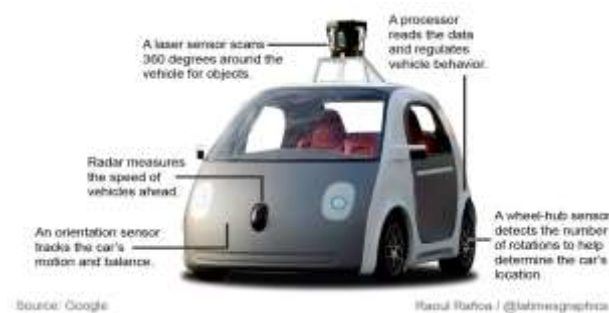
The car is limited to a maximum speed of 25 miles per hour, the speed covers driving in most cities. It's legal to drive 25 miles per hour on a street with a 35 mile per hour limit. The slower a car goes the less kinetic energy is involved in a crash, so there's less potential for destruction. Powered by an electric motor with around a 100 mile range, the car uses a combination of sensors and software to locate itself in the real world combined with highly accurate digital maps. A GPS is used, just like the satellite navigation systems in most cars, to get a rough location of the car, at which point radar, lasers and cameras take over to monitor the world around the car, 360-degrees.

The software can recognize objects, people, cars, road marking, signs and traffic lights, obeying the rules of the road and allowing for multiple unpredictable hazards, including cyclists. It can even detect road works and safely navigate around them. The new prototype has more sensors fitted to it that can see further (up to 600 feet in all directions) and in greater detail than the ones available on the previous repurposed Lexus and Toyota vehicles.

The car itself is limited to 25 mph, which restricts it to certain roads, but also minimizes the kinetic energy it could carry into a crash if one should happen. The front of the car is also made to be as kind to pedestrians as

possible with a foam bumper and a flexible windscreen that is designed to absorb energy from an impact with a person's body.

Seat belts are also provided – a safety requirement for vehicles on the road – while the car has redundant systems, a "fault-tolerant architecture" as Google calls it, for both steering and braking, if the primary systems fail; plus there is an emergency stop button that passengers can press at any time.

Google has also taken the data and behaviours it has learned from its previous vehicles, to create a defensive, considerate driving style that is meant to protect both the passengers and other road users. For instance, the car will wait a second after the traffic lights turn green before it moves off, although this could incur the anger of drivers behind.

Google also says that making it drive in a natural and predictable way has been one of the key goals, so that it behaves in a familiar way on the road along with and for other drivers.

As conclusion Google driverless car can be used easily and safely, regardless of one's ability to drive. Our self-driving cars are designed to navigate safely through city streets.

<div align="right">
S. Divya (BP160513)
I M.Sc., Computer Science
</div>

With Skin Track, Your Arm is the Touchpad

Introduction

When smart watches started appearing on store shelves, there was one nagging question about the devices: "How can anyone play Angry Birds on this?" and the solution is imminent. Researchers of Carnegie Mellon University have made this

possible. It works on our fore arm. And it is Skin Track System. It works great iPhone devices. Great thing about this is that it's not obtrusive. Watches and rings are items that people already wear every day!

Working

Skin Track system are made up of two primary Components,

- Signal-emitting ring that's worn in the index finger
- Sensing band

Human skin is a good conductor of electricity, the ring sends high-frequency electrical signals through the skin, and electrodes in the sensor band detect the signal's phase differences to track distance and movement.

As our devices get shrink researchers are in search of a new technology to interact with humans. This often means taking the surface of interaction off of our

phones and tablets and moving it elsewhere where there is more convenience. Our skin conducts electricity, and touch-screens already rely on the minute electrical forces at the tips of our fingers to track movements. The researchers say that their system can read movements with 99 percent accuracy, and with an average error of only 7.6 millimeters. It still works on hairy arms and through thin shirtsleeves, though its accuracy diminishes slightly.

Summary

The technology is safe. No evidence suggests that the ratio frequently signals used by Skin Track. It works with no effect to humans.

References

1. www.cmu.edu/news/stories/skintrack-technology
2. With Skin Track, Your Arm is the Touchpad, by Nathaniel Scharping.

R. Prabu (BP150504)
II M.Sc., Computer Science

Satellite Networking

Satellites are the height of modern communications technology. They provide global wide access to information by transmitting radio signals from orbit around the earth. Communication satellites are used in networks by retransmitting signals from a ground base to a large area of the earth.

A communications satellite is a specialized wireless receiver / transmitter - receiving radio waves from one location and transmitting them to another that is launched by a rocket and placed in orbit around the earth. Today, there are hundreds of commercial satellites in operation around the world. Those satellites are used for such diverse purposes as wide-area network communications, weather forecasting, television broadcasting, amateur radio communications, Internet access and the Global Positioning System. Satellites have many important uses, not just communications.
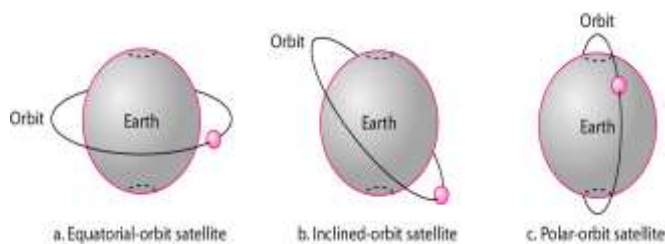
A satellite's job in the communications network is to serve as a repeater. That is, it receives a signal from one location and rebroadcasts it, so another station can receive the signal. Reception and retransmission are accomplished by a transponder. A typical satellite has 32 transponders.

a. Equatorial-orbit satellite   b. Inclined-orbit satellite   c. Polar-orbit satellite

Based on location, the orbits are divided into **three categories:**

- **GEO:** Geostationary Earth Orbit.
- **MEO:** Medium Earth Orbit.
- **LEO:** Low Earth Orbit.
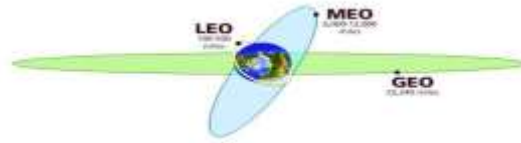
Orbits

- ❖ An artificial satellite needs to have an orbit i.e., the path in which it travels around the Earth.
- ❖ The orbit can be equatorial, inclined, or polar.
- ❖ The period of a satellite i.e., the time required for a satellite to make a complete trip around the Earth, is determined by Kepler's law, which defines the period as a function of the distance of the satellite from the center of the Earth.

Footprint

- ❖ The area of the Earth's surface from which an earth station can transmit to or receive from a particular satellite.
- ❖ The signal from a satellite is normally aimed at a specific area called the footprint.

How Satellite Works

The frequencies reserved for satellite microwave communication are in the gigahertz (OHz) range. Each satellite sends and receives over two different bands.

   i) Transmission from the Earth to the satellite is called the **uplink**.

   ii) Transmission from the satellite to the Earth is called the **downlink**.

Advantages of Satellites

- ❖ The coverage area of a satellite greatly exceeds that of a terrestrial system.
- ❖ Transmission cost of a satellite is independent of the distance from the center of the coverage area.
- ❖ Satellite to satellite communication is very precise.
- ❖ Higher Bandwidths are available for use.

Disadvantages of Satellites

- ❖ Launching satellites into orbit is costly.
- ❖ Satellite bandwidth is gradually used up.
- ❖ There is a larger propagation delay in satellite communication than in terrestrial communication.

Summary

- ❖ A satellite network uses satellites to provide communication between any points on Earth.
- ❖ A Geostationary Earth orbit (CGEO) is at the equatorial plane and revolves in phase with Earth.
- ❖ Global Positioning System (CGPS) satellites are Medium-Earth-Orbit (MEO) satellites that provide time and location information for vehicles and ships.

❖ Iridium satellites are Low-Earth-Orbit (LEO) satellites that provide direct universal voice and data communications for handheld terminals.

G. John Benetic (BP150506)
II M.Sc., Computer Science

Tunicates

Tunicates are marine invertebrate animals (animals lacking a backbone) that are commonly found attached to rocks in the coastal ocean. If you spend time around harbours and marinas you are likely to have seen them attached to docks and pier pilings. Tunicates have a swimming larval stage, but during their adult stage most species are permanently attached to a substrate. Tunicates may be solitary (single animals, like humans) or colonial (living attached to one another, like corals). Tunicates are known as sea squirts because they circulate water inside. Tunicates are diverse. There are 2,500 named species of tunicates, of which 140 of them live in the Caribbean. There are around 60 species in the Bocas del Toro region. Four newly discovered species from Bocas are now being described (two of them in the pictures).Tunicates help fight cancer because they do not have any external skeleton, tunicates use chemicals to protect themselves. Some tunicate chemicals are proven to act against cancer cells. Others can kill bacteria and fungus resistant to antibiotics. The chemical Ecteinascidin ET743 from Ecteinascidia turbinata has been shown to act against sarcomas. Some species are invasive and cause problems for aquaculture. They grow on mussel and oyster shells, compete with them for space and increase the weight of the culture. Billions of dollars are wasted just cleaning this shells. Tunicates are the only animals that reverse their blood circulation. Their heart is tubular and they have two pace-makers which take turns. The tunics that cover their body is a living tissue with blood vessels. It is equivalent to our connective tissue underneath the skin. But they have it outside the skin. Tunicates are the animal group most closely related to vertebrates. Their larva is called tadpole and has chordate features, like a tail with a stiff rod called a notochord and a nerve cord like our spinal cord.

A. Gayathri (BP150903)
II MSc., Biochemistry

Health Benefits of Aloe Vera Juice

Aloe vera is the species of the succulent plant and has thick fleshy stems with spiny leaves. The fleshy stem contains the Aloe vera juice which is an excellent home remedy. It is used in every medicinal, cosmetic, health treatment and also in your regular diet.

How to make Aloe vera juice

- Cut and open a few stems of the plant from the middle part. Choose the outer stems as they are the most mature of all and has highest concentration of antioxidant.
- The liquid which oozes out is the fresh aloe gel.

- Squeeze out the entire gel from the stem and store in bowl.

- Put the gel in a blender and add around 1 cup of water.

- Blend them to get pure Aloe vera juice. Use the prepared juice within 3 - 4 days, otherwise the juice will lose antioxidant.

Aloe vera Juice Health Benefits
- Curing the bowel problem due to its high anti-inflammatory properties.

- Aloe vera contains over 200 active components including vitamins, minerals, amino acids, enzymes, polysaccharide, and fatty acids no wonder it's used for such a wide range of remedies. The bulk of the Aloe vera leaf is filled with a clear gel-like substance, which is approximately 99% water.

- Aloe vera contains many vitamins including A, C, E, folic acid, choline, B1, B2, B3 (niacin), B6. Aloe vera is also one of the few plants that contain vitamin B12.

- Some of the 20 minerals found in Aloe vera include: calcium, magnesium, zinc, chromium, selenium, sodium, iron, potassium, copper and manganese.

- Most people are living and subsisting on mostly acidic foods. For great health, remember the 80/20 rule – 80% alkaline forming foods and 20% acidic. Aloe vera is an alkaline forming food. It alkalizes the body, helping to balance overly acidic dietary habits**.**

- Mix 2 teaspoon of fresh Aloe vera juice with 1 glass of water and consume regularly in the morning. It helps to treating ulcer and detoxifies the digestive system of our body**.**

G. Kalpana (BP150910)
II M.Sc., Biochemistry

15 Inspiring Life Lessons We Can All Take From MS Dhoni: The Untold Story

The much-awaited biopic of MS Dhoni is just released and it has opened to mixed reviews. The film obviously had a few shortcomings but, if you pass it all,

it does have a few lessons to take home. I mean, if the story of a pump operator's son who went on to become the face of Indian cricket does not motivate, then it would certainly be a waste of time watching it.

Source: Backbenz

So, here are a few life lessons we learnt from the movie:

1. Shoot for the stars & always dream big

Dhoni's father was a pump operator. When Dhoni got a job in the railways, he was more than happy. But, Dhoni had a bigger dream, a dream that led him to be India's greatest cricket captain. It's like they say, aim for the stars and you might just hit the moon.

Source: Bollywood Life

2. You shouldn't always listen to your parents

As a child, all Dhoni got from his dad was, "Khel khud apni jagah hai, lekin padhoge likhoge toh kisi layak banoge". When Dhoni got a job offer from the Indian Railways, his dad was overjoyed and MSD took the job just to make his dad happy. But, when he realised that the job of a TC was holding him back, he immediately quit, despite his father's protests. The rest, as we know, is history.

Source: utopeen

3. Stay humble & never stop learning from your peers

Dhoni had a reputation of being an aggressive batsman from a very early age, but, he didn't let his ego stop him from learning from others. He learned the helicopter shot from his friend, which later on became a trademark shot of Captain Cool.

Source: Catch News

4. Never let your opponents or your obstacles overwhelm you

While playing against Punjab, India's star, Yuvraj Singh scored a mammoth individual innings of over 300 runs, more than the total that Dhoni's entire team posted. Dhoni was impressed by Yuvi's skills but acknowledged that they lost the match even before it began, all because his team was blown away by Yuvraj's attitude and reputation.

Source: Outlook

5. Accept your failures and learn from them

Dhoni was a cricket sensation in his school and everyone used to shower him with praise. However, when he didn't make it to the U-19 team, everyone around him was disappointed, but, Dhoni decided to throw a party, because he appreciated the reality check of the snub and worked harder to get to where he is now.

Source: Bollywood Life

6. Never ever shy away from hard work

Dhoni used to finish his 3-hour-long examination in just 2 hours 30 minutes to go and practice with his club. He managed his studies and his passion together. Even after getting a full-time job, he never missed a practice session and that too after toiling hard at the railway station every day.

Source: Indian Express

7. It's okay to feel disheartened sometimes

Dhoni did everything he could to make it to the Indian team, but, in the beginning things just did not work out for him. He was obviously disheartened

but he didn't give up. He kept going until he finally made it to the playing eleven of the men in blue.

Source: The Typical Indian

8. Leave your comfort zone if you want to achieve something extraordinary

Dhoni had a permanent government job. His family was happy and he could have lived a well-off life too. But, he took a giant leap instead. He took the risk because he didn't want to live the regular life.

Source: NDTV

9. Don't care about what others will say and always follow your heart

Don't ever overthink things too much but do what makes you happy. Dhoni never cared about what people would say. He travelled all the way to Delhi to meet his then girlfriend and later went to Aurangabad by road to spend some time with Sakshi. He was carefree and undeterred even after regular media interference.

Source: Dinamani

10. Don't let your personal life distract you from your professional life

Just before an all-important Pakistan series, Dhoni's late girlfriend asked, "Will you miss me?", he said, "No, that will distract me." It's tough but if you want to give your 100%, you have to have a clear head. He was firm and cool-headed, even after the sudden and tragic demise of his girlfriend.

Source: Daily Hunt

11. Having an attitude is good, but being modest and grounded will take you far

Dhoni never let the fame get to him and he never forgot his roots. And, if it wasn't for his modesty, the first encounter with his present wife, Sakshi would have just been a disaster.

Source: Indian 24 News

12. Never fear the hate you will get from taking tough decisions

The Indian cricket team was going through a changing phase and senior players were considered 'slow' compared to the young players of other teams. Dhoni knew if he wanted to win the 2011 World Cup he needed a young team. He went ahead and put forth his thoughts in front of the selection committee. Everyone hated him at first, but, it all worked out for the best.

Source: News Dog

13. Make sure you always have a hobby

Whenever Dhoni needed to unwind, he used to spend his time at the garage, modifying his bike, going on rides and buying new ones too. Having a hobby helped him cope with the troubles of his professional life.

Source: Everything.plus

14. Don't let go of your loyal friends, they are everything you need

MSD had talent, but, talent alone wasn't enough to take him to the pinnacle. The support of his loved ones was almost indispensable. Cricket was something for which his friends supported him more than his family ever could. He was always there for them and didn't forget them even after becoming a star.

Source: Scroll

15. Always keep improvising

India was chasing a big target in the World Cup final and after losing a few wickets in quick succession, there was a bit of panic in the dressing room. Yuvraj was padded up and ready to go. But, Dhoni took the gamble and promoted himself up the order and led the men in blue to the finish line in style.

Nothing is impossible, pad up and go out to fight, to make your dreams come true.

Source: India TV News

W. Cyril Allen Jonathan (BP151403)
II M.Sc. Counselling Psychology

Avoid Acidic Foods

When we eat foods that are "acid-forming", they cause our blood to become acidic. Acidic blood means "thick blood", means "slow-moving" blood that reduces the effective function of carrying nutrients to every part of our body. Thick blood "hosts" a myriad of harmful organisms (bacteria, virus, parasites, yeast, etc.). Over time, it begins to clog up the detox organs and cause other health issues. What happens when your liver gets clogged up. What are acid-forming foods? Some examples: Animal protein, dairy products, deep-fried foods, cooked foods, junk/processed foods, oily foods, medication, flour and sugar products (e.g. pastries, cakes, biscuits, doughnuts, etc.), artificial food additives (e.g. emulsifiers, colouring, flavouring, preservatives, stabilizers), soft drinks and alcohol. Plant proteins are also acid-forming but are more easily assimilated compared to animal proteins. If you have the habit of drinking soda/carbonated drinks regularly, you would do yourself a great favour if you gradually eliminate them from your diet - the sooner the better. A can of soda/carbonated drink contains up to 15 teaspoons of sugar, 150 empty calories, 30 to 55mg of caffeine and is loaded with harmful artificial food colours, flavourings and preservatives, all these but with zero nutritional value. Some soda drinks are "disguised" as "diet soda" where dangerous sweeteners like aspartame are added. Numerous health side effects are associated with aspartame ingestion, including brain damage, diabetes, emotional disorders, decreased vision, ringing in the ears, memory loss, heart palpitations, shortness of breath and many more. This short list should be enough to show you the danger of this ingredient in diet sodas. Another way soda drinks are "disguised", is in so-called "energy drinks". Energy drinks may give you a boost of energy upon consumption, but it does not last. In fact, when the effect wears off you will feel your energy dwindle and you will start to crave for another can. It becomes a vicious cycle and eventually gets you hooked. The sugar content level

in sodas is way too high and will lead to many health problems. Moreover, when you consume too much sugar, your appetite will be suppressed for the nutritious foods. This results in nutritional deficiency.

<div align="right">

V. Minnalpriya (BU140916)
III B.Sc., Biochemistry

</div>

Health Benefits of Herbal Juices

Naval bull

Goodness of (naval) jamun brings wellness in diabetics is proven. Wonder drink with the only ingredients jamun ensures the wellbeing of diabetics. Jamun protects stomach from ulcers and prevents excess secretion of stomach acid. Naval juice is a protective fluid for liver and stomach and fights cancer. Naval corrects excessive urination in diabetics. Jamun seed has gastro protective properties mainly through promotion of mucous defensive factors and antioxidants status.

Amla haritalli

An equal and perfect mix of *Amla haritalli* makes it unique and rejuvenating reliving and maintains the optimum functioning ability of the body. This cleanses and detoxifies at the deepest organic levels without depleting the body. It naturally detoxifies and cleans blood, liver and digestion and corrects the metabolism in body thereby managing the worst common metabolic disorder of diabetes and enhances the efficient functioning of circulatory system and normalized lipid metabolism.

Aloe vera

Aloe vera is an excellent immune modulator. *Aloe vera* is the natural colon cleanser vertical in detoxifying the body. *Aloe vera* works on surface and membrane thus healing ulcers at mouth stomach and genetics boon for female reproductive system, menstrual disorder, leucorrhea and reducing excess body heat *Aloe vera* stimulates liver, improves digestion and controls diabetics. It prevents dehydration and ensures firm skin.

<div align="right">

S. Murugan (BU150946)
II B.Sc., Biochemistry

</div>

Cheese as an Addictive Drug

Cheese is an addictive drug. Researchers from the University of Michigan investigating which items serve as the "drug" of the food world, discovered pizza headed the "addictive" list because of its cheesy, fatty topping. They discovered that the chemical casein found in dairy products was to be blamed for these addictive properties. Casein breaks apart during digestion to release opiates called casomorphins. Studies have shown that casomorphins interact with opioid receptors, which are involved in controlling pain and addiction in the brain. The same parts of the brain are stimulated while under the influence of addictive drugs like crack cocaine and heroin. Casomorphins play with the dopamine receptors and trigger that addictive element.

<div align="right">

S. Prem (BU140923)
III B.Sc., Biochemistry

</div>

Easy Tips for Fuelling Your Workout without Overdoing It

Heading to the gym after work for a quick workout? Out for a morning walk with the dogs? Working out is good for physical and mental health. Although, many individuals workout for weight loss or maintenance and exercising burns fewer calories than you might think. For example, you burn about 100 calories for every mile you walk or run. Yet, the average energy bar provides about 250 calories and a 16-ounce fruit smoothie has 350 to 400 calories, so it is easy to overdo it when you think you're just preparing for your workout. Here are some tips for fuelling your workout without sabotaging the calorie - burning effort of exercise.

The Morning Workout

A low-intensity morning workout such as a walk, bike ride, yoga or round of golf requires very little fuel. Concentrate on hydration and a small carbohydrate-rich snack, possibly 16 ounces of water and a mini bagel or a 100 calorie granola bar. It will give you enough energy to compensate for an overnight fast without loading up on calories. After your workout, eat a smart breakfast of quality carbohydrates and protein. This can be a hard cooked egg, a slice of whole grain toast and 100 per cent fruit juice or oatmeal with berries and fat-free milk.

In the Evening

If you exercise after work, plan to eat lunch 3 to 4 hours before your workout. Good choices include a grilled chicken salad, a grilled cheese sandwich with a cup of tomato soup, or a turkey sub with baked chips. A healthy lunch will provide enough calories to sustain a late afternoon workout, but give yourself a little energy boost 15 to 30 minutes before your workout by eating a banana, orange slices or a handful of grapes. Concentrate on hydration; water is a good choice for exercise lasting less than an hour, but consider a low-calorie sports drink (about 20 calories per cup) if you are exercising for more than an hour at a higher intensity. If you are working out for more than an hour in a hot, humid climate, consider drinking a sports drink (1 cup) and water for the next fluid break.

Refuelling

After a workout, rehydrate with water. If you are heading home and eating dinner within a couple of hours, there is no need for a post workout snack. If your meal will be delayed, then recover with 6 to 8 ounces of fat free chocolate milk, 6 ounces of low fat Greek yogurt, or a stick of string cheese with a few whole grain crackers. Try not to fall into the cycle of skipping breakfast, eating a light lunch and then exercising after work with little fuel on board. With this scenario, you are more likely to overeat after your workout because you are so hungry from not eating enough during the day. Another mental trap is rewarding a good workout with high - calorie or fatty foods. Rewarding your workout with food and high calorie fluids will undo your efforts in the gym; instead, treat yourself to a new pair of sneakers for a job well done.

K. Punitahvalli (BP150904)
II M.Sc., Biochemistry

Six Chemicals We Consume In Our Food and Drink
That Should Be Banned

E290

The E numbers are bad, we all know that. And E290 is no exception. It sneaks its way into fizzy drinks, bread and even your homemade cakes. But, this chemical is probably the worst of the lot, because if we don't stop producing it then we are heading for global disaster. The scientific literature is quite clear on the subject and there are over a million peer-reviewed papers that describe the harmful effect it has on our environment. And they put this stuff in our kids' lemonade!

8-methyl-*N*-vannillyl-6-nonenamide

With a name like 8-methyl-*N*-vannillyl-6-nonenamide, it's bound to be a baddie. If you want more evidence of its unpleasantness then you may like to know that it is used by the police to control rioters. But that doesn't stop it turning up in our nation's favourite meals. In fact you have almost certainly suffered the consequence of an overzealous chef adding a bit too much of this stuff to your Saturday night post-pub curry or kebab. Do excessive sweating, burning sensations and indigestion sound familiar? Well that's good old 8-methyl-*N*-vannillyl-6-nonenamide for you. Would you believe that it is even put in chocolate?

Denatured protein

You might not know this but Alzheimer's disease, Parkinson's and CJD (the human version of mad cow disease) are all caused by proteins that have misfolded. Basically, perfectly normal proteins get shape shifted into evil versions of themselves that they cause dreadful diseases. And guess what, when you fry your egg you cause the proteins in the white to misfold. I'll leave you to draw the obvious conclusion.

DHMO

Fruit juice contains a chemical, DHMO which is also produced by rocket engines. Think about it for a moment. The same stuff that comes shooting out the back of a rocket on its way to the International Space Station is sloshing around in your fridge and you drink it for breakfast! And nobody does a damn thing about it. The chemical reaction that destroyed the airship also produced DHMO. Fancy that it is in your refreshing glass of orange juice? I don't care if you have squeezed the stuff straight from citrus fruit grown in your very own organic orangery, with every sip you're consuming DHMO. It can even be found in mineral water, tap water, rain water – in fact the oceans, rivers and lakes are literally full of the stuff.

NaCl

Not one but two deadly poisons are here. What do you think that makes salty snacks so appealing? Nothing other than a delicious mix of a chemical warfare agent used in the trenches of the first world war and an explosive metal. They put this chemical on our crisps, nuts and chips!

Uranium

And finally one that glows in the dark, in anyone's book, that is good. You don't eat it, but you might be eating out of it. Got any green glassware in the house? Well then RUN TO THE HILLS! There's a good chance it contains uranium! Unbelievably, you can just buy the stuff on the internet, without the slightest controls being in place.

M. Radha (BU140920)
III B.Sc., Biochemistry

Ten Unknown Interesting Facts about the Brain

1. **Nerve impulses to and from the brain travel as fast as 170 miles per hour.** Ever wonder how you can react so fast to things around you or why that stubbed toe hurts right away? It's due to the super-speedy movement of nerve impulses from your brain to the rest of your body and vice versa, bringing reactions at the speed of a high powered luxury sports car.

2. **The brain operates on the same amount of power as 10-watt light bulb.** The cartoon image of a light bulb over your head when a great thought occurs isn't too far off the mark. Your brain generates as much energy as a small light bulb even when you're sleeping.

3. **The human brain cell can hold 5 times as much information as the Encyclopedia Britannica** or any other encyclopedia for that matter. Scientists have yet to settle on a definitive amount, but the storage capacity of the brain in electronic terms is thought to be between 3 or even 1,000 terabytes. The National Archives of Britain, containing over 900 years of history, only takes up 70 terabytes, making your brain's memory power pretty darn impressive.

4. **Your brain uses 20% of the oxygen that enters your bloodstream.** The brain only makes up about 2% of our body mass, yet consumes more oxygen than any other organ in the body, making it extremely susceptible to damage related to oxygen deprivation. So breathe deep to keep your brain happy and swimming in oxygenated cells.

5. **The brain is much more active at night than during the day.** Logically, you would think that all that moving around, complicated calculations and tasks and general interaction we do on a daily basis during our working hours would take a lot more brain power than, say, lying in bed. Turns out, the opposite is true. When you turn off your brain turns on. Scientists don't yet know why this is but you can thank the hard work of your brain while you sleep for all those pleasant dreams.

6. **Scientists say the higher your I.Q. the more you dream.** While this may be true, don't take it as a sign you're mentally lacking if you can't recall your dreams. Most of us don't remember many of our dreams and the average length of most dreams is only 2-3 seconds–barely long enough to register.

7. **Neurons continue to grow throughout human life.** For years scientists and doctors thought that brain and neural tissue couldn't grow or

regenerate. While it doesn't act in the same manner as tissues in many other parts of the body, neurons can and do grow throughout your life, adding a whole new dimension to the study of the brain and the illnesses that affect it.

8. **Information travels at different speeds within different types of neurons.** Not all neurons are the same. There are a few different types in the body and transmission along these different kinds can be as slow as 0.5 meters/sec or as fast as 120 meters/sec.

9. **The brain itself cannot feel pain.** While the brain might be the pain center when you cut your finger or burn yourself, the brain itself does not have pain receptors and cannot feel pain. That doesn't mean your head can't hurt. The brain is surrounded by loads of tissues, nerves and blood vessels that are plenty receptive to pain and can give you a pounding headache.

10. **Eighty per cent of the brain is water.** Your brain isn't the firm, gray mass you've seen on TV. Living brain tissue is a squishy, pink and jelly-like organ thanks to the loads of blood and high water content of the tissue. So the next time you're feeling dehydrated get a drink to keep your brain hydrated.

<div align="right">

V. Ragul (BP150911)
II M.Sc., Biochemistry

</div>

Harmful Effects of Junk Food

We've been warned enough about the downside of too much consumption of junk food. There's no doubt that fast foods and processed foods have increased the burden of childhood obesity, heart disease and diabetes and have made these chronic diseases a common lifestyle concern. Recently, the Delhi Government demanded a crackdown on junk food that is sold in schools and within 50 meters of school zone. It can cause memory and learning problems. A study published in the American Journal of Clinical Nutrition in 2011 showed that healthy people who ate junk food for only 5 days performed poorly on cognitive tests that measured attention, speed, and mood. It was concluded that eating junk food regularly can deteriorate your memory. This probably stems from the fact that a poor or toxic diet can cause certain chemical reactions that lead to inflammation in the hippocampus area of the brain which is associated with memory and special recognition. Diets that are high in sugar and fat can suppress the activity of a brain peptide called BDNF (brain-derived neurotrophic factor) that helps with learning and memory formation. Moreover, the brain contains synapses which are responsible for learning and memory. Eating too many calories can interfere with the healthy production and functioning of these synapses.

<div align="right">

K. Sangavi (BU140909)
III B.Sc., Biochemistry

</div>

Fibers and Its Health Benefits

Fiber is a type of carbohydrate that the body can't digest. Though most carbohydrates are broken down into sugar molecules, fiber cannot be broken

down into sugar molecules, and instead it passes through the body undigested. Fiber helps regulate the body's use of sugars, helping to keep hunger and blood sugar in check. Children and adults need at least 20 to 30 grams of fiber per day for good health, but most Americans get only about 15 grams a day. Great sources are whole fruits and vegetables, whole grains, and beans.

- Soluble fiber, which dissolves in water, can help lower glucose levels as well as help lower blood cholesterol. Foods with soluble fiber include oatmeal, nuts, beans, lentils, apples and blueberries.

- Insoluble fiber, which does not dissolve in water, can help food move through your digestive system, promoting regularity and helping prevent constipation. Foods with insoluble fibers include wheat, whole wheat bread, whole grain couscous, brown rice, legumes, carrots, cucumbers and tomatoes.

The best sources of fiber are whole grain foods, fresh fruits and vegetables, legumes, and nuts.

- Eat whole fruits instead of drinking fruit juices.

- Replace white rice, bread, and pasta with brown rice and whole grain products.

- For breakfast, choose cereals that have a whole grain as their first ingredient.

- Snack on raw vegetables instead of chips, crackers, or chocolate bars.

- Substitute beans or legumes for meat two to three times per week in chili and soups.

R. Shanthi (BU140945)
III B.Sc., Biochemistry

Horse Gram as Food and Medicine

Raw horse gram is particularly rich in polyphenols, flavonoids and proteins, the major anti-oxidants. In other words, it can keep your body young and vibrant! What's more, scientists from the Indian Institute of Chemical Technology have found that unprocessed, raw horse gram seeds have the ability to reduce high blood sugar following a meal, by slowing down carbohydrate digestion and reducing insulin resistance. This makes it an extra diabetic-friendly food! The health benefits of horse gram seem to be innumerable. Just name a health issue and "kollu-power" will work for it! Traditional medicinal texts describe its use for asthma, bronchitis, leucoderma, urinary discharge, kidney stones and heart disease. Ayurvedic cuisine also recommends horse gram for persons suffering from jaundice or water retention. Rheumatism, worms, conjunctivitis and piles are also said to quail before the power of horse gram. Horse gram has astringent and diuretic properties. It is also beneficial for extracting phlegm, and controlling fever and cholesterol levels. According to some studies, the lipid extracts of horse gram are beneficial for treating peptic ulcers, and it is said that these magic legumes can reduce flatulence and control various menstrual problems.

N. Sharmila (BU150923)
II B.Sc., Biochemistry

Eight Healthy Eating Goals

Small changes can make a big difference in your health. Try incorporating at least six of the eight goals below into your diet. Commit to incorporating one new healthy eating goal each week over the next six weeks.

Make half your plate fruits and vegetables: Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert. The more colorful you make your plate, the more likely you are to get the vitamins, minerals, and fiber your body needs to be healthy.

Make half the grains you eat whole grains: An easy way to eat more whole grains is to switch from a refined-grain food to a whole-grain food. For example, eat whole-wheat bread instead of white bread. Read the ingredients list and choose products that list a whole-grain ingredients first. Look for things like: "whole wheat," "brown rice," "bulgur," "buckwheat," "oatmeal," "rolled oats," quinoa," or "wild rice".

Switch to fat-free or low fat (1%) milk: Both have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

Choose a variety of lean protein foods: Meat, poultry, seafood, dry beans or peas, eggs, nuts, and seeds are considered part of the protein foods group. Select leaner cuts of ground beef (where the label says 90% lean or higher), turkey breast, or chicken breast.

Compare sodium in foods: Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."

Drink water instead of sugary drinks: Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar and calories in American diets. Try adding a slice of lemon, lime, or watermelon or a splash of 100% juice to your glass of water if you want some flavour.

Eat some seafood: Seafood includes fish (such as salmon, tuna, and trout) and shellfish (such as crab, mussels, and oysters). Seafood has protein, minerals, and omega-3 fatty acids (heart-healthy fat). Adults should try to eat at least eight ounces a week of a variety of seafood. Children can eat smaller amounts of seafood, too.

Cut back on solid fats: Eat fewer foods that contain solid fats. The major sources for Americans are cakes, cookies, and other desserts (often made with butter, margarine, or shortening); pizza; processed and fatty meats (e.g., sausages, hot dogs, bacon, ribs); and ice cream.

D. Sivaranjani (BU140917)
III B.Sc., Biochemistry

Disadvantages of Fast Foods

There are many disadvantages of fast food including potential heart, liver or weight issues that can permanently damage your health. Doctors will often recommend that their patients avoid fast food to maintain an ideal weight and energy level. Fast food products are often rumored to cause a variety of health problems. Ingredients that are artificial, high in sugar or fat are not meant to be eaten on a regular basis. Consuming these foods regularly can lead to health issues including heart disease, diabetes and cancers. Being aware of these effects is essential to determining whether fast food is safe to include in your diet, particularly if you are already suffering. Fast food is often filled with ingredients such as soya, salt, cheese or mayonnaise and is often deep fried, which adds a lot of extra calories without adding any additional nutrition. Given the high amount of calories, it will take a significant amount of exercise to burn off the calories you take in. For example, it would take 7 hours of exercise to burn off the calories in a large Coke, fries and a Big Mac from McDonalds. Consuming this high level of calories without burning them off can lead to additional health issues.

Obesity: The high levels of sugar and fat in fast food can lead to an increased risk of obesity. It has been shown that those who live close to fast food restaurants have a much higher tendency to be obese. The cooking oils and preservatives used to maintain fast food products make it difficult for your body to shed fat, making hard to shed the extra calories even if you attempt to up your activity level.

Liver damage: Though it is not as frequently discussed, liver damage is a significant risk associated with consuming fast food. Junk food is often filled with trans-fat, an artificial fat that is used as a stabilizer. So premade foods can sit for long periods of time before they are consumed. As your body works to remove this fat from your system it can build up in the liver and cause damage. This is very similar to the damage which is caused by regularly consuming alcohol. If this is not kept in check, it can lead to liver failure.

Cardiovascular diseases: Regularly consuming fast food that is high in sodium and cholesterol can cause damage to the cardiovascular system. Cholesterol can clog the arteries, increasing the risk of having a heart attack or stroke. High levels of sodium from fries, sodas or enriched meat products will increase your blood pressure, which can also increase the risk of heart attack or stroke over time. As your cardiovascular system is weakened it can be difficult to perform physical activities that will allow you to maintain your health.

Impact on the environment: In addition to the medical disadvantages associated with fast food, the production and selling of junk food puts a significant negative impact on the environment. The amount of resources necessary to raise the meat for fast food products create a shortage of resources around the world. For example, every pound of hamburger we consume takes 2500 gallons of water and 16 pounds of grain to produce, say nothing of the land needed to raise the cattle and the grains to feed them. The animals raised to make fast food meat products are often fed antibiotics and a poor diet that causes the animals to be underdeveloped. These antibiotics and growth hormones can be passed on to those who consume the meat afterward, leading to negative health effects. Some have reported growing extra breast tissue or

developing damage to the immune system from eating fast food on a regular basis.

S. Tirupathi(BU140905)
III B.Sc., Biochemistry

Benefits of Barnyard Rice and Finger Millet

Barnyard Rice (Kuthiravali)

- It makes the body to function correctly and constantly.
- It has a capacity to reduce the sugar level.
- It also acts as an antioxidant.
- It prevents us from anemia.
- It also acts as remedy for constipation.

Finger millet

- Helps to reduce weight
- Increases bone strength
- Controls diabetes
- Reduces cholesterol
- Aids relaxation
- Good source of protein and amino acids
- Treats Anemia
- Helps digestion
- Reverts skin aging and increases lactation

R. Venkatdharan (BU140955)
III B.Sc., Biochemistry

Hurdles

My expressions of pain is what wows you.
What breaks me gives you a joy and zeal to read.
This is not just some imagination or fantasy.
My creativity is drawn from my pain and hardships
Every time I see a pen I see pain.
Like Jesus I am the rejected stone not his equal don't get me wrong.
The path I travel is tedious and long

I look up to my pain to forge ahead
A little faith in me is all I needed.
To be told I am good like this is all I wanted.
To be respected I never demanded.
Just to be longed and acknowledged is all I wanted.

They tell me forgive and forget but never tell me how to forget when I have to write.

They tell me to move on but they never want me to take a step.
What they say behind closed doors is preposterous.

My life has become a movie.
My pain has become a show.
My failure is discussed.
My success is ignored.
The evil in me is seen.
The good is ignored

Why to dream if there's no hope?
Why to live if I am going to die anyway?
They wait for me to fall so they can laugh.
Without me they have nothing to do but that's just life we fall here and there.
We cry a little
Hope a little.
Pray a little more.
Do a little.
Write a little

This art is what keeps me going.
This art is what keeps me thinking.
This art is what keeps me awake at night.
This art is what knows my anger and rage.
The pen knows my fury. The paper keeps it.

Gets You On Your Feet
It always seems dark
It really is dark
The light doesnt shine any more
The darkness spreads more
Hope is lost
So is faith
We all want to stand under the Sun
We all want light
Yet no one wants to shade it

The breeze isn't cool as it was
The heart hard as rock, cold as ice
Nothing seems the same
Friends turn to strangers
Good guys are a fairytale
Happy days are only in ink
All that is left are memories
Pen is the only best friend

Suddenly she comes along
Her heart so tender
It changes everything
Restores hope even in little things
Her touch so gentle
It melts your heart
Her love so unconditional
It surmounts all hurdles
She's more than words can describe.

Mumba Marriott (AU150548)
II B.Sc. Computer Science (Shift-I)

Report on Youth Educational Service

North East Summer Exposure Programme – 2016

Report

Every year students from Sacred Heart College are actively participating in the summer exposure programme organized in North Eastern states of India. This year also six of our students volunteered themselves to go to north east and teach mathematics and computer science to the school students and college students.

Under the able leadership of Rev. Dr. D. Maria Antony Raj, the Principal of Sacred Heart College, the programme was coordinated by Mr. A. Arokia Nepolean Raj of Department of Chemistry to scrutinize the list of students and make the necessary arrangements to send the students to north east. The students were asked to get the concern of their parents before they proceeded.

On 28.04.2016 the students assembled in the college to get the blessing form the principal. The principal congratulated the students on volunteering themselves for the summer exposure programme and gave some guidelines regarding the climatic conditions of North east. Then the students proceeded to Chennai for a four-day long Journey form Chennai Egmore to Dimmapur in Dibrugarh express.

On 01.05.2016 the students landed in Dimmapur railway station. Rev Fr Suresh an alumnus of our college and the coordinator of this programme received the students at Dimmapur railway station and then to the Province. From there the students were allotted different places for their volunteer service.

List of students participated in summer exposure programme in 2016

1) M. Pushparaj   - I M.Sc. Mathematics
2) I. RajaKumar   - I M.Sc. Mathematics
3) O. A. Balakishore - I M.Sc. Mathematics
4) R. Vincent   - II MCA
5) A. Abishek Raj   - II MCA
6) R. Karthick   - III MCA

The places of their service are

1) Don Bosco Hr. Sec. School. - Wokha
2) Don Bosco Youth Centre - Maram, Manipur
3) Don Bosco College. - Maram, Manipur
4) Don Bosco Youth Centre. - Ittanagar, Arunachal Pradesh
5) Don Bosco High School, Rangajan, Golaghath

Our students enjoyed the programme with full enthusiasm and delivered good service to the students of the North east province. They felt that it was a good experience for them and were willing to go again in the next year. The coordinator Rev Fr. Suresh expressed his happiness and satisfaction about the service our students rendered during this summer.

Report by
A. Arokia Nepolean Raj
(Coordinator – North East Summer Exposure Programme)

Few Photographs from Don Bosco Youth Centre - Ittanagar, Arunachal Pradesh.

மாநில அளவில் நடைபெற்ற பேச்சுப் போட்டியில் முதல் பரிசு வென்ற மாணவன்

1. செல்வன் த.திருப்பதி (BP150803) முதுகலைத் தமிழ் இரண்டாமாண்டு மாணவன் தமிழ்த்துறை 20.12.2016 அன்று வேலூர் மாவட்டத் தமிழ்வளர்ச்சித் துறையினால் நடத்தப்பட்ட, மாவட்ட அளவிலானப் பேச்சுப்போட்டியில் மாவட்ட அளவில் முதலிடம் பெற்று, சான்றிதழ் மற்றும் ரூபாய் 10,000 பரிசுத்தொகையை வேலூர் மாவட்ட ஆட்சித்தலைவரின் திருக்கரங்களால் பெற்றார்.

2. பேச்சுப்போட்டியில் மாவட்ட அளவில் முதலிடம் பெற்ற மாணவர்களுக்கு மாநில அளவிலான பேச்சுப்பேட்டி தமிழ்நாடு அரசின் தமிழ் வளர்ச்சித்துறையின் சார்பாக மதுரையிலுள்ள மதுரை உலகத் தமிழ்ச்சங்கத்தில் நடைபெற்றது. இதில் மாநில அளவில் முதர் மாணாக்கராகப் பேச்சுப் போட்டியில் வென்று ரூபாய் 15,000 பரிசினைப் பெற்று நம் தூய நெஞ்சக் கல்லூரிக்குப் பெருமையைச் சேர்த்துள்ளார் இம்மாணவர்.

தேசிய விளையாட்டுத் தினம்

இந்தியாவின் தேசிய விளையாட்டாக ஹாக்கி உள்ளது. ஹாக்கி போட்டியில் சாதனை படைத்த **தயான் சந்த் (Dayan Chanth)** நினைவாகத் தான், அவர் பிறந்த நாளான ஆகஸ்ட் 29-ம் தேதி, தேசிய விளையாட்டுத் தினமாகக் கொண்டாடப்படுகிறது. தயான் சந்த் 1905-ம் ஆண்டு, ஆகஸ்ட் மாதம் 29-ம் தேதி உத்தரப்பிரதேச மாநிலம் அலகாபாத்தில் பிறந்தார். இவரின் தந்தை சாமேஸ்வாதத் சிங், இந்திய ராணுவத்தில் பணி புரிந்தார். அவரைப் பல ஊர்களுக்குப் பணிமாற்றம் செய்ததால் தயான் சந்த் சரிவர கல்வி கற்க முடியவில்லை. ஆறாம் வகுப்புடன் படிப்பை முடித்துக்கொண்டார். பின்னர் அவரது குடும்பம் உத்தரப்பிரதேச மாநிலம் ஜான்சியில் வீடு கட்டிக் குடியேறியது.

சிறுவயதில் தயான்சந்துக்கு வலு தூக்குவதில் தான் ஆர்வம் இருந்தது. 1992-ம் ஆண்டு ராணுவத்தில் தயான் சந்த் சேர்ந்த பிறகே அவருக்கு ஹாக்கி மீது ஓர் ஆர்வம் பிறந்தது. அப்போது அவருக்கு வயது 16. அவர் 1926-ம் ஆண்டு வரை இந்திய ராணுவ அணிக்காக ஹாக்கி அணியின் கேப்டனாக இருந்தார்.

1928 (ஆம்ஸ்டர்மாம்) 1932 (லாஸ் ஏன்செல்ஸ்), 1936 (பெர்லின்) ஆகிய ஆண்டுகளில் நடைபெற்ற ஒலிம்பிக் போட்டிகளில் இந்தியா தங்கப் பதக்கம் வெல்ல தயான் சந்த் முக்கியக் காரணமாக இருந்தார். ஆயிரம் கோல்களுக்கு மேல் போட்டு சாதனை படைத்த இவர், தன் 51-வது வயதில் 1956-ம் ஆண்டு இந்திய ராணுவ மேஜர் பதவியில் இருந்து ஓய்வு பெற்றார்.

அந்த ஆண்டு அவருக்கு நாட்டின் மூன்றாவது பெரிய விருதான பாரத பூஷன் விருது வழங்கப்பட்டது. பணி ஓய்வுக்குப் பிறகு அவர் ராஜாஸ்தானில் மவுண்ட் அபுவில் இருந்துகொண்டு ஹாக்கி பயிற்சி அளித்தார். மேலும், பாட்டியாலாவில் உள்ள தேசிய விளையாட்டு அமைப்பின் தலைமை ஹாக்கி பயிற்சியாளராக இருந்தார். தயான் சந்த் 1952-ல் கோல் என்கின்ற பெயரில் சுயசரிதை எழுதினார். இவர் 1979-ம் ஆண்டு டிசம்பர் 3-ம் தேதி இறந்தார்.

பெரிய பதவி தருகிறேன் எங்கள் நாட்டுக்காக விளையாட வந்து விடுங்கள் என்று ஹிட்லர் கேட்டபோது, மறுத்து தாய்நாடு தான் பெரிது என்று இந்தியாவுக்காகத் தொடர்ந்து ஹாக்கி விளையாடிய வீரர்தான் தயான் சந்த்.

கிரிக்கெட் சாதனையாளர் பிராட்மேன் கூறும்போது, *கிரிக்கெட்டில் ரன் எடுப்பதுபோலத் தயான்சந்த் கோல்களை எடுக்கிறார் என்றார். ஆஸ்திரியாவின் வியன்னா நகரில் தயான் சந்துக்குச் சிலை வைக்கப்பட்டிருக்கிறது.*

தற்போது இந்திய ஹாக்கி விளையாட்டின் நிலை கவலைக்குரியதாக இருக்கிறது. அந்த விளையாட்டு மட்டைக் குறித்துக் கூட பலருக்குத் தெரியாத நிலை உள்ளது. எனவே ஹாக்கி தனது பழைய நிலையை மீண்டும் அடைய ஒரு சிறப்பு வாய்ந்த வெற்றி தேவைப்படுகிறது. அந்த வெற்றி பிரமாண்டமானதாக இருக்க வேண்டும். அப்போதுதான் இளைஞர் மற்றும் மாணவர்கள் மத்தியில் ஹாக்கி குறித்த விழிப்புணர்வும், புதிய எழுச்சியும் ஏற்படும். அதற்குத் தேவையான அனைத்து நடவடிக்கைகளையும் எடுக்க அரசு பல முயற்சிகளை மேற்கொள்ள வேண்டும்.

<div align="right">

மேஜர் எம்.எஸ்.அல்போன்ஸ்,

முன்னாள் உடற்பயிற்சி இயக்குனர்,

தூய நெஞ்சக் கல்லூரி, திருப்பத்தூர்.

</div>

இராசேந்திரச் சோழன்

முன்னுரை

மனித இனம் தோன்றிய காலம் தொட்டு உணவுத்தேடல் மற்றும் நாடோடி வாழ்க்கையிலேயே காலத்தைக் கழித்தது. நிலையாக ஓரிடத்தில் வாழ தலைப்பட்ட இடம் ஆறுகள் பாயும் சமவெளிப்பகுதிகளான மருத நிலமேயாகும். குறிஞ்சி நிலத்தில் இனக்குழு வாழ்க்கையைத் தொடங்கிய மனிதன் முல்லை நிலத்தில் நிலையான அரசுருவாக்கத்தில் ஈடுபட்டான். இதன் நீட்சியாக மருத நிலம் சேர, சோழ, பாண்டியர்களின் பேரரசு உருவாக்கத்தில் முதன்மை இடமாக இருந்துள்ளது. சேரர்கள் பேரியாற்றையும், பாண்டியர்கள் வைகை ஆற்றையும் தம் அரசியல் நிறுவலின் மையமாகக் கொண்டு ஆட்சி புரிந்துள்ளனர். சோழர்கள் இந்தியாவிலுள்ள சில பேராறுகளில் ஒன்றான காவிரியின் கரையில் ஆட்சியை நிறுவி நிலையான ஆட்சியைப் புரிந்தனர்.

சோழர் இனத்தின் தொன்மமும் - வரலாறும்

ஓரினத்தின் பழமையை உணர தொன்மக் கூறுகள் உதவுகின்றன. சோழர்கள் முசுந்தன், சிபி, மனுநீதிச் சோழன் போன்ற தொன்மக் கூறுகளோடு தொடர்புபடுத்தப்படுகின்றனர்.

வரலாறு

தமிழகம் தொல்காப்பியர் காலத்திற்கு முன்பிருந்தே சேர, சோழ, பாண்டியர்களின் ஆளுகையின் கீழ் இருந்துள்ளது. அசோகர் தம் கல்வெட்டில் சோழர்களைப் பதிவு செய்திருப்பது நோக்கத்தக்கது. சங்க காலத்தில் சோழநாட்டைப் பல மன்னர்கள் ஆட்சிப் புரிந்திருப்பதைச் சங்க நூல்கள் பதிவு செய்கின்றன. சோழன் இராசசூயம் வேட்ட பெருநற்கிள்ளி, சோழன் இலவந்திகைப் பள்ளித்துஞ்சிய நலங்கிள்ளி, இளஞ்சேட்சென்னி, உருவப்ப.்.றேர்

இளஞ்செட் சென்னி, கரிகாற் பெருவளத்தான், குராப்பள்ளித் துஞ்சிய கிள்ளி வளவன், குளமுற்றத்துத் துஞ்சிய கிள்ளி வளவன், செங்காணன், செருப்பாழி எறிந்த இளஞ்செட் சென்னி, நலங்கிள்ளி, நல்லுருத்திரன், மாவளத்தான், பெருநற்கிள்ளி போன்ற சிறப்புற்றிருந்த சோழ மன்னர்களின் பட்டியல் நீண்டு கொண்டே செல்கிறது.

இராசேந்திரச் சோழன்

சங்க காலத்தில் சிறப்புற்றிருந்த சோழ இனம் பின்னர் பல்லவர் ஆளுகையில் கீழ் வந்து, ஏறத்தாழ கி.பி. 9-ஆம் நூற்றண்டு வரை அடிமைப்பட்டுக் கிடந்தது. பிற்காலச் சோழர்களின் விஜயாலயன் சோழநாட்டைப் பல்லவர்களிடம் இருந்து மீட்டெடுக்க, அவன் வழித் தோன்றல்களான இராசராசனும், இராசேந்திரனும் தமிழரின் பெருமையையும் சோழ இனத்தின் சிறப்பினையும் உலகம் முழுவதும் பரப்பினர். தருமபுரிக்கு அருகாமையிலுள்ள கல்வெட்டு ஒன்று, ஸ்ரீபூர்வு தேசமும் கங்கையும் கிடாரமும் கொண்ட கோப்பரகேசரி பந்மரான உடையார் ஸ்ரீராஜேந்திர சோழற்கு ஆண்டு 20-வது நுளம்ப பாடியாகிய நிகரிலி சோழ மண்டலத்து புற மலைநாடு என்று கூறுகிறது. இதில் இராஜேந்திர சோழன் தன்னுடைய 20-வது ஆட்சி ஆண்டில் கங்கை, கிட இராசேந்திர சோழன் இந்திய நாட்டின் வட எல்லையான இமயம் வரை வென்றுள்ளான். கங்கையிலிருந்து கொண்டு வந்த நீரைக் கொண்டு தஞ்சாவூருக்கு அருகாமையில் கங்கைகொண்ட சோழபுரத்தை உருவாக்கினான். பின்னர் கப்பல் படை கொண்டு உலகின் பல நாடுகளை வென்ற பெருமை இராசேந்திரனையே சாரும். இவன் இன்றைய மலேசியா, மியான்மார், இலங்கை போன்ற நாடுகளைக் கடல் கடந்து சென்று வென்றது தமிழரின் பெருமையை வெளிப்படுத்தும் சிறப்புச் செய்தியாகும். இராசேந்திர சோழன் ஆட்சிப்பீடத்தில் அமர்ந்து ஆயிரம் ஆண்டை அடியெடுத்து வைப்பது தமிழர் பெருமைகளில் மேலும் ஒரு மைல் கல்லாக அமைகிறது. இராசேந்திரனை இந்தியாவின் அலெக்ஸாண்டர் என்று சொன்னால் அது மிகையன்று.

முனைவர் க.மோகன் காந்தி
உதவிப் பேராசிரியர், தமிழ்த்துறை

கல்லும் சிற்பமும்

ஆலயத்திற்குள்ளே இருக்கும் சிலைக்கும் (கடவுள்) வெளியில் இருக்கும் படிக்கட்டுக் கல்லுக்கும் நடைபெறும் உரையாடல்.

கல்: எனக்கு ஒரு உண்மை தெரியவேண்டும் சிலையே!

சிலை : என்ன சொல்.

கல் : நானும் ஒரு கல் தான்! நீங்களும் ஒரு கல் தான்! ஆனால் இந்த மனிதர்கள் என்னை மிதிப்பதும் நடப்பதும் காலணிகளைக் கழட்டிவிடுவது எனச் செய்கிறார்கள். உங்களை மட்டும் வணங்குவதும் மாலை மரியாதை செய்வதும் எனச்செய்கிறார்களே ஏன்? என்றதாம்.

சிலை: என்னைக் கலைஞர்கள் கடப்பாறை, சுத்தி மற்றும் உளியினைக் கொண்டு செதுக்க பலவலிகளை அடைந்து சிற்பமானேன் ஆதலால் நான்

மதிக்கத்தக்க வகையில் ஆலயத்திற்குள்ளே இருக்கின்றேன். இதனையெல்லாம் நீ அடையாததால் வெளியில் படிக்கட்டாக இருக்கின்றாய் என்றது சிலை.

கதையின் கருத்து: இதன் மூலம் மனிதர்களாகிய நாம் அறிந்துகொள்ள வேண்டியது என்னவென்றால் நாம் வாழ்வில் எந்த அளவிற்குக் கடினமான தருணங்களையும் சூழ்நிலைகளையும் கடக்கின்றோமோ அந்த அளவிற்கு வெற்றிகளும் பெருமைகளும் நம்மை வந்துசேரும்.

2016-ல் வணங்கப்பட வேண்டியவர்கள் (அ) போற்றப்பட வேண்டியவர்கள்

மக்கள் தொகையில் இரண்டாம் இடம் இந்தியா!
வந்தது ஒலிம்பிக் (ரியோ) 2016
நாடு முழுவதும் பதக்கம் கிடைக்குமா என்று
ஏக்கத்தில் இருக்க!
அந்த ஏக்கத்திற்கு முற்றுப்புள்ளி வைத்தவர்களோ இரு பெண்மணிகள்
மல்யுத்தத்தில் வெண்கலம் வென்ற சாக்சிமாலிக்கும்
இறகுபந்து போட்டியில் பி.வி.சிந்துவுமே 2016-ல்
இந்தியா போற்றப்படவேண்டியவர்கள் என்றால் மிகையாகாது.
திறமைகள் ஒளிந்துகிடக்கின்றது இங்கு! தேடிகண்டறியுங்கள்
இலஞ்சங்களைத் தவிர்த்தால்
கண்டிப்பாக திறமைசாலிகள் கிடைப்பார்கள்
இலட்சியங்களை அடைய!
இன்று வென்றதோ இரண்டு பதக்கம்
எதிர்காலத்தில் வெல்வோம் இருநூறு பதக்கங்கள்
வெற்றியைக் காட்டிலும் தோல்வியே சிறந்தது
வெற்றி பெற்றவனை விட
தோல்வி அடைந்தவனே சிறந்தவன்!
ஏனென்றால் வெற்றி அடைந்தவன் வெற்றியின்
மிதப்பில் இருப்பான்!
ஆனால்! தோல்வி அடைந்தவன்
வெற்றி பெறவேண்டும் என்னும்
சிந்திப்பில் இருப்பான் வெற்றியைக் காண!

<div align="right">

வ. மணிகண்டன் (AP150008)
முதுகலைப் பொருளாதாரம் இரண்டாம் ஆண்டு

</div>

காலத்தின் பொன்மொழிகள்

❖ காலம் கடவுளுடையது நம்முடையதன்று - ஹாலந்து

❖ காலத்தால் ஏற்பட்ட புண் காலத்தாலேயே ஆறும் - **இங்கிலாந்து**

❖ உலகத்துச் செல்வங்களால் இழந்து போன ஒரு கணத்தைக்கூட திரும்ப பெறமுடியாது - **பிரான்ஸ்**

❖ காலம்தான் உலகின் ஆன்மா - **கிரீஸ்**

❖ காலத்தை விலைக்கு வாங்க முடியாது - **ஜெர்மணி**

❖ காலத்திற்காகக் காத்திருக்கலாம். காலம் யாருக்காகவும் காத்திருக்காது - **இங்கிலாந்து**

❖ நிகழ்காலத்தை நாம் இழப்பதால் நாம் எல்லா காலத்தையும் இழக்கிறோம் - **இங்கிலாந்து**

❖ காலம் ஓசையில்லாத அரம் - **இத்தாலி**

❖ பல்லுள்ளபோதே தேங்காயைத் தின்ன வேண்டும் - **இலங்கை**

❖ இரவும் பகலும் யாருக்காகவும் காத்திருப்பதில்லை - **ஜப்பான்**

❖ மழை பெய்யும்முன்பே நீர் பிடிப்புக்கு ஏற்பாடு செய் - **துருக்கி**

❖ எல்லாத் துயரங்களுக்கும் இரண்டு பரிகாரங்கள் உண்டு. அவைக் காலமும் மௌனமும் - **பிரான்ஸ்**

❖ ஒவ்வொருவனும் தன் குற்றத்தைக் காலத்தின் மேல் சுமத்துகிறான் - **இங்கிலாந்து**

❖ காலத்தைத் தவறவிட்டால் வாழ்வு சுமையாகிவிடும் - **இந்தியா**

❖ நேரம் சொக்கத்தங்கம் - **எஸ்டோனியா**

விஜி (AU140137)
மூன்றாம் ஆண்டு வணிகவியல்

படிப்புகள் தெரியுமா?

- Aristology   -   உணவுக் கலை, உணவு ஆய்வு நூல்
- Ecology   -   உயிரின வாழ்க்கைச் சூழல் ஆய்வு நூல்
- Mycology   -   காளானுல் பூஞ்சைக் காளானைப் பற்றிய ஆய்வு நூல்
- Acoustics   -   ஓசை ஆய்வியல் துறை, செவிப்புலன் இயைபு
- Anatomy   -   உடற்கூறியல்
- Chronology   -   காலக்கணிப்பு முறை நூல், காலவரிசை முறை
- Epigraphy   -   கல்வெட்டு பற்றிய படிப்பு
- Philology   -   மொழிநூல் - கலை இலக்கியப் பற்றார்வம்
- Philately   -   அஞ்சல்தலை ஆய்வு
- Numismatics -   நாணயம் - பதக்கம் முதலியவற்றின் ஆராய்ச்சித்துறை
- Cytology   -   உயிர்மங்களைப் பற்றி ஆயும் உயிர் நூற்பிரிவு
- Ornithology -   பறவையியல் நூல்

- Osteology - எலும்புகளைப் பற்றி ஆயும் உள்ளுறுப்பியல் விலங்கின் எலும்புக்கட்டுமான அமைப்பு
- Archaeology - தொல்பொருள் ஆராய்ச்சி (பழமைச் செய்திகள் பற்றிய அறிவியல் ஆய்வு)
- Pedagogy - ஆசிரியரியல், போதனை முறை
- Seismography - நிலநடுக்க ஆய்வு முறை

<div align="right">

இளவரசன் (AU140157)
மூன்றாம் ஆண்டு வணிகவியல்

</div>

நேர்மை வணிகம்

அம்மா என்ற பாசம்
அதுதான் உண்மையான நேசம்
அதுபோல
வியாபாரம் என்ற வாசம்
நேர்மை வணிகம் என்று வீசும்
இதனை புரிந்தவர்களுக்கு அது சுவாசம்!
பொருட்களில் கலப்படம் இல்லாமல்,
வாங்கும் பொருளுக்குரிய நேர்மையான விலையில்
செய்வதே உண்மை வியாபாரம்
பூக்கள் என்பது உதிரும் வரை
இரவு என்பது விடியும் வரை
நேர்மை வணிகம் என்பது மனிதர்கள் இப்பூமியில் உள்ள வரை!

<div align="right">

ம. மணி (BU141250)
மூன்றாம் ஆண்டு வணிக கணினிப் பயன்பாட்டியல்

</div>

இந்தியாவின் நிலை

உலக நாடுகளில் சில துறைகளில் நமது நாடு வகிக்கும் இடத்தை அறிவோம்.

❖ மிகப் பெரிய ஜனநாயக நாடுகளில் இந்தியாவுக்கு முதலிடம்.

❖ மக்கள் தொகையின் அடிப்படையில் நம் நாடு இரண்டாம் இடம்.

❖ அறிவியல் தொழில்நுட்பத்தில் மூன்றாம் இடம்.

❖ படைகளின் எண்ணிக்கையில் நமக்கு நான்காம் இடம்.

❖ விண்வெளி ஆராய்ச்சியில் நாம் வகிப்பது ஐந்தாம் இடம்.

❖ அணுசக்தி ஆராய்ச்சியில் இந்தியாவுக்கு ஆறாவது இடம்.

❖ நிலப்பரப்பின் அடிப்படையில் ஏழாம் இடம்.

பொன் மொழிகள்

❖ நீங்கள் எதைச் செய்தாலும் உங்கள் உள்ளத்திற்கும் உலகத்திற்கும் உண்மையாகவே நடந்து கொள்ளுங்கள் - **காந்திஜி**

❖ உண்மைக்கு நாம் செய்யும் மிகப் பெரிய சமர்ப்பணம் அதை நாம் உபயோகப்படுத்துவதுதான் - **எமர்ஸன்**

❖ புகழ்ச்சி என்பது வார்த்தைகளால் ஆனது. உண்மைக்கும் அதற்கும் சம்பந்தம் இல்லை - **பிரௌன்**

❖ துன்பம், துன்ப எழுச்சி, துன்ப நீக்கம், துன்ப நீக்கதிற்கான வழி இந்த நான்குமே நிலையான உண்மைகள் ஆகும் - **புத்தர்**

❖ உண்மைக்குப் பகையாய் நிற்பது வரட்டு விவாதம்தான். - **அரவிந்தர்**

❖ எல்லா அறிவுக்கும் அடிப்படையாகவும் எல்லா சமுதாயங்களுக்கும் ஆணி வேராகவும் உண்மை இருக்கிறது - **டிரைடன்**

❖ முடிந்தால் சமாதானமாக இரு. ஆனால் என்ன நேர்ந்தாலும் உண்மையை மட்டும் கூறு - **லூதர் கிங்**

❖ ஒவ்வொருவரும் உண்மை தன் பக்கம் இருக்க வேண்டும் என்று விரும்புகிறார்கள். உண்மையின் பக்கம் அவர்கள் இருக்க விரும்புவதில்லை - **வேட்லி**

❖ உண்மையைக் கடைப்பிடியுங்கள் பொய்மைத் தானே வெட்கித் தலைகுனியும் - **ஜெபர்சன்.**

<div align="right">

ng. ntq;fNlrd; (AU140112)

மூன்றாம் ஆண்டு வணிகவியல்

</div>

வசந்தம்

பூக்கள் இருக்கும் வரை
வண்டுகளுக்கு வசந்தம்
உலகில் நீர் இருக்கும் வரை
உயிர்களுக்கு வசந்தம்
ஆயுள் இருக்கும் வரை
மனிதனுக்கு வசந்தம்
தாயின் பாசம் இருக்கும் வரை
குழந்தைகளுக்கு வசந்தம்
கல்லூரி வாழ்க்கை இருக்கும் வரை
மாணவர்களுக்கு வசந்தம்
தூய நெஞ்சக் கல்லூரியே நீ இருக்கும் வரை
சமுதாயத்திற்கு வசந்தம்!!!!!!!

<div align="right">

மோ.சங்கீதா (BP141003)

</div>

அறுபது நாட்களில்...
மனிதன் மரணித்த பிறகு உடலில் ...

36 மணி நேரத்தில் ஈக்கள் முட்டை இடுகின்றன.

60 மணி நேரத்தில் லாவாக்கள் தோன்றுகின்றன.

3 நாட்களில் நகங்கள் கழன்று விடுகின்றன.

4 நாட்களில் ஈறுகள் தொலைகின்றன.

5 நாட்களில் திரவமாய் உருகுகிறது மூளை.

6 நாட்களில் வாயுக்களால் வெடிக்கிறது வயிறு.

2 மாதங்ளில் உடல் உருகி திரவமாகின்றது.

இரா.அருண் (BU150228)
இளங்கலைக் கணிதம் இரண்டாம் ஆண்டு (பிரிவு - 2)

இயேசுவை நேசி

சோதனையில் சோர்ந்திடாதே

சோகத்தில் மூழ்கிடாதே

சோதனையை நீ ஜெயித்தால்

வல்லவனாய் போல் மாறுவாய்!

ஆயிரம் இடிகள் இடித்திட்டபோதும்

வானம் கிழிவதில்லை!

அதுபோல் உன் நம்பிக்கையை இயேசு மேல் வை

அவர் உன்னை நேசிக்க

உன் வாழ்க்கை வெளிச்சமாகும்!

எனவே எப்போதும் இயேசுவை நீ நேசி! .... நேசி!!

உயிர் மூச்சாக சுவாசி …..!!!

ச.கோட்டிஸ்வரி (BP141020)
முதுகலை மூன்றாம் ஆண்டு, கணினிப்பொறியியல்

ஆசிரியர்களுக்கான அன்பின் சமர்ப்பணம்

அஞ்சில் எமைவளைத்து அமுதனைய கல்வியினை

நெஞ்சில் நிறைக்கின்ற நேர்த்தியெல்லாம் கற்றவரே!

அறிவு நீர்பாய்ச்சி அகந்தைக் களையகற்றி

செறிவுடையோராய் எம்மைச் செய் உழவர் நீங்களன்றோ!

எண்ணோடு எழுத்தென்னும் இரு கண்கள் திறக்கின்ற

திண்ணிய பணிசெய்யும் சிற்பியரும் நீங்களன்றோ!

அன்றாடம் எமை நாடி அறிவு புகட்டும்உம்மை

இன்றிந்நாள் எம்நெஞ்சில் நிறுத்தி புகழ்கின்றேன்

வாழ்நாள் முழுவதையும் மாணவர்க்களித்து

வீழ் நாளிலாக் கல்வி விளைக்கும் நீர் வாழியவே!!!!!!

உங்கள் புகழ் என்றும் ஓங்கட்டும்………………

 கு.பிரியங்கா (BP141040)

முதுகலை மூன்றாம் ஆண்டு கணினிப்பொறியியல்

jha;

இருளான கருவறையில் இருந்த போது கூட,

என்னை பயம் அறியாமல் பாதுகாத்தாய்….!

இம்மண்ணில் நான் பிறந்த போது,

விண்மீனாய் என்னை அறிமுகப் படுத்தினாய்…….!

பள்ளி பருவத்தை நான் தொட்ட உடன்,

பகலவனாய் என்னை ஒளிரச் செய்தாய்….!

நான் வெற்றி பெற்று விளங்கும் போது,

உன் புன்னகையால் என்னை அழகு படுத்தினாய்…..!

நான் வான் போன்று உயர்ந்து நிற்கும் இவ்வேளையிலோ,

என்னை விட்டு விண்ணகம் புகுந்தாய்…….!

அன்று நான் சிரித்த போது,

உன்னைப்போல் மகிழ்ந்தவரும் இல்லை………!

இன்று நான் அழும் போது,

உன்னைப்போல் ஆறுதல் உரைப்போரும் இல்லை……!

அன்னையே என்னைச் சான்றோனாக்கிய

நீ இல்லையே என் உயரத்தைக் காண.

kdpjd;

உயிரெழுத்தைக் கற்றாய்

உயிரின் முக்கியத்துவம் உனக்குத் தெரியவில்லை…….!

மெய்யெழுத்தைப் பிரித்தாய்

மெய்யின் பொருள் உனக்கு விளங்கவில்லை….!

கடலின் ஆழத்தை அளந்தாய்

அடுத்தவரின் மன நிலையை அறிய மறந்தாய்........!

நிலவில் காலடி பதித்தாய்

அடுத்தவர் காலணி இல்லாததை உணர மறந்தாய்.......!

நிலத்தின் விரிசலைக் கண்டறிந்தாய்

உன் மனதின் விரிசலைக் குறைக்க நீ கண்டறியவில்லை........!

உனக்கெனப் பொருள் சேர்த்தாய்

உன் அயலான் உணவின்றி தவிப்பது உனக்குப் புரியவில்லை....!

வளர்ச்சி வாழ்வின் அவசியம் என்பதனை உணர்ந்த நீ ,

மனித நேயத்தினை மட்டும் ஏன் மறந்தாய்...!

முதலில் மனிதனாக மாறு! மனிதத்தை நாடு.......!

வளர்ச்சியினைப் பெருக்கு.......!

சகோதர உறவில் கலந்து மகிழ்ந்திடு......!

<div align="right">
வ. செல்வ மெட்டி ஷிப்னா (BP151025)
முதுகலை இரண்டாம் ஆண்டு கணினி பொறியியல்
</div>

வாழ்க்கை நிலையாமை

நமது பிறப்பு : பெற்றோரால் தரப்பட்டது

நமது பெயர் : பிறரால் சூட்டப்பட்டது

நமது வருமானம் : பிறரால் தரப்படுகிறது

நமது மரியாதை : பிறரால் தரப்படுகிறது

நமது முதல் மற்றும் கடைசி குளியல் : பிறரால் செய்யப்படுகிறது

நமது இறப்புக்குப் பின்

நமது சொத்துக்களும், உடைமைகளும் : பிறரால் எடுத்துக் கொள்ளப்படுகிறது

நம்மை எரியூட்டுவதும் புதைப்பதும் : பிறரால் செய்யப்படுகிறது

இத்தனையும் தெரிந்த பிறகும் நாம் ஏன் தேவையற்ற அகந்தையோடு திரிகிறோம் என்பதை நினைத்தால் ஆச்சரியமாக இருக்கிறது. எனவே வாழும் போதே பிறருக்காக வாழுங்கள் சகோதர, சகோதரிகளே!

<div align="right">
க.ஜோதீஸ்வரன் (BU150224)
இளங்கலைக் கணிதம் இரண்டாம் ஆண்டு (பிரிவு - 2)
</div>

பள்ளி நாட்கள்

இராமனைக் கடவுளாக சித்தரித்தனர்

<div align="center">97</div>

கம்ப இராமாயணத்தில் - அவரின்
பதினான்காண்டு வனவாசமே
        அதனை மேலும் சிறப்பித்தது
பன்னிரண்டு ஆண்டாக மாணவரும்
        பள்ளியாசகம் மேற் கொள்கின்றனர்
மாணவர்களை வலிமை படுத்தியதும்
        முதலில் இன்னலை எதிர் கொள்ளச் செய்ததும்
சமூகம் அறிய சாதனைச் செய்ய
        வித்திட்டதும் இந்த நாட்களே!

மா.வசந்தகுமார் (BU150271)
இளங்கலைக் கணிதம் இரண்டாம் ஆண்டு (பிரிவு - 2)

கல்லூரி

பொது உணர்வுகளை உதிரத்தில் கலந்து
மங்கிய மதிக்கு சானம் பிடித்து
கூர்மையான மதியாக உயிர்பித்து
சமூகக் கடலில் நீந்த பயிற்சி கொடுத்தனர் எமது கல்லூரியில்
மீன் பிடிப்பதும், முத்தெடுப்பதும் அவரவர் கைகளில்........

சி.மு.திலக் (BU150215)
இளங்கலைக் கணிதம் இரண்டாம் ஆண்டு (பிரிவு - 2)

கிறுக்கல்

அடக்க மென்ற பெயரால் அடங்காதே
        நேர் கோடுகள் ஒருபோதும் சித்திர மன்று
சோதனையையும் தோல்விகளையும் எதிர்கொள்
        ஓவியமாக உருவெடுக்கும் உன் கிறுக்கல்
திருத்தங்களைத் திறனாய்வு செய்கின்றன
        கிறுக்கே சமுதாயத்தில் நல்லதை வேண்டி
கிளர்ச்சி செய்கின்றது என்றும்

அ.ரா.கோகுல் (BU150218)
இளங்கலைக் கணிதம் இரண்டாம் ஆண்டு (பிரிவு - 2)

நேரத்தின் மதிப்பு

1. ஒரு ஆண்டின் மதிப்பு என்னவென்று அறிய தேர்வில் தோல்வி அடைந்த மாணவனைக் கேளுங்கள்.

2. ஒரு மாதத்தின் மதிப்பு என்னவென்று குறைப்பிரசவத்திற்கு ஆளானத் தாயைக் கேளுங்கள்.

3. ஒரு வாரத்தின் மதிப்பை அறிய ஒரு வார பத்திரிகை ஆசிரியரைக் கேளுங்கள்.

4. ஒரு நாளின் மதிப்பை அறிய அன்று வேலை கிடைக்காமல் போன ஒரு தினக் கூலித் தொழிலாளியிடம் கேளுங்கள்.

5. ஒரு மணி நேரத்தின் மதிப்பை அறிய இரயில் நிலையத்தில் உறவினருக்காக காத்திருக்கும் மனிதனைக் கேளுங்கள்.

6. ஒரு நிமிடத்தின் மதிப்பு என்னவென்று இரயிலைத் தவறவிட்ட பயணியிடம் கேளுங்கள்.

7. ஒரு விநாடியின் மதிப்பு என்னவென்று ஒரு விபத்தில் உயிர் தப்பியவரைக் கேளுங்கள்.

8. ஒரு மில்லி செகண்டின் மதிப்பு என்னவென்று ஒலிம்பிக் போட்டியில் வெள்ளிப்பதக்கம் வென்ற ஓட்டப்பந்தய வீரரைக் கேளுங்கள்.

"காலத்தின் அருமை அபாரமானது"

பா. பைஜு (BU140223)
இளங்கலைக் கணிதம் மூன்றாம் ஆண்டு (பிரிவு- 2)

சிந்தனைகள்

❖ நாம் எப்போதும் முன்னேறி செல்வது தான் வெற்றி என்று நினைத்து கொண்டிருக்கிறோம். சில நேரங்களில் பின் செல்வதும் வெற்றிக்கு வழி வகுக்கும்.

   - உதாரணம் சதுரங்காட்டம்

❖ உயர உயர உன் ஆடம்பரத்தின் அளவை சின்னதாக்கு, அது உன்னை திரும்பி பார்க்கவைக்கும்.

   - உதாரணம் கோபுரம்

❖ அடுத்தவன் உழைப்பு இன்றி ஒருவன் பயன்பெற முடியாது.

   - உதாரணம் வியாபாரி

❖ எப்போதும் பிரிவைக் கண்டு கவலை கொள்ள வேண்டாம் பிரிந்து இருப்பதும் ஒரு வகை நன்மையே.

   - உதாரணம் தண்டவாளம்

அ. ராஜேஷ்வர் (BU140202)

நம்பிக்கை

விண்ணைத் தொடும் அளவு
விரல்கள் நீளமில்லை - ஆனால்
நம்பிக்கை என்னும் ஏவுகணைக் கொண்டு
விரல்களால் விண்ணை முட்டினோம்!
ஆழியை அள்ளும் அளவு கைகளுமில்லை - ஆனால்
நவீனக் கைகளால் தீவுகள் படைத்தோம்!
பார்வையிலே பால்வெளியையும் வெல்லுவோம்!
அறிவு (இயல்) என்னும் நம்பிக்கை கொண்டு!

<div align="right">

பூ. ஆர்த்தி (BP160303)
முதுகலை இயற்பியல் முதலாம் ஆண்டு

</div>

மழை

நீ வரும் முன்பே
உனக்கு வரவேற்பு மிகுந்திருக்கிறது ....
இடி பட்டாசை வெடித்தும்
மின்னல் விளக்கு ஏற்றியும்
மக்கள் பூஜை செய்தும்
உன்னை வரவேற்கிறார்கள்
நீ அருவியாக மண்ணில் பொழிந்து
இயற்கையை வளர்த்து
மக்களின் வாழ்க்கையில் ஒளியேற்றுகிறாய்
சிறு சிறு குழந்தைகளோ
உன் வருகையால்
விளையாடியும், கப்பல் செய்தும் மகிழ்கிறார்கள்
நீ இல்லாமல் ஒரு வாழ்க்கையை
எவராலும் வாழ முடியாது
மழையே நீ வருக!
மண்ணில் வளம் பெருக....

<div align="right">

ம. சங்கீதா (BU140922)
மூன்றாம் ஆண்டு உயிர்வேதியியல்

</div>

பின்னம்

"பாலையும் தண்ணீரையும்
பிரித்தால் அன்னம்

முழு பொருளைச் சமமாகப்
பிரித்தால் அது **பின்னம்**
தலையினிலே **தொகுதி** வரும்
பாதத்திலே **பகுதி** வரும்
இடையில் வரும் கோட்டுத்துண்டு
பின்னத்தின் சின்னம்
தலைபாரம் குறைவால் தாங்கும்
பின்னம் அது **தகுபின்னம்**
தலைபாரம் அதிகமானால் தாங்காப்
பின்னம் அது **தகாப் பின்னம்**
தாங்காதபாரத்தை முழு எண்ணாய்
கீழிறக்கித்
தாங்கும் படிகலந்து நிற்கும்
பின்னமேகலப்புப் பின்னம்"

வெ. பவானி (BU160310)
இளங்கலை இயற்பியல் முதலாமாண்டு (பிரிவு - 2)

உமக்கு நன்றி

மணி விழாவைக் கடந்த
எங்கள் உன்னத கல்லூரியே!
தூய நெஞ்சக்கல்லூரியே!
உன்னை விட்டுப் பிரிய
மனம் இல்லை....
உன் நுழைவாயிலில்
நான் காலை வைத்தபோது
பெருமிதம் கொண்டேன்
உன்னில் என்னைச் சேர்த்ததற்காகவும்
உன் குடும்பத்தில் ஒருவனாக
என்னைச் ஏற்றுக் கொண்டதற்காகவும்
பெருமைப்படுகிறேன்.....
உன் புகழை மேலும் சொல்ல
வார்த்தைகள் வருகின்றன - ஆனால்

101

எழுத இயலாமல்

என் கவித் துளிகள்

கண்ணீர் துளிகளாக மாறுகின்றன

உன்னைவிட்டுப் பிரியாத காரணத்தால்

நானும் வருவேன்

ஒருநாள்....

நல்ல பணியாளனாக........

ர.பிரித்தா (BU160334)
இளங்கலை முதலாமாண்டு இயற்பியல் (பிரிவு-2)

சங்கக்ககால பெண்பாற் புலவர்களின் பாடல்களில் கணிதம்

முன்னுரை

சங்க இலக்கியங்கள் மக்கள் இலக்கியம் என்றும் போற்றப் பெறுகிறது. சங்க இலக்கியத்தில் ஆண்பாற் புலவர்களைக் காட்டிலும் பெண்பாற் புலவர்கள் எண்ணிக்கை குறைவாக இருப்பினும் அவர்களும் தம் பாடல்களின் வழி சமூகம், பண்பாடு, அறிவியல், கணிதம் போன்ற செய்திகளைக் கூறியுள்ளனர். அவ்வழியில் பெண்பாற்புலவரின் பாடல்களிலுள்ள கணிதச் செய்திகளை ஆய்வதே இக்கட்டுரையின் நோக்கமாகும்.

பழங்கால கணிதநூல்கள்

தமிழ் எழுத்துக்கள் பண்டைக்காலம் தொட்டு இக்காலம் வரை இவ்வொரு நூற்றாண்டிலும் வரிவடிவத்தில் மாற்றமடைந்து வந்திருக்கின்றன. இவ்வாறே தமிழ் எண்களும் மாற்றமடைந்து வந்துள்ளன. கல்வெட்டுகளிலும், செப்பேடுகளிலும், ஓலைச்சுவடிகளிலும் தமிழ் எண்கள் பயன்படுத்தப்பட்டு வந்துள்ளதைத் காணமுடிகிறது. பழந்தமிழ்க் கணக்கு நூல்களாக ஏரம்பம், கிளராலயம், திரிபுவனதிலகம், சிறுகணக்கு, மலையான் கணக்கு, கணக்கதிகாரம், ஆஸ்தான கோலாகலம் முதலிய நூல்கள் இருந்துள்ளமைக்கான குறிப்புகள் காணப்படுகின்றன. இவற்றுள் கணக்கதிகாரம், ஆஸ்தான கோலாகலம் இரண்டு மட்டுமே அச்சு வடிவில் கிடைக்கின்றன.

பழங்காலத்தில் கணிதம்

தமிழ்க்கணக்கு, தனித்தன்மை கொண்டது தமிழ் எண்களும் தனித்தன்மை கொண்டவை. மனிதன் ஒரு எண்ணை மற்றவருக்குத் தெரிவிக்க முதலில் கைவிரல் கொண்டும் பின்னர் கயிறுகளால் முடிச்சிட்டும் உணர்த்தினான்.

தன் எதிரில் இல்லாத ஒருவருக்கு ஒரு குறிப்பிட்ட எண்ணிக்கையைத் தெரிவிக்க முனைந்தபோது களிமண்ணில் கைகளால் கோடுகள் போட்டு அந்த எண்ணைப் பதிவு செய்தான் மனிதனின் இம்முயற்சியே எண் குறியீடுகள் தோன்றுவதற்குரிய முதல் முயற்சியாகும்.

தமிழில் எண்ணுப்பெயர்கள் சிற்றிலக்கம், பேரிலக்கம் என்று குறிப்பிடப்படுகிறது.

சிற்றிலக்கத்தில் முந்திரி, காணி, வீசம், அரைக்கால், கால், அரை, முக்கால், மா போன்றவை அடங்கும்.

பேரிலக்கத்தில் 1 முதல் 10 வரையுள்ள எண்கள் என்றும் அதற்கு மேல் நூறு ஆயிரம், நூறாயிரம், கோடி ஆம்பல், வெள்ளம், குவளை, சங்கம், நெய்தல் என வருவனவற்றைப் பேரெண்கள் எனக் குறிப்பிடலாம்.

முடத்தாமக்கண்ணியார்

சங்ககாலப் பெண்பாற் புலவர்களின் சிறந்த புலவராக கருதப்படும் முடத்தாமக் கண்ணியார் பொருநராற்றுப் படையில் சோழநாட்டின் வளத்தை குறிப்பதற்காக

மா மாவின் வயின்வயின் நெல்

தாழ் தாழைத் தண் தண்டலை - பொ. ஆ (180-181)

அகன்ற நிலப்பரப்பினை உடைய அந்நிலத்தில் 100 குழிகள் கொண்ட அளவிற்றாகிய ஒவ்வொரு மா நிலத்தில் திடர்தோறும் தாழ்ந்த தெங்கினை உடைய குளிர்ந்த மருதநில மரங்கள் படர்ந்திருக்கும்.

இப்பாடலிலிருந்து மா என்பது நில அளவையைக் குறிக்கப் பயன்படும் பின்ன எண்ணுப்பெயராகும் என்பதை அறிய முடிகிறது. மாவிற்கு பிங்கல நிகண்டு பின்வரும் பொருளைத் தருகிறது.

மா என்னும் சொல் பதிவிற்கு

ஒரு மரப் பெயரு மழைத்தலுங் கறுப்புங்

குதிரையும் விலங்கும் திருவும் வனப்பும்

வலியும் வண்டும் பிண்டியும் செல்வமு

நிறனும் பெருமையும் நிலனுமோ ரிலக்குழு

மருவிய பெயரு மாவென லாகும்

என்றவாறு பதினாறு வகைப் பொருள் தரும் பிங்கல நிகண்டு அவற்றுள் ஒன்றாக ஓர் எண் என்னும் பொருளையும் தருகிறது.

100 குழி   =   1 மா

20 மா   =   1 வேலி இதன் மதிப்பு 1/20 ஆகும்

"காணி நான் மாவாக்கி"

என்றவாறு காணி நான்கு கொண்டது மா என்கிறது கணக்கதிகாரம் என்னும் நூல்.

தஞ்சை பெருவுடையார் கோவிலில் உள்ள முதலாம் இராசராசன் காலத்துக் கல்வெட்டு ஒன்று மா வின் மதிப்பினைக் கீழ்க்கண்டவாறு குறிப்பிடப்படுகிறது.

முக்காலே இரண்மா காணி

அரைக்காணி கீழ் அரையே மூன்று

மாவின் கீழ் மூன்றுமா அரைக்காணி

103

முந்திரிகைக் கீழ் முக்காணிக் கீழ் முக்காலே ஒரு மா

என்றவாறு வரும் பகுதி கீழ் கீழ் கீழ் கீழ் முக்காலே ஒருமா எனப்படும். கீழ் முக்காலே ஒரு மா என்னும் எண்ணுப்பெயரைச் சுட்டுகிறது. எண்ணுப் பெயரின் மிக மிகச் சிறியதாகக் கருதப்படும் இவ் எண்ணுப் பெயரின் மதிப்பு 3/838860800000 ஆகும்.

முடிவுரை

பெண்பாற் புலவர்களின் பாடல்களில் சமூகம், பண்பாடு, வரலாற்றுச் செய்திகள் மட்டுமல்லாது கணிதச் செய்திகளும் உள்ளன என்பதை மேற்கண்ட பாடல்கள் வலியுறுத்துகின்றன.

<div align="right">

கோ.யாழினி (DR140806)
முனைவர் பட்ட ஆய்வாளர்
</div>

பட்டாம்பூச்சியும் இலக்கியமும்

பட்டாம்பூச்சியே! நீயோ ஒரு கூட்டினுள்
புழுவாய் பிறக்கிறாய்!
நானோ மனிதர்களின் மனக்கூட்டினுள்
இலக்கியமாகப் பிறக்கின்றேன்.

நீயோ சிவப்பு, மஞ்சள், கருப்பு, வெள்ளையெனப்
பல வண்ணங்களில் மிளிர்கிறாய்!
நானோ உவமை, உருவகம், சந்தம், நயம்,
மோனை, இயைபு, தொடையெனும் இலக்கிய
உருபுகளால் மிளிர்கின்றேன்.

உன்னைப் பார்ப்பவர்களின் நெஞ்சை
அள்ளுகிறாய் நீ!
என்னைப் படிப்பவர்களின் நெஞ்சை
அள்ளுகிறேன் நான்!
உன்னைப் பார்ப்பவர்களின் மனதில்
இரசனையைத் தூண்டுகிறாய்!
என்னைப் படிப்பவர்களின் மனதில்
இரசனையைத் தூண்டி கற்பனையை வளர்க்கிறேன்.
உன்னைப் பிடிக்க வருபவர்களை
சிரமத்தில் ஆழ்த்துகிறாய்!
என்னைப் படிக்கின்றவர்களை
இன்பமுறச் செய்கிறேன்.

நீயோ பட்டாம்பூச்சியாக விண்ணில்
சிறகடித்துப் பறக்கிறாய்!
நானோ இலக்கியமாக கற்றவர்களின்
நெஞ்சில் சிறகடித்து நிற்கிறேன்.

உனக்கும் எனக்கும் பெரிய
வித்தியாசம் ஒன்றுமில்லை,
நீயோ உயிருடன் நடமாடுகிறாய்,
நானோ மனிதர்களின் நடமாட்டத்தில்
உயிர் வாழ்கிறேன்.

கோ.சவிதா, (DR130801)
முனைவர் பட்ட ஆய்வாளர், தமிழ்த்துறை

புதிய பாதை பிறக்கட்டும்

விழுந்தால் அழாதே ....
எழுந்திரு ......
தோற்றால் புலம்பாதே
போராடு .....
கிண்டலடித்தால் கலங்காதே ...
மன்னித்துவிடு ....
நஷ்டப்பட்டால் நடுங்காதே ....
நிதானமாய் யோசி ....
ஏமார்ந்துவிட்டால் ஏங்காதே ....
எதிர்த்து நில் ....
நோய் வந்தால் நொந்து போகாதே ....
நம்பிக்கை வை ....
கஷ்டப்படுத்தினால் கதறாதே ...
கலங்காமலிரு ...
உதாசீனப்படுத்தினால் உளறாதே ...
உயர்ந்து காட்டு
கிடைக்காவிட்டால் குதிக்காதே ....
அடைந்து காட்டு ....
மொத்ததில் நீ பலமாவாய் ....
சித்தத்தில் நீ பக்குமாவாய் ....
உன்னால் முடியும் ....
உயரமுடியும் .....
உனக்கு உதவ ...
நீதான் உண்டு
உன்னை உயர்த்த
நீ தான் நம்பு
எப்பொழுதும் நம்பிக்கையை
இழக்காதே ---
நீயே ஜெயிப்பாய் ...

லூ.பிரகாஷ்ஜான் பால்
ஆய்வக உதவியளார், இயற்பியல் துறை

Academic Association Activities (Shift-I)

வீரமாமுனிவர் தமிழ் மன்றம்

நாள்	நிகழ்வு	பொறுப்பாசிரியர்கள்	சிறப்புவிருந்தினர்கள்
27.06.2016	முதலாமாண்டு மாணாவர்களுக்குத் தகுதித்தேர்வு	தமிழ்த்துறைப் பேராசிரியர்கள்	-
05.07.2016	தமிழ் மன்றச் செயலர் - இணைச் செயலர் தேர்வு	முனைவர் க. மோகன்காந்தி	-
30.07.2016 31.07.2016	தருமபுரி மாவட்டத் தடயங்கள்- தேசியக்கருத்தரங்கம்	முனைவர் க. மோகன்காந்தி	திரு. நடன. காசிநாதன், மேனாள் இயக்குநர் தமிழ்நாடு தொல்லியல் துறை, சென்னை
05.08.2016	துறைகளுக்கிடையிலான பேச்சுப்போட்டி	திருமதி.மு.ரோஸ்	வி.கனகராஜ், குமரவேல், ஆசிரியர்கள்
29.08.2016	இலக்கியவிழா நினைவுச் சொற்பொழிவு இலக்கிய இன்பம்	முனைவர் க. மோகன்காந்தி	முனைவர் க. சிவகாமி உதவிப்பேராசிரியர், அரசுமகளிர் கலைக் கல்லூரி, கிருட்டிணகிரி.
06.09.2016	கல்லூரிகளுக்கிடையேயான பேச்சுப் போட்டி	முனைவர்.அ.பிரபு	-
15.09.2016 16.09.2016	முத்தமிழ் விழா	முனைவர் க. மோகன்காந்தி முனைவர் ந.சோழன்	திருகி.தனவேல் IAS திரு. திருப்பூர் கிருஷ்ணன் மற்றும் பலர்
04.02.2017	இலக்கிய விழா நினைவுச் சொற்பொழிவு	முனைவர்.அ.பிரபு	இ.சூசை, இணைப் பேராசிரியர், தூய வளனார் கல்லூரி (தன்னாட்சி), திருச்சிராப்பள்ளி
20.02.2017	ஊடகம் - சிறப்புச் சொற்பொழிவு	முனைவர்.அ.பிரபு	திரு. ஸ்ரீதர் ரங்கராஜ், பொறுப்பாசிரியர், வல்லினம் கலைஇலக்கிய இதழ், மலேசியா
21.02.2017	இலக்கியவிழா மீள் பார்வை	முனைவர் க. மோகன்காந்தி	பேரா. முனைவர் இரத்தினநடராசன்
22.02.2017	உணவே மருந்து! மருந்தே உணவு!!	முனைவர் பொன்.செல்வகுமார்	புலவர்.தி.கு.பொன்னம்பலம் தலைவர், முத்தமிழ்ப் பேரவை, திருப்பத்தூர்
23.02.2017	மாணவ மாணவியர் நல்லுறவு கலந்துரையாடல்	திருமதி.மு.ரோஸ்	முனைவர் சி.சகாயராஜ் தலைவர், வணிகவியல் துறை, அரசினர் திருமகள் ஆலைக் கல்லூரி, குடியாத்தம்

Department of English

Date	Programme	Resource Person
22.07.2016	Inauguration of Drama Club	Dr. John Paul Department of English VIT, Vellore
27.07.2016	"Author Presentation"	Prof. Kadhar Nawaz Head, Department of English, Islamiah College (Autonomous), Vaniyambadi
17.08.2016	"Text Based Film"	Department
20.09.2016	"Shakespearean Dramas"	Prof C.Parimala Department of English, Krishna Arts and Science College, Krishnagiri.
22.09.2016	"Invited Talk on Language"	Mr. Leo Maria Francis, BITS, Don Bosco, Yelagiri Hills
28.09.2016	"Elocution Contest"	Prof V.Madhan Kumar, Department of English
21.12.2017	"Shakespearean Dramas"	Department
06.01.2017	"Text Based Film"	Department
10.01.2017	"Invited Talk on Exuberant English Literature"	Dr.C.Govindaraj Associate Professor Department of English Periyar University PG Extension Centre, Dharmapuri
15.02.2017 & 16.02.2017	National Level Conference – cum – workshop on Language and Literature	Ms. Bama Dalit Feminist and Novelist Dr. A. Lourdusamy Dean & Associate Professor of English St. Alyousius College (Autonomous) Mangalore. Dr. J. John Love Joy, Asst. Professor of English, St. Joseph's College (Autonomous), Trichy

Department of Economics

Date	Programme	Staff In – Charge
24.06.2016	Inauguration of Diamond Jubilee Year	All the Students & Staff
30.06.2016	Fresher's Day	All the Students & Staff
30.06.2016 To 01.07.2016	ICSSR Two Days National Seminar	All the Students & Staff
26.08.2016	A.D Shroff Elocution Competition	Mr.S. John Sundar
31.08.2016	Teacher's Day	All the Staffs
01.09.2016	Workshop on 'SEBI'	Dr. Mani Sankar
08.09.2016	Industrial Visit for 3rd B.A Students	Mr.S. John Sundar & Mr.R. Sankaran
31.10.2016 To 04.11.2016	NCRET Collaboration State Level Workshop	Dr. A. Xavier Susairaj
05.01.2017 to 06.01.2017	Training in Excel	Dr. A. Xavier Susairaj
17.02.2017	Econ Fest'17	Association President
20.02.2017	Retirement Function	All the Staff

Department of Physics

Date	Programme	Resource Person
06.07.2016	Inauguration of Association of Physics	Prof. P. Ramasamy, SSN College, Chennai
30.11.2016	National Conference	1. Prof. Kalainathan, VIT, Vellore 2. Dr. Arun Kumar, PSG College, Covai 3. Dr. Ganagesan, Putra University, Malasya
16.12.2016	Student Seminar	P. Vanmathi, III BSc, Physics
19.12.2016	Science and Technology Conference	1. Dr. Kadiresan, Vijaya Hospital, Chennai 2. Dr. Baskaran, Gandigram Rural University, Dindukal 3. Collins Arun Prakash, SHC, TPT
11.01.2017	Special Lecture	Mr. Surya Kumar, Chennai

Department of Commerce

Date	Programme	Resource Person(s) / Chief Guest
30.06.2016	Fresher's Day	Dr. K.A. Maria John Joseph Head, Department of Commerce Department Staff Members & Students
13.07.2016	Awareness Programme on "Career as a Company Secretary"	Mr. Jeyabalan Counsellor of ICSI, Vellore Chapter
04.08.2016	One day 'Entrepreneurship Awareness Camp'	Dr. E. Bhaskaran BE, MIE, MBA, PhD Deputy Director of Industries and Commerce Government of Tamil Nadu, Chennai Dr. M.V. Swaminathan President, Vellore District Micro and Small Entrepreneurs Association, Ambur, Vellore
01.09.2016	Teachers Day	Department Students
23.09.2016	One day National Seminar Rural Entrepreneurship – Transforming the Face of Rural India sponsored by ICSSR	Dr. D. Raja Jeba Singh Faculty of Commerce St. Joseph College of Commerce (Autonomous) Bangalore, Karnataka Dr. R. Subramaniya Bharathy Faculty in Management Periyar Institute of Management Studies, Periyar University, Salem – 11 Certified Zone Trainer – Junior Chamber International, India Dr. Francis Xavier Associate Professor & Head PG & Research Department of Commerce, Andhra Loyola College Vijayawada, Andhra Pradesh
22.12.2016	Christmas Celebration	Department Students
07.01.2017	Intra Commerce Competition ICC-2016-17	Rev.Fr. Dr. C. Antony Raj Rev.Fr. Dr. D. Maria Antony Raj
20.02.2017	Commits 2017 (Inter-Collegiate Competition)	Rev.Fr. Dr. D. Maria Antony Raj Principal Dr. K.A. Maria John Joseph Head, Department of Commerce Department Staff Members & Students
15.03.2017	Workshop on Online Share Trading	Dr. S. Hariharan
28.03.2017	Interview Techniques – III B Com	Dr. K. A. Maria John Joseph

Department of Mathematics

Date	Programme	Resource Person	Staff In Charge
31.06.2016	Fresher's day Celebration	-	Department Staff
15.07.2016	Fresher's day Celebration	-	Department Staff
05.08.2016	Invited talk-I	Dr. V. Sadhasivam	Dr. V. Balaji
02.09.2016	Non verbal Reasoning (Written Quiz)	Dr. D. Ajay	Dr. A. George Maria Selvam Prof. S. Kalaiarasi
28.09.2016	Staff Seminar	Dr. N. Nithyapriya	Dr. A. Merceline Anita
26.11.2016	Latex Training	Prof. E. Suresh	Dr. G. Britto Antony Xavier A. Antony Arokiasamy
20.12.2016	Ramanujan Day Competitions	Dr. Sadhasivam	Department Staff
23.12.2016	Launching Online Journal of Computational Mathematica	Members of Editorial Board	Dr. G. Britto Antony Xavier
10.01.2017	MS Office Workshop	Prof. Joseph Antony	Prof. P. Manoharan
27.01.2017 28.01.2017	International Conference ICMA - 2017	Dr. I.P.Stavroulakis (Greece) Dr. Sandra Pinelas (Portugal) Dr. Javid Ali (UP) Dr. Pankaj Srivastava (Allahabad) Dr. E.Thandapani (Madras) Dr. P. Veeramani (Madras) Dr. Vengatesh (Bangalore)	Department Staff
14.02.2017	Releasing OMEGA -17 Magazine	Dr. C. Antony Raj	Department Staff

Department of Chemistry

Date	Programme	Resource Persons
30.06.2016	Fresher's Day	Department
29.07.2016	Rev. Fr. P. A. Thomas, SDB, Memorial Lecture	Prof. R. Mohan, Head , Department of Chemistry Loyola –ICAM, College of Engineering and Technology Loyola Campus, Nungambakkam, Chennai-34
31.08.2016	Teacher's Day Celebration	Rev. Dr. Praveen Peter and Department Staff
08.09.2016	Students Seminar	1.R.Kaviyarasan (Cell Penetratinf peptide) 2.A.Shiek Muzzammil (Green Chemistry-Basic) 3.S.Aprose (Green Chemistry - Applications)
17.09.2016	Invited Talk	Dr. I. Niyas Ahamed
29.01.2017	Alumni Meet	Department
02.02.2017	Industrial Visit	Dr. S. R. Xavier Rajarathinam & Prof. A. ArockiaNepolen Raj
08.02.2017	National Conference	Department Staff
14.02.2017	Students Seminar	Dr. V. Collins Arun Prakash
18.02.2017	Trekking, III Year	Prof. J. Maria Leo Joseph
23.02.2017	CHEM FEST	Dr. S. R. Xavier Rajarathinam

Department of Counselling Psychology

Date	Programme	Resource Persons	Faculty In-charge
06.07.2016	Fresher's Welcome	--	Mr.Dhamodharan
29.09.2016	2nd Annual National conference on "Psychology And Holistic Wellbeing"	Dr.ShekarRegistrar, NIMHANS	Dr.Henry Rozario
21.12.2016	Christmas celebration	--	Mr.Dhamodharan
15.02.2017	Workshop on Counselling Skills	--	Sr.Anthoniammal
02.03.2017	Workshop on Psychometric assessments collaboration with RGNIYD	Dr.Suresh, Assistant Professor, RGNIYD	Mr.Dhamodharan
16.03.2017	Workshop on Hypnotism	Dr.Kadhiravan Professor & Head, Periyar University	Mr.Dhamodharan

Department of Computer Science (UG)

Month	Programme	Staff In charge / Resource Person
21.06.2016	Joint Secretary Election/Dividing CQC Groups	Prof. Maria Dominic / Prof.R.Sandrilla
23.06.2016	Association Initiating meet for I years	Prof.R.Sandrilla
24.06.2016	Group Discussion on Association Annual Plan	Prof.R.Sandrilla
27.06.2016	Invited Talk: Psychological Issues	Prof.Latha Muniswamy
28.06.2016	Regular Counseling Sessions Begins	Prof.Latha Muniswamy
01.07.2016	Fresher's Day	Prof.R.Sandrilla
06.07.2016	Dividing the CQC Groups and Planning(odd semester)	Class Teacher
07.07.2016	Seminar on: Recent Trends in Computer Science	Mr.T.Gokula Selvan
13.07.2016 To 15.07.2016	Input for Sound Mind	Mrs. Sumitra Heart Fullness, Learn to Meditate, Tirupattur.
26.07.2016	Invited Talk and Prelims on Stress Management.	Prof. R.Sandrilla / Fr. Antony John SDB ,
12.08.2016	Prelims on Mock Interview	Academic Association
25.08.2016	DOT.NET Programming for II &III Year Students	Prof.S.Antony Josephraj Dept. of MSc. CS
01.09.2016	Teachers Day Celebrations	Prof.R.Sandrilla
15.09.2016	SPACE2K'16	All faculty Members
25.11.2016	Software Project Methodology (Phase I)	Prof.Shinoj, Don Bosco College, Yelagiri Hills
13.12.2016	Input on Recent trends on information Technology	Prof.Gopinath Ganapathy, Bharadhidhasan University, Trichy
02.02.2017	Talentina 2017	Prof.R.Sandrilla
04.02.2017	Software Project Methodology (Phase-II)	Dr. L. Ravi
06.02.2017	Mathematical Aptitude	Dr. A. Merceline Anita
15.02.2017	Result Analysis and Remedial Classes	Prof. Maria Dominic
17.02.2017	COMMUNE 2K17	Department

Department of Business Administration

Date	Programme	Resource Person
13.07.2016	Invited Talk – I -Research Methodology	Prof. A. Joshuva Victor,
19.07.2016	Invited Talk – II -Motivational Skills	Prof.J. Sasiganth
29.07.2016	Inter School Quiz Competition	Rev.Fr. Borg
01.08.2016	Inter College Competition	IslamiahWomens College, Vaniyamabdi
02.08.2016	Workshop – I – Personality Development	Dr. M. Raguraman Assistant Professor, Govt. Arts College, Barugur
12.08.2016	Inter College Conference on Global Trends in HR	M.K. Jain College, Vaniyambadi
17.08.2016	Invited Talk – III –SPSS	Prof. Dr. K. Anabalagan
17.08.2016	Invited Talk – IV – Role of Computers in Management	Prof. John Bosco
19.08.2016	Students participated in the Inter College conference on Social Media Marketing	Don Bosco College, Dharmapuri
24.08.2016	RBI Sponsored National Level Conference on Banking	Dr. A. Jayasagar Associate Professor M.G Govt. Arts College, Irrity, Kannur District, Kerala Prof. Imran Batcha, Bridhavanam College, Bangalore Mr. N. Senthilnathan Branch Manager, IOB, Sivaganagai Dt.
28.09.2016	Students participated in the State Level Inter Collegiate Management Meet	BWDA Arts & Science College
07.01.2017	ADMINFEST 2016 – 11th Consecutive Year	Mr. Jayaganth Rtd. Branch Manager, Punjab National Bank, Vellore
03.01.2017	Coaching Class for Competitive Exams	Prof. R. Veerappan
05.01.2017	Invited Talk – IV –How to Prepare Power Point Presentation & Mail	Mr.S. Vigneshwaran
28.01.2017	Intra Departmental Sports	Department
22.02.2017	SHAPE 16 – Inter Collegiate Competition – 10th Consecutive	Department
24.02.2017	Workshop	Department
28.02.2017	Invited Talk – V – Seminar on Retailing	Dr. S. Sasikumar

Department of Biochemistry (UG)

Date	Programme	Resource Person	Staff In charge
05.07.2016	Inauguration and Fresher's Day	-	Association President & HOD
11.07.2016	Intra Departmental Sports Competition	-	Dr. P. Saranraj
20.07.2016	Invited Talk - I	Dr. M. Gomathi, Head, Dept. of Biotechnology M.K.Jain College for Women, Vaniyambadi	-
17.08.2016	Biochamp	-	Department Staff
18.08.2016	Talents' Show	-	Dr. A. Jayaprakash
19.08.2016	Film / Movie Making	-	Mr.M.Fernandusdurai
07.09.2016	Paper and Poster Presentation	-	Department Staff
14.09.2016	Inter Departmental Science Exhibition	-	Department Staff
23.09.2016	BIOZONE '2016'	Dr. M. K. Sateesh Asst. Prof. Dept. of Biotechnology & Microbiology, Bangalore University, Bangalore Dr. N. Sathya Prasad Asst. Prof. Dept. of Biochemistry, Vels University, Chennai Dr. K. Ramalingam Associate Prof. & Dept. of Biochemistry, Narayana Medical College & Hospital, Nellore.	- -
29.09.2016	Industrial Visit	Boys- Royal Bioresearch Laboratory, Velachery, Chennai - 42 Girls- Awecare Laboratories, Thindal, Erode - 638 012	Association President & HOD
14.12.2016	Invited Talk - II	Prof. Dr. Nahren Manuel Mascarenhas	-
20.12.2016	Quiz Competition	-	Department Staff
11.01.2017	Workshop	Medox Bioresearch Lab, Chennai	-
25.01.2017	Career Guidance	-	Dr. A. Jayaprakash

Department of Biochemistry (PG)

Date	Programme	Resource Person
05.07.2016	Department Association Activity Inauguration	-
15.07.2016	Fresher's day	-
06.07.2016	Intra departmental Sports Events	-
19.08.2016	Biochamp	5 Different chief guests from other departments
01.09.2016	Paper, Poster, Model making competition	-
27.07.2016	Invited talk	Mr. Baskar Viswanathan, M.D from Biolimb, Chennai.
23.09.2016	National Level Seminar , BioZone '16	Dr. M.K.Satheesh, Asst. Prof. Dept. of Biotechnology and Microbiology , Bangalore University, Bangalore Dr. N. Sathya Prasad Asst.Prof. Dept. of Biochemistry, Vel's University, Chennai Dr. S. Ramalingam, Asst. Prof., Dept. of Biochemistry, Narayana Medical College, Nellore.
30.09.2016	Industrial visit	AWE CARE (Analytical and Research Lab) Erode.
19.12.2016	Motivational Films related to Research Oriented Concepts	-
15.12.2016	Quiz Competition (Research)	-
11.01.2017	Workshop	Mr. Mukeshkumar University of Madras Chennai
17.02.2017	Invited Talk	Dr. S.A. Martin Britto Dhas

Department of Social Work

Date	Programme	Resource Persons	Faculty In-charge
05.07.2016	Fresher's Welcome		Mr. Christi Anandan
16.08.2016	Workshop – ATC, Hosur	Mr.Somasundaram and Ms.Gowri	Ms. Lisa
21.08.2016	Intra Departmental Games		Mr. Christi Anandan & Ms. Lisa
20.09.2016	Seminar on 'Small is Beautiful' – Environmental Protection	Mr. PiysuhManush Environmental Activist	Mr. Christi Anandan
27.09.2016	International Lecture on "International Labour Movements"	Rev.Fr. Guy P.Boudaud & Mr. Ernst Bordenmüller World Christian Workers Movement, Belgium	Rev.Fr. Andrews Raja & Mr. Christi Anandan
22.11.2016	International Seminar on Child Sexual Abuse and using Traumagenic Dynamics to asses for Treatment	Mrs.Lois J. Engelbrecht Phllippines	Mr. Christi Anandan
01.12.2016	Worlds AIDS Day		Mr. Christi Anandan
10.12.2016	Human Rights Day		Rev.Fr. Andrews Raja
21.12.2016	Meaningful Christmas		Dr. Arockia Raj
20.01.2017 21.01.2017	Intl. Conference on Emerging Trends in Youth Development	Mr.Jim Campbell and Mrs.Sevasti- Melissa Nolas	Dr. Henry Rozario
23.01.2017 24.01.2017	Workshop on Play for Peace	Mr. Agyat Mitra Director, Play for Peace	Mr. Christi Anandan
22.02.2017	Seminar – NABARD		Rev.Fr. Ambrose
08.03.2017	Women's Day Celebration		Ms. Lisa
15.03.2017	Talent Fest		Mr. Christi Anandan

Department of Computer Science (PG)

Date	Programme	Resource Person
05.07.2016	Student seminar on Robotics	M.Sc. CS
12.07.2016	Student Seminar on Types of Computing	M.Sc. CS
15.07. 2016	Fresher's Day Celebration	Dr. S. Sagayaraj
21.07.2016	Student Seminar on E-Ball	M.Sc. CS
26.07.2016	Student Seminar on 3D Holographic Project Technology	M.Sc. CS
02.08.2016	Student Seminar on Blue Eyes Technology	M.Sc. CS
16.08.2016	Student Seminar on Eye Tracking Mouse	M.Sc. CS
23.08.2016	Student Seminar on Satellite	M.Sc. CS
30.08.2016	Student Seminar on 5 Pen Pc Technology	M.Sc. CS
01.09.2016	Teachers Day Celebration	Dr. S. Sagayaraj
06.09.2016	Student Seminar on Google Baloon	M.Sc. CS
23.09.2016	Inter Collegiate IT Meet – SHARP '16	Prof. S. John Bosco
27.09.2016	Student Seminar on Hardware Networking	M.Sc. CS
27.09.2016	Student Seminar on Bermuda Triangle	M.Sc. CS
30.11.2016	Virtual Seminar through Online – Http Web Security	Mr. Lourduraj, USA
03.12.2016	SHADE – Intra Department Sports Meet	Prof. S. John Bosco
22.12.2016	SHARE – Thanks Giving Day	Mr. Kishore, Mahatma Gandhi Old Age Home, Tirupattur
22.12.2016	Suppose Christmas Celebration	Prof. S. John Bosco
10.01.2017	Student Seminar on Virtual Reality	M.Sc. CS
26.01.2017	Technical Workshop	M.Sc. CS
04.02.2017	Industrial Visit – Chennai	Prof. S. John Bosco
17.02.2017	Intra Department IT competition Login	Dr. S. Sagayaraj

Department of Software Technology

Date	Program	Resource Person / Student Name
05.07.2016	Orientation for Academic Student Project	Prof. S. Anthony Philomen Raj
12.07.2016	Recent Research on Computer Science	Prof. C. Dharma Devi
19.07.2016	UR Programming	II M.Sc. Software Technology Students
26.07.2016	Adobe Photoshop – Demo	II M.Sc. Software Technology Students
03.08.2016	Mobile Operating System	I M.Sc. Software Technology Students
06.08.2016	SAP	Mr. Chandra Prasath Open Cloud Technology, Bangalore.
26.08.2016	Virtualization (Cloud Computing)	Mr. Sudhagar & Mrs. Bhuvaneshwari Bangalore.
30.08.2016	Data Mining	II M.Sc. Software Technology Students
06.09.2016	Li-Fi	I M.Sc. Software Technology Students
29.09.2016	Mirror Link	II M.Sc. Software Technology Students
21.10.2016	Touch Screen Technology	I M.Sc. Software Technology Students
29.11.2016	Database Concepts-Demo	II M.Sc. Software Technology Students
30.11.2016	Video Conferencing-http	Resource Person
05.12.2016	IOS	Mr. Karthick
16.12.2016	Hardware Concepts	
06.12.2017	Solid State Drive	II M.Sc. Software Technology Students
10.01.2017	Robotics	II M.Sc. Software Technology Students
17.01.2017	Multimedia and Its Applications	Mr. R. Ashok Kumar
07.02.2017	FOG Computing	Ms. Janani Devi
14.02.2017	Video Editing Tools	Mr. P. Ashok Kumar
21.02.2017	Grid Computing	Mr. Babu & Ms. Geetha
28.02.2017	Video Lecture	Prof. Vinothkanna
07.03.2017	Open Source Software	Ms. Jeeve & Ms. Durgadevi
14.03.2017	Recent Technologies in IOT	I M.Sc. Software Technology Students

Department of Management Studies

Date	Programme	Resource Person/incharge
12.07.2016	Industrial Visit(TVS Motor Company, Hosur)	Mr. Mukesh Krishna (Industrial visit Coordinator, TVS, Hosur)
01.08.2016	Management Week Celebration (Chart Exhibition)	MBA Department
02.08.2016	Management week celebration (Consumer awareness program)	MBA Department
03.08.2016	Management week celebration (Charity visit)	MBA Department
04.08.2016	Management week celebration (Tree plantation)	MBA Department
05.08.2016	Management week celebration (Rural visit)	MBA Department
06.08.2016	Management week celebration (Blood donation)	MBA Department
07.08.2016	Management Week celebration (ISR activity)	MBA Department
16.08.2016	Industrial Visit (L & T Chennai)	Mrs. Shamala (Corporate Head-Communications, L&T)
16.08.2016	Industrial Visit (Coca-Cola, Chennai)	Mr.GopinathJayaraman (Manager HR, Hindustan Coca Cola Beverager Ltd)
03.09.2016	HR Convention	Mr.L.Maria Antony Jude Raj (Deputy General Manager –ELGI)
03.09.2016	HR Convention	Mr.DennisDanniel & Team (Manager HR – Talent Pro, Bangalore)
15.09.2016	On Campus Drive (Surya Informatics)	Mr.Rajeev (Manager HR, Surya Informatics, Chennai)
15.09.2016	Guest Lecture	Mr.Rajeev (Manager HR – Surya Informatics, Chennai)
20.09.2016	National Conference	Dr.Sigamani Paneer Ph.D
21.09.2016	National Conference	Dr.S.M Krishnan
30.09.2016	Industrial Visit (Pondicherry Co-operative Union Ltd, Pondicherry)	Mr. Kamala Kanan (Production team)
30.09.2016	Industrial Visit (Swathik Preforms Ltd, Pondicherry)	Mr.Surya (Factory Manager, Swasthick Performs Ltd)
30.09.2016	Industrial Visit (Godrej Consumer Products Ltd, Pondicherry)	Mr.Jagadish (Vice President, Godraj consumer products Ltd)
20.10.2016	Guest Lecture	Mr. Anandha Kumar (Deputy Director of Planning Industry, Pondicherry)
20.10.2016	Guest Lecture	Mr. P.Joseph Victor Raj (Director of Hope, Pondicherry)
14.11.2016	Communication Skill Camp	Mr.Rozario Lloyd Gerard (Soft Skills Trainer, Madurai)

15.11.2016	Communication Skill Camp	Mr.Rozario Lloyd Gerard (Soft Skills Trainer,Madurai)
16.11.2016	Communication Skill Camp	Mr.Rozario Lloyd Gerard (Soft Skills Trainer,Madurai)
17.11.2016	Communication Skill Camp	Mr.Rozario Lloyd Gerard (Soft Skills Trainer,Madurai)
18.11.2016	Communication Skill Camp	Mr.Rozario Lloyd Gerard (Soft Skills Trainer,Madurai)
19.11.2016	Soft Skill Camp	Mr. L. Maria Antony JudeRaj (Deputy General Manager – ELGI)
20.11.2016	Soft Skill Camp	Mr. L. Maria Antony JudeRaj (Deputy General Manager – ELGI)
24.11.2016	Campus Interview(JMA IT Solutions, Chennai)	Ms. Sangeetha, Director, (Sakthi Technology Ltd, Chennai)
25.11.2016	Guest Lecture	Mr. Praveen Kumar (Manager, EPISON)
25.11.2016	Campus Interview(ISSM, Chennai)	Mr.Shiva (Manager HR, ISSM, Chennai)
09.12.2016	Soft Skill Camp	Mr. L. Maria Antony Jude Raj (Deputy General Manager – ELGI)
10.12.2016	Soft Skill Camp	Mr. L. Maria Antony Jude Raj (Deputy General Manager – ELGI)
17.12.2016	Soft Skill Camp	Mr. L. Maria Antony Jude Raj (Deputy General Manager – ELGI)
18.12.2016	Soft Skill Camp	Mr. L. Maria Antony Jude Raj (Deputy General Manager – ELGI)
02.01.2017	Campus Interview (Accenture, Chennai)	Mr. Donald (Training Coordinator, Accenture, Chennai)
09.01.2017	Campus Interview (Software Hulchul Private Ltd, Delhi)	Ms. Ashwanipandey, (HR Team, Hulchul Private Ltd, New Delhi)
12.01.2017	Campus interview (Hinduja Global Solutions Ltd, Chennai)	Mr. L. Jeroge Velankanni, (Senior Exective- Talent Acauisition, Chennai)
17.01.2017	Industrial visit (Toyota, Bangalore)	Mr. Gobinath, IV Coordinator, (Toyota, Bangalore)
17.01.2017	Industrial visit (JVS Electronics Ltd, Bangalore)	Mr. Ajaykumar, (Marketing Manager, JVS Electronics Ltd, Bangalore)

Department of Computer Applications

Date	Programme	Organized / taken by	Staff Incharge
24/06/2016	Secretary and Joint-Secretary Election	President	Prof. A. John Martin
04/07/2016	Recent Trends in IT	Secretary & Joint-Secretary	Prof. A. John Martin
14/07/2016	Introduction To 'Cpanel' (Godaay.Com) Web Hosting	Team – I	Prof. C. Dharmadevi
22/07/2016	Cloud Era	Team – II	Prof. S. Anthony Philomenraj
01/08/2016	Debate	Team – III	Prof. A. George Louis Raja
17/08/2016	Android Application Development	Resource Person	Prof. A. John Martin
24/08/2016	Software Quality Assurance	Team – IV	Prof. A. John Martin
02/09/2016	DB Tools - I	Team – V	Prof. V. Thomas Immanuel
12/09/2016	SAP / ERP	Resource Person	Prof. A. John Martin
02/09/2016	SHINE – IT SYMPOSIUM	President	Prof. A. John Martin
21/09/2016	Trends in Technologies	Team – VI	Prof. S. Saravanapriya
29/09/2016	Demo on Cloud Computing	Team – VII	Prof. R. Veeraragavan
19/10/2016	Unbelievable Google Projects	Team – VIII	Prof. M. Poovizhi
23/10/2016	Gamification In E-Learning	Team – IX	Prof. P. Sugumar
28/11/2016	Creating Blogs	Team – I	Prof. M. Poovizhi
05/12/2016	UML (Unified Modelling Language)	Team – II	Prof. R. Veeraragavan
14/12/2016	Orientation on Competitive Exam	Team – III	Prof. C. Dharmadevi
22/12/2016	Project Development Methodologies	Team – IV	Prof. P. Sugumar
06/01/2017	SQL Tuning/SQL Optimization Techniques	Resource Person	Prof. A. John Martin

27/01/2017	DB Design Tools (Open Source)	Team – V	Prof. A. Anthony Philemenraj
06/02/2017	Image Processing	Team – VI	Prof. K. Saravanapriya
14/02/2017	Quality Assurance	Resource Person	Prof. A. John Martin
22/02/2017	DB Tools - II	Team – VII	Prof. V. Thomas Immanuel
28/02/2017 02/03/2017	National Workshop		Convener
10/03/2017	A Survey of data de-duplication Tools	Team – VIII	Prof. A. George Louis Raja
28/03/2017	Technical Writing / Group Discussion, Stress Interview, Mock Interview	Resource Person	Prof. A. John Martin

Non - Academic Activities (Shift-I)

All India Catholic University Federation (AICUF)

Date	Events	Resource Person
13.07.2016	Selection of Office Bearers	AICUF
27.07.2016	Developing Argumentative Skills	Prof. P. Balasubramanian
04.07.2016	Media Awareness	Dr. G. Mohan Gandhi
02.08.2016 to 04.08.2016	Three days camp in SRDPS Orphanage for girls, Tirupattur	Conducted by Rev. Fr. Paulraj, SJ, AICUF Secretary
15.08.2016	Ten students participated in awareness programme in Trichy St. Joseph's College. Group Discussion on social Awareness	
21.08.2016	Orientation on AICUF and its Roles	State AICUFER and president Mr.Arok Prakash
19.12.2016	"Assertiveness Skills"	Prof. Dhamadharan, Department of Counseling Psychology
26.12.2016 to 29.12.2016	"Magis" in St. Joseph's	Rev. Fr. Paulraj, S.J. AICUF Secretary.
09.01.2017	Speech competition for the SHELTER students	Topics: Demonetization and its effects The New Education Policy Woman Harassment
06.03.2017	Awareness slogans in Campus Inter-shelter Debate	Students
08.03.2017	A Talk on Emotional Intelligence	Department of Psychology

National Cadet Corps (NCC)

Date (s)	Programme (s)	Participants	Programme In – Charge(s)
23.05.2016 To 01.06.2016	TSC – I, Kandasamy Kendars College, Namakkal.	06	---
05.06.2016 To 14.06.2016	TSC – II, Kandasamy Kendars College, Namakkal.	05	---
17.06.2016 to 26.06.2016	CATC – Combined Annual Training Camp, Jayam College of Engineering, Dharmapuri & Pre IGC for TSC (SD/SW)	50+3	---
18.06.2016 to 27.06.2016	Pre RDC Selection Camp at Kalaignar Karunanithi College of Engineering, Coimbatore.	08	---
21.06.2016	International Yoga Day Celebration	90	---
27.06.2016 to 27.07.2016	AMC – Advance Mountaineering Course and Trekking Camp in Manali, Himachal Pradesh	02	---
01.07.2016 to 10.07.2016	IGC for TSC (Boys)	01	---
06.07.2016 To 23.07.2016	TSC/PRE IGC AND IGC Camp held at Navalkadu, Nagarkovil.	03	---
22.07.2016 To 31.07.2016	IGC – Hockey Camp held at Periyar Maniyammai University, Vallam, Thanjavur.	04	---
09.07.2016 To 18.07.2016	RDC Selection & BLC camp held at Karpagam Institute of Technology, Coimbatore.	02	---
13.07.2016	Selection of I – year NCC Cadets (SD/SW) for the year 2016 – 2017 at SHC, Tirupattur.	80	Army Staff & NCC Officer
05.08.2016 to 14.08.2016	TSC Launch – I held at Thuthukodi.	03	---
06.08.2016	Commemoration Day (36th Anniversary) for Police Men who laid down their lives in the line of duty at Town Police Station, Tirupattur.	50	NCC Officer
15.08.2016	Independence Day Celebration and Parade at SHC, Tirupattur	160	Chief Guest. Mr. A.Soosai
16.08.2016 To 04.10.2016	AMC – Advanced Mountaineering Course and Trekking held at Uttrakand.	02	---
D$_1$+D$_2$	Aims and Objectives of NCC,		

Date	Topic	Cadets	Conducted by
19.08.2016	Religious, Culture, Traditions and Customs of India.	150 Cadets	Army Staff & NCC Officer
20.08.2016 To 30.08.2016	IGC – Basket Ball Camp held at Pondicherry.	05	---
D₃+D₄ 24.08.2016	Civil Defence Organization and its duties /NDMA, Guard of Honour, Biographies of renowned Generals (Carriapa/Sam Manekshaw)	135	Army Staff & NCC Officer
25.08.2016 To 03.09.2016	TSC Launch – II held at Thirunelvelli.	03	**---**
D₅+D₆ 27.08.2016	Characteristics of 7.62mm SLR rifle, ammunition, firepower, stripping, assembling & cleaning, National Integration Importance and Necessity	145	Army Staff & NCC Officer
D₇+D₈ 29.08.2016	Introduction to Personality Development, Organization of Infantry Battalion & Structure & functioning of the human body, Physical & Mental Health.	140	,,
D₉+D₁₀ 03.09.2016	Turning on the march and wheeling, Factors Influencing/shaping personality, Physical, Social, Psychological and Philosophical & Self-Awareness-Know you / Insight.	145	,,
07.09.2016 To 03.10.2016	Pre IGC and IGC Camp held at New Delhi.	03	**---**
D₁₁+D₁₂ 14.09.2016	Getting on parade with rifle and dressing at the order, Section Battle Drill, Types of communications & Basic organization of Armed Forces.	135	Army Staff & NCC Officer
D₁₃+D₁₄ 17.09.2016	Communication Skills: Group Discussions / Lecturettes, Freedom Struggle and Nationalist Movement in India.	130	,,
23.09.2016 To 02.10.2016	CATC Camp held at Govt. Hr. Sec. School, Metturdam.	10	**---**
D₁₅+D₁₆ 08.10.2016	Social Evils viz Dowry/Female Feticide/Child abuse & trafficking etc. Time Management.	110	Army Staff & NCC Officer
D₁₇+D₁₈ 15.10.2016	Hygiene & Sanitation (Personal & Food Hygiene). Stress management Skills. Traffic Control Org and Anti-drunken driving	120	,,
D₁₉+D₂₀	Topographical forms and technical	130	,,

22.10.2016	terms Characteristics of Wireless Technology (Mobile, Wi Fi etc.) Rock Climbing		
$D_{21}+D_{22}$ 26.10.2016	Provisions of Protection of Children from sexual Harassment Act-2012, Interview Skills & Latest trends and development (Multi Media, Video Conferencing, IT)	135	,,
$D_{23}+D_{24}$ 23.11.2016	Indian Army War Heroes-PVCs, Judging Distance, Setting a Map, finding North and own position & Basics of Home Nursing & First-Aid in common medical emergencies	130	,,
$D_{25}+D_{26}$ 26.11.2016	Prime Minister's Clean India Awareness Mega Cycle Rally (40km)	110	Prof. K. Sivakumar & Dr. A. Royal Edward Williams
$D_{27}+D_{28}$ 29.11.2016	Characteristics on Infantry Battalion support weapons, Leadership Traits, Problems / Challenges of National Integration, Badges and Ranks	140	Army Staff & NCC Officer
$D_{29}+D_{30}$ 14.12.2016	Types of Leadership, Civic Responsibilities, Types of emergencies/Natural Disasters, Water Conservation & Rainwater harvesting.	135	Army Staff & NCC Officer
$D_{31}+D_{32}$ 17.12.2016	Introduction to Yoga & Exercises, Sociability: Social Skills, Cycling/Trekking, Unity in Diversity & War Movies.	145	,,
$D_{33}+D_{34}$ 21.12.2016	Assistance during Natural / other Calamities: Flood / Cyclone / Earth Quake / Accident /Cycling / Trekking	140	,,
D_{35} 21.12.2016	Values /Code of Ethics, Short range firing, Aiming II- Alteration of sight & Assistance during Natural / other Calamities: Flood / Cyclone / Earth Quake / Accident etc.	135	,,
D_{36} 07.01.2017	Prismatic compass and its use & GPS, Social /Rural Development Project: MNREGA, SGSY, NSAP etc., Map to Ground, Ground to map.	125	,,
D_{37} 09.01.2017	Blood Donation Camp Jointly organized by NSS & NCC	70	Prof. K. Sivakumar & Dr. J. Jacob Stanley Inbaraj and Team

D₃₈ 12.01.2017	Regular Parade & Pongal Celebration	150	NCC Officer
26.01.2017	Republic Day Parade and Celebration	150	Chief Guest Dr. J.Henry Rosario
04.02.2017	College Day Celebration at SHC, Tirupattur	130	NCC Officer
18.02.2017 19.02.2017	"B" Certificate Examination (Army Wing) for the year 2016 – 2017	50	---
25.03.2017 26.03.2017	"C" Certificate Examination (Army Wing) for the year 2016 – 2017	30	---

YRC

Date	Events
25.07.2016	Human Values – Dr.P.Balamurugan
29.08.2016	Organ donation and its importance – Mr.K.Prakash (Stanley Hospital, Chennai)
19.09.2016	Emotional Intelligence – Mr.M.Dhamodaran
12.12.2016	Knowledge & Awareness of HIV/AIDS among the college students – Mr.J.Peace Clarance (CMC)
14.12.2016	Disaster Management – Mr.Ganesh& Team
15.12.2016	Human Rights and Beggar Trafficking – Dr.D.Leslin
12.01.2017	Pongal Celebration with Udhavum Ullagal
30.01.2017	"Help the Needy" – Hospital Visit (Govt. Hospital -TPT)
06.02.2017	"Help the Needy" – Orphanage visit
18.02.2017	Trekking – Yelagiri Hills

NSS

Date	Events	Resource Person
18.07.2016	Importance of NSS to the Society	Dr. P.R. Amutha., Ph.D Assistant Professor of English Auxilium College, Vellore.
12.08.2016	Swatachata Campaign	Mr. S.K. Durai Pandian Inspector of Police, Tirupattur
18.08.2016	Open Defecation Free India	Rev. Fr. Andrews., SDB Assistant Professor of Social Work, Sacred Heart College, Tiruapttur
29.08.2016	Slogan Writing Competition	NSS Volunteers
30.08.2016	Painting competition	NSS Volunteers
31.08.2016	Anti- Ragging Campaign	Mr. S.K. DuraiPandian Inspector of Police, Tirupattur.

Date	Events	Resource Person
19.09.2016	Visit to an Orphanage	Mr. Ramesh. Udavum Ullangal, Tiruapttur
12.10.2016	Campus Cleaning	NSS Programme Officers
21.10.2016	Special Programme on Abdul Kalam	Dr. P. Selva Kumar Head, Department of Tamil, Sacred Heart College, Tiruapttur
25.11.2016	Invited Talk on Indian Constitution	Dr. D. Leslin Head, Department of History and Politics, Sacred Heart College, Tiruapttur
16.12.2016	Special lecture on Dengue Fever	Dr. V. Aravindhan., MBBS, Government Hospital, Uthangarai
19.12.2016	Cleaning at Idhaya Nagar, Tiruapttur	NSS Volunteers
09.01.2017	Blood Donation Camp	Dr. K. M. Kumaravel MBBS Government Hospital, Tiruapttur
10.01.2017	Special programme on Digital Systems: Cashless Economy	Dr. C. Dhandapani., Ph.D Head, Professor of Economics Thiruvalluvar University Serkkadu, Vellore.
04.02.2017	College Day Seating Arrangements	NSS Volunteers

Media & Consumer Forum

Date	Events	Resource Person
18.07.2016	Introduction to "Media and Consumer Forum"	Dr. A. Royal Edward Williams President
27.08.2016	Duties & Responsibilities of the Consumers	Dr. A. Royal Edward Williams President
01.08.2016	Creating & Presenting News	By Students
19.08.2016	Awareness on Consumer	Dr. A. Royal Edward Williams President
21.09.2016	Social Media and Youth	Dr. P. Balasubramanian Head, Dept. of Tamil
22.09.2016	Awareness on Consumer	Prof. P.S. Joan Kingsly Asst.Prof., Dept. of MBA
26.09.2016	Impact of Media	Dr. P. Selvakumar Head, Dept. of Tamil
28.11.2016	Consumer Protection & Consumer Welfare	Dr. A. Royal Edward Williams

19.12.2016	Media at a Glance	By Students Media and Consumer Forum
09.01.2017	Psychology Approach of Consumer Awareness	Prof. M. Dhamodhran Assistant Professor, P.G. Department of Counselling Psychology
11.01.2017	The Role of Film Industry in Social Media	Mr. Joe Malluri Actor, Tamil Film Industry
11.02.2017	College Day Seating Arrangement	Along with NSS
13.02.2017	Awareness on the Conversation of Water Resources	Mr. Parusuram and Bharathi Kannan, SRM University

Fine Arts

Date	Events	Resource Person
16.06.2016	Inauguration of Academic year	Rev. Dr. Lawrence Pius D.D Bishop of Dharmapuri Diocese Dr. M.A. Jayaraj Joint Director of Collegiate Education, Vellore Region
06.07.2016	Inauguration of SHELTERS Associations	Prof. P. Ramasamy Former Vice Chancellor of Alagappa University
23.07.2016	Sports Day	Mr. N. Mohammed Riaz Deputy General Manager Air India Southern Region Chennai.
30.08.2016 31.08.2016	2 day Training Programme	Mr. Victor
03.09.2016	Canonization of Mother Teresa	Rev. Dr. C. Antonyraj SDB
04.09.2016	Sacred Heart Feast	Rev. Dr. C. Antonyraj SDB
09.09.2016	Staff Silver Jubilee	Rev. Dr. D. Maria Antony Raj SDB
28.11.2016	Signing MoU with Alcala University	-
02.12.2016	Cultural Fest– UG	Mr. V.L Jayabalan Poet & Renowned Film Director.
23.12.2016	Community Day Celebrations	Rev. Dr. C. Antonyraj SDB
12.01.2017	Pongal celebrations	Mr. Sridhar Town Inspector, Law & Order Tirupattur
10.02.2017	Staff Retirement Function	Rev. Dr. D. Maria Antony Raj SDB

Date	Events	Name of the Resource Person / Nature of Activity
11.02.2017	College Day	Dr. M.A. Jayaraj Joint Director of collegiate Education, Vellore Region Shri D.S. Antuvan Senior Scientist & Project Director ISRO Thiruvanathapuram
24.02.2017	Valediction of Associations	Mr. Cyril R Fernandez General Manager Material Management Bharat Heavy Electricals Limited Boiler Auxiliaries Plant, Ranipet

Rangers/Rovers

Date	Events	Name of the Resource Person / Nature of Activity
11.07.2016	Election of Student Representatives	Staff Co-ordinators selected the secretary and joint secretary of the Rovers/Rangers SHELTERS Association
18.07.2016	Introduction to scouting	Staff Co-Ordinators.
25.07.2016	Team Work - Self introduction Game	Ms. M. Rose - Staff Co-Ordinator
01.08.2016	Scout promise and Scout Law	Staff Co-Ordinators
22.08.2106	Scout Prayer song and Flag song	Rovers and Rangers have learned and practised the Scout Prayer song and Flag song with the help of LCD Projectors
29.08.2016	Basic Scout Discipline and Uniform	Mr. S. Raja Sudamani - Scout Master, Don Bosco District Association has explained about the basic scout discipline and the parts of the uniform. Later the Rovers and Rangers gave their measurements for their scout uniforms
12.09.2016	Scout Prayer song and Flag song - Practice	Rovers and Rangers have learned and practised the Scout Prayer song and Flag song with the help of LCD Projectors
07.09.2016	Scouting Badges and Awards	Ms. M. Rose - Staff Co-ordinator explained the various badges and awards that can be obtained by the Rovers and Rangers
12.12.2016	Formation of Rovers and Ranger Crews	Rovers and Rangers were divided into crews and leaders were elected for each crew.
17.12.2016	Worldwide organization of Scout Movement	Dr. G. Prakash Raj - Staff Co-ordinator explained about the global nature of the scouting movement and about the Bear Grylls - the Chief Scout of UK

09.01.2017	Uniform - Parts and Importance	The Staff Co-ordinators explained the various components of the Rovers / Rangers Uniform
11.01.2017	Training on Knots and Flag Hoisting	Mr. S. Raja Sudamani - Scout Master, Don Bosco District Association will train the Rovers and Rangers on the different types of knots and flag hoisting procedures
31.01.2017 to 02.02.2017	Annual Camp at Yelagiri Hills	Various activities - Flag hoisting and Drills, Trekking, Group Activities, Camp Fire Etc.
13.02.2017	Visit to Anbu Illam	Rovers and Rangers will entertain the residents of Anbu Illam through some cultural performances.

Rotaract

Date	Events	Resource Person
Every Monday 2.30 p.m.	Weekly meeting	Prof. G. Jayakumar
04.07.2016	Special lecture on "Functions and Benifits of Rotaract Club"	Rev.Sr.Mallavarapu Supriya, St. Charles Convent, Tirupattur
01.08.2016	Documentary session on "Who am I?"	Prof. G. Jayakumar
12.08.2016	Clean India Awareness Camp	Mr. S. K. Durai Pandiyan, Inspector,Tirupattur
08.09.2016	Awareness Programme on "Dengue Fever and Preventive measures"	Mr. Kumar, Sub-Inspector, Tirupattur
05.12.2016	SWOT analysis on "Fundamental and Learning skills"	Prof. G. Jayakumar
12.12.2016	Documentary session on "Human Rights"	Prof. G. Jayakumar
17.12.2016	Mahatma Old Age Home visit	Mr. Kishore Kumar, Founder, Mahatma Old Age Home
09.01.2017	Documentary session on "Anatomy Therapy"	Prof. G. Jayakumar
06.02.2017	Special lecture on "Adolescent Characteristics and Problems"	Mr. R. Krishnamoorty, Principal, David Raja College of Education, Tirupattur
13.02.2017	SWOT analysis on "Emotion and Social Skills"	Prof. G. Jayakumar
27.02.2017	Yoga practice	Mr. R. Senthil Kumar, Teacher, Ramakrishna Madam, Natrampalli

Maatru Nataka Iyakkam (MNI)

Date	Events	Trainer / Place
27.06.2016	Introduction to Theatre	Dr.K.Parthibaraja
05.07.2016	Time and Place Management	Miss.A.Rupa, Theatre Artist Tirupattur
12.07.2016	Voice and Pronunciation	Miss.A.Rupa, Theatre Artist Tirupattur
27.07.2016	Stage Management	Dr.K.Parthibaraja
15.08.2016	Folk Dance (oyil)	Mr.Rajasakar, Theatre Artist Tirupattur
06.09.2016	Body Language	Dr.K.Parthibaraja
09.09.2016	Folk Dance (kumi)	Ms. Girija, Ms.Maliga Arangasri Theatre Group Thanjavoor
25.09.2016 26.09.2016	Nedumpayanam Play	Sacred Heart College,Tirupattur
14.10.2016 15.10.2016	Nedumpayanam Play	Don Bosco College, Yelagiri Hills
27.11.2016	Nedumpayanam Play	Pondicherry University, Pondicherry
11.12.2016	Nedumpayanam Play	Koothupattarai, Chennai
21.12.2016	Body and Movement	Dr.K.Parthibaraja
04.01.2017	Special Meeting	Dr.K.Parthibaraja
05.01.2017 06.01.2017	Improvisation	Melodi Dorcas National School of Drama, New Delhi
07.01.2017	Nedumpayanam Play	Loyola College, Chennai
11.02.2017	College Day Tamil Play	Dr.K.Parthibaraja

Red Ribbon Club

Date	Events	Resource Person
04.07.2016	Red Ribbon Club Introduction	Prof.V.Madhan Kumar
19.07.2016	"Celebrating Life"	Mr. Athisiya Rooban RRC Coordinator Thiruvalluvar University
29.08.2016	"Organ Donation and its Importance"	Mr.Prakash Govt. Stanley Hospital, Chennai
19.09.2016	"Personal Hygiene and Healthy Food Habits"	Prof. Dr.Jaya Prakash, SHC, TPT
14.12.2016	Invited Talk on HIV	Mr.Peace Clarance CMC Vellore
27.01.2017	Debate, Essay Writing	Prof.N.Arul Doss
07.02.2017	Suicide Awareness	Prof.Dhamodharan, SHC,TPT

Academic Association Activities (Shift-II)

Department of Commerce (UG)

Date	Programme	Resource Persons
17.06.2016	Election for student Representatives	Dr. G. Devi
30.06.2016	Fresher's Day	Dr. K. Anbalagan and Dr.G.Devi
28.07.2016	Invited Talk on Positive Mental Attitude	Mrs. K.Jemimah Suneeram Miranda
19.08.2016	CONFLUENCE 2K16	Rev.Fr.K.A.MariyaArokiaraj Rev.Fr.D.Maria Antony Raj,
11.01.2017	Invited Talk on Functions of RBI	Dr.S.Sagayaraj. Tirumagal Arts and Science College, Gudiyatham.
	Guideline on Facing Competitive Exams	Dr.S.Sagayaraj. Tirumagal Arts and Science College, Gudiyatham.
27.01.2017	Guest Lecture on Blooming Corporate Culture	Prof. P.S.Joan Kingsly
23.02.2017	National Seminar on Demonetization and Budget-2017	Dr.Bushan D.Sudhakar Associate Professor, Pondicherry University. Pondicherry
	Topic: Demonetization and its Effects on Medium and Small Scale Industries	
	Issues, Opportunities and Challenges of Cashless Economy	Dr. T. Thirupathi, Government Arts College, Salam.
	Budget 2017-2018 Post Demonetization	Dr. S. Sreedaran, Muthurangam Government Arts College, Vellore.

Department of Commerce (PG)

Date	Program	Resource Persons
05.07.2016	Workshop on "Selecting the Research Problem"	Dr. A. Jacob Stanly Inbaraj
15.07.2016	Fresher's day	---
02.08.2016	Workshop on "How to Write Research Articles"	Dr. A. Marcus
19.08.2016	CONFLUENCE 2K16	Inter Collegiate
09.09.2016	Industrial Visit	Chennai
22.09.2016	Orientation on SPSS	Dr. K. Anbalagan
23.09.2016	Orientation on SPSS	Dr. K. Anbalagan
25.11.2016	Workshop on Research Report Writing	Dr. A. Jacob Stanly Inbaraj

08.12.2016	How to face Competitive Exams (TNPSC & Other Central Govt.)	------
09.01.2017	Industrial Visit	Chennai
27.01.2017	Awareness on Higher Studies – CA , ICWA and ACS	CA. Sureshkumar Auditor
10.02.2017	Industrial Visit	Chennai
23.02.2017	National Seminar on Impact of Demonetization	Dr. Bhusan D. Sudhakar Dr. S. Sreedaran Dr. T. Thirupathi
27.02.2017	Paper Presentation (II M.Com)	------
27.03.2017	Paper Presentation (II M. Com)	------

Department of Mathematics (PG)

Date	Programme	Resource Persons
15.07.2016	Fresher's day Celebration	-----
26.07.2016	Graduate Lecture Series	Dr. G. Britto Antony Xavier
05.08.2016	Invited Talk-I	Dr. V. Sadhasivam
30.09.2016	Staff Seminar	Prof. M. Meganahtan
26.11.2016	Latex Training Programme	Prof. E. Suresh
20.12.2016	Ramanujan Day Competitions	Dr. Sadhasivam
20.12.2016	Poster Presentation	Rev.Fr. Stanislaus
27.01.2017 28.01.2017	International Conference ICMA - 2017	Dr. Sandra Pinelas (Portugal) Dr. Javid Ali (UP) Dr. Pankaj Srivastava (Allahabad) Dr. E.Thandapani (Madras) Dr. P. Veeramani (Madras) Dr. Vengatesh (Bangalore)
04.02.2017	Graduate Lecture Series	Dr. J. Ravi Shankar Dr. Felix

Department of Mathematics (UG)

Date	Programme	Resource Person
31.06.2016	Fresher's Day celebration	--
26.07.2016	Graduate Lecture Series	Dr. G. Britto Antony Xavier
05.08.2016	Invited Talk-I	Dr. V. Sadhasivam
02.09.2016	Non-verbal reasoning	-
30.09.2016	Staff Seminar	Prof. M. Meganahtan
20.12.2016	Ramanujan Day Competitions	Dr. Sadhasivam

20.12.2016	Poster Presentation	Rev.Fr. Stanislaus
04.02.2017	Graduate Lecture Series	Dr. J. Ravi Shankar Dr. Felix
13.02.2017	MS-Office workshop	Mr.B. Mohan

Department of Physics (UG)

Date	Name of the activity	Resource person
17.06.2016	Diagnostic test for I year students	Prof. M. Aravinthraj
20.06.2016	Selection of Office Bearers	Prof. D. Rajkumar
23.06.2016	Fresher's Day	Prof. R. Ramesh Prof. L. Anandaraj
10.08.2016	Visit to Vainu Bappu Space Observatory	Dr.Sunitha Girdhar
23.08.2016	Workshop on functional materials and spectroscopy	Dr. R. Karthik IISc Bangalore Dr. Shubhadip Chakraborty IISc Bangalore Dr. Kamini Mishra IISc Bangalore Dr. Balamurugan NIT, Tirchy
09.09.2016	Student Seminar-I	Prof. L. Anandaraj
16.09.2016	Prayer service on religious harmony	Prof. M. Aravinthraj
20.09.2016	Invited Talk- The Role of Vector Calculus in Physics	Sr. E. Glitta Sumangali Department of Physics Gonzaga College for Arts and Science for Women, Elathagiri
24.11.2016	Basic Physics Demonstration	Dr. S.A. Martin Britto Dhas Assistant Professor Department of Physics Sacred Heart College - TPT
28.11.2016	Industrial Visit for II year UG Students	TVS Motor Company, Hosur
01.12.2016	National Conference on Systematic Investigations of Structural, Morphological and Optical Properties of Materials (NCSI-16)	Dr. R. Arunkumar, Assistant professor of physics, PSG College of technology, Coimbatore Dr. Kanagesan University of Putra, Malaysia Dr.S.Kalainathan, Senior Professor of Physics VIT University, Vellore
15.12.2016	Student Seminar-II	Prof. S. Kalaiarasi
19.12.2016	Science and Technology Conference (STC-16)	Dr. P.M. Asdil Ahmed Mazharululoom college, Ambur Prof. A. Kadiresan, Chief Physicist, Vijaya Health Centre, Chennai

		Dr.S.Kanagesan University of Putra, Malaysia
04.03.2017	Industrial Visit for I and III year UG Students	IISc, Bangalore
10.03.2017	Intra departmental Programmes	All Staff Members

Department of Physics (PG)

Date	Programme	Resource Persons
05.07.2016	Fresher's Day	
15.07.2016	Invited talk on " Crystal Growth and its Characterizations"	Dr. Muthu Senthil Pandian Research Scientist SSN Research Centre, Chennai
10.08.2016	Visit to Vainu Pappu Space Observatory, Kavalur	---
14.09.2016	Student Seminar - 1	N. Saravanan P. Lakshmidevi H. Revathi
23.08.2016	Workshop on Functional Materials and Spectroscopy WFMS -2016	1.Dr. R. Karthik IISc, Bangalore 2. Dr. Kamini Mishra IISc, Bangalore 3. Dr. Balamurugan NIT – Trichy 4. Dr. Anindita Das IISc, Bangalore 5. Dr. Shubhadip Chakraborty IISc, Bangalore
26.09.2016	Presentation of Project Proposals by II M.Sc. Students	II M.Sc. Students
21.12.2016	Christmas Celebration	
23.12.2016	Student Seminar - 2	D. Swathi K. Sunandha S.K. Manoj Kumar D. Albert Antony
12.01.2017	Pongal Celebration	
17.02.2017	Student Seminar - 3	R. Elamathi T. Kamalesh Amal George P. Fayeegha Suman
17.02.2017	Student Seminar -4	D. Siva Priya S. Matheswari A. Rudresh
21.02.2017	Research Paper presentation on SHOCK TUBE	T. Kamalesh

Department of Chemistry (PG)

Date	Programme
05.07.2016	Invited Lecture - Crystal Growth
15.07.2016	Fresher's day celebration
17.08.2016	Students seminar Mr. Vetrivelan-II MSc., Summer Research Fellow -Graphene Chemistry Ms. Baranipriya-II MSc., -Green Chemistry
23.08.2016	Invited guest lecture on Nanomaterials-Dr. Anindita Das, IISc-Bangalore.
02.09.2016	Teachers day celebration
08.09.2016	Lecture on structure and functions of proteins.-Dr. Nahren Manuel
01.12.2016	Invited guest lecture on application of NMR spectroscopy to separation of noble metal from electronic gadgets- Dr Arun from Japan.
22.12.2016	Christmas celebration
06.02.2017	Special lecture on functionalization of nanoparticles using metal complexes-Dr. Vilvamani
15.02.2017	Workshop on "Advanced techniques in chemistry"

Department of Chemistry (UG)

Date	Programme
30.06.2016	Fresher's day celebration
17.08.2016	Students seminar
22.08.2016	Invited guest lecture on materials for non – conventional energy production by Dr. Andhita Dass, IISC Bangalore.
01.09.2016	Teachers day celebration
07.09.2016	Lecture on structure and functions of proteins by Dr. Nahren Manuel Mascrenhas.
01.12.2016	Invited guest lecture on application of NMR spectroscopy to separation of noble metal from electronic gadgets by Dr. Arun Kumar.
22.12.2016	Christmas celebration
07.02.2017	Special lecture on functionalization of nanoparticles using metal complexes by Dr. N. Vilvamani
23.02.2017	CHEM FEST 2017 Invited Guest Lecture on Macro molecules by Dr. V. Alexander, Professor Emeritus, Loyola College, Chennai Invited Guest Lecture on Electro – Organic Chemistry by Dr. M. Anbukulandainathan, Principal Scientist, CECRI, Karaikudi Invited Guest Lecture on Importance of Science by Mr. T. P. Suresh Kumar, State Resource Person, TNSF, Cold Roll Mill, Salem. Quiz program by Mr.T.Jayamurugan, State Resource Person, TNSF, Cold Roll Mill, Salem.

Department of Computer Science (UG)

Date	Programme	Resource Persons & Staff in charge
27.06.2016	Prayer service & Sharing of experience	Prof. A. Josphine Sagaya Mala
30.06.2016	Fresher's Day	Prof. M. Sarlin Raj
04.07.2016	Aptitude Session	Prof. D. Adiyaman
05.07.2016	Knowledge Sharing - 1	Prof. S. Mohanraj
27.07.2016	Seminar on Network Security	Prof. A. John Martin Dept. of Software Technology
02.09.2016	Knowledge Sharing - 2	Prof. T. Prabakaran
02.09.2016	Teachers Day Celebration	I, II, III Year Students
07.09.2016	Seminar On Database Management	Mr. Ashok Kumar, CTS- Chennai.
15.09.2016	SPACE 2K16 Intercollegiate IT Meet	Prof. G. Geroge Louis Raja, Dept. of M.C.A,
21.11.2016	Workshop on Creative Design	Prof. S. John Bosco, Prof. D.Adhiyaman
15.12.2016	Seminar on Project Methodology	Prof. Flex, Bosco Soft Pvt. Ltd, Yellagiri Hills
18.12.2016	Visit to Karunai Illam	Prof. A.J. Sagaya Mala Prof .M. Sarlin Raj Prof .S. Mohan Raj
30.02.2017	Seminar on Java API restful services	Prof. Sakthivel, Dept. of MCA, Adhiyaman Engineering College Hosur.
17.02.2017	COMMUNE 2K17	Prof. A. John Martin, Dept. of Software Technology,

Department of BCA

Date	Programme	Resource persons
18.06.2016	Election of the secretary and Joint Secretary	Department Staff and students
25.07.2016	Seminar on Learning Style	Prof. Shinoj Robert Asst. Professor Don Bosco College, Yellagiri Hills
30.06.2016	Fresher's Day	Department Staff and students
29.07.2016	IT Quiz – Intra Departmental Competition	Department Staff and students
30.09.2016	Seminar on Software Project Methodology	Prof .Shinoj Robert Asst. Professor Don Bosco College, Yellagiri Hills
02.09.2016	Teachers Day	Department Staffs and students
16.09.2016	Annual Workshop on Recent Trends	1.Prof.R.Karthik 2.Prof.V.S.Jayakumar Paul Bosco

	(R LANGUAGE)	3.Prof.A.Mekala 4.Prof.T.Deepa 5.Prof.A.Selvaraj JeyaKumar
16.12.2016	Seminar on Software Project Documentation	1.Ms.Geetha R.K Senior Technical Content Writer Bosco Soft Technology Pvt. Ltd, Yellagiri Hills 2. Ms.Vinci.V, Quality Engineer Bosco Soft Technology Pvt. Ltd, Yellagiri Hills
22.12.2016	Christmas Day Celebration	Department Staff and students
27.01.2017	Guest Lecture on Recent Trends	Prof. A. John Martin Head, Dept. of M.Sc. ST
04.02.2017	Seminar on Software Testing	Ms.Victoria Senior Test Engineer HCL, Bangalore
15.02.2017	SAIT'17 (Inter Departmental Competition)	External Participants and our students
17.02.2017	Training on Quantitative Aptitude Skills	Prof.VasanthaKumar Head, Dept. of Maths,

Department of English

Date	Programme
14.07.2016	Orientation and Training on Competitive Examinations
25.07.2016 To 29.07.2016	Workshop on Theatrics
05.08.2016	Seminar on Recent Trends in Literature for PG and M. Phil students
17.08.2016	Workshop on Research & Writing Papers for PG and M. Phil students
19.09.2016	'ELLITES' – Intercollegiate Competitions
15.02.2017 To 16.02.2017	National Level Conference - Cum -Workshop on Language and Literature
27.02.2017 To 04.03.2017	Lit – Week
13.03.2017	Seminar on Eco Literature
14.03.2017	Seminar on Bakthi Literature
15.03.2017	Use of Technology in ELT
17.03.2017	Seminar on Translational Studies

Department of B.Com (CA)

Date	Program
17.06.2016	General Guidelines and Class room Bahaviour
17.06.2016	Identification of Slow learners for First Year through Common Test
20.06.2016	Campus Drive – I B.Com (CA)
22.06.2016	Selection of Office Bearers
30.06.2016	Fresher's Day
23.08.2016	Subject Wise Quiz
02.09.2016	Teachers Day
16.09.2016	Seminar on Stress Management
30.09.2016	Industrial Visit – II & III B.Com (CA)
14.10.2016	Awareness on CA Course
17.10.2016	Subject wise Quiz
18.10.2016	Debate: Money or Mind
22.12.2016	Christmas celebration
11.01.2017	Industrial Visit – I Year
12.01.2017	Pongal celebration
21.02.2017	Awareness on TNSET
21.02.2017	Industrial Visit – III year
23.02.2017	National level seminar "Impact of Demonetization and Budget 2017"
23.02.2017	Awareness on Higher Studies (MCA, MBA & M.Com)

Non-Academic Association Activities (Shift-II)

AICUF

Date	Events
01.07.2016	Selection of Office Bearers
04.08.2016	Inaugural Function of AICUF and Visitation from the State AICUF Unit
17.08.2016	Invited talk by Mr. Justin Vimal Gandhi
25.08.2016 To 27.08.2016	State Level Council Meeting for the Electing the Office Bearers and Skill Training
03.09.2016	Orientation Programme for AICUF Students
07.09.2016	Dengue Awareness Programme
18.09.2016	Leadership Training in the Home Unit
16.09.2016 To 18.09.2016	Leadership Training Programme organized in Tirupattur
26.09.2016	Nedumpayanam skit
02.12.2016 To 03.12.2016	State level Awareness campaign on "New Education Policy", St.Joseph's College, Trichy
21.12.2016	Awareness Rally on "Conservation of Tirupattur Lake for the Betterment of the Future"
25.12.2016 To 27/12/2016	MAGIS-2016, St.Joseph's College, Tirupattur

09.01.2017 To 11.01.2017	AICUF Cultural Training	
12.01.2017	Cultural Celebration on PONGAL	
21.02.2017	Survival of Women in the Contemporary World and Chart Exhibition	
22.02.2017	Valediction and Certificate Distribution	
23.02.2017	Campaign on "Save Drinking Water"	

Fine Arts

Date	Events	Resource Persons
16.06.2016	Inauguration of Academic year	Rt. Rev. Dr. Lawrence Pius D.D Bishop of Dharmapuri Diocese
06.07.2016	Inauguration of SHELTERS Associations	Prof. P. Ramasamy Former Vice Chancellor of Alagappa University
23.07.2016	Sports Day	Mr. N. Mohammed Riaz Deputy General Manager Air India Southern Region Chennai.
30.08.2016 To 31.08.2016	Two day training programme for Fine Arts students	Mr. Victor, Chennai
03.09.2016	Canonization of Mother Teresa	Rev. Dr. C. Antonyraj SDB Rev. Dr. K.A. Maria Arokia raj SDB
04.09.2016	Sacred Heart Feast	Rev. Dr. C. Antonyraj SDB
03.12.2016	Heart Beat (UG)	Mr. Guru Somasundaram Renowned Film actor and Theatre Personality, Chennai
17.12.2016	Heart Beat (PG)	Mr. A. Nallathambi, MLA, Tirupattur
23.12.2016	Christmas and Community Day Celebrations	Rev. Dr. C. Antonyraj SDB
12.01.2017	Pongal celebrations	Rev. Sr.Gracy Headmistress, OLS, Tirupattur Mr. Julius Idhayakumar Tirupattur. Mrs. S.L.Sofia Asst. Professor Gonzaga Arts and Science for women, Elathagiri.
11.02.2017	College Day	Dr. M.A. Jayaraj Joint Director of Collegiate education, Vellore Region Vellore Shri D.S. Antuvan Senior Scientist & Project Directro ISRO Thiruvananthapuram

Maatru Nataka Iyakkam (MNI)

Date	Programme	Trainer / Place
27.06.2016	Introduction to Theatre	Dr. K. Parthibaraja
05.07.2016	Time And Place Management	Miss. A. Rupa Theatre Artist, Tirupattur
12.07.2016	Voice And Pronunciation	Miss. A. Rupa Theatre Artist, Tirupattur
27.07.2016	Stage Management	Dr. K. Parthibaraja
15.08.2016	Folk Dance(Oyil)	Mr. Rajasakar, Theatre Artist, Tirupattur
06.09.2016	Body Language	Dr.K.Parthibaraja
09.09.2016	Folk Dance(Kumi)	Ms.Girija, Ms.Maliga Aranga Sri Theatre Group, Thanjavoor
25.09.2016 To 26.09.2016	Nedumpayanam Play	Sacred Heart College Tirupattur
14.10.2016 To 15.10.2016	Nedumpayanam Play	Yelagiri Don Bosco College Yelagiri
27.11.2016	Nedumpayanam Play	Pondichary University Pondichary
11.12.2016	Nedumpayanam Play	Koothupattarai Chennai
21.12.2016	Body And Movement	Dr.K.Parthibaraja
04.01.2017	Special Meeting	Dr.K.Parthibaraja
05.01.2017 To 06.01.2017	Improvisation	Melodi Dorcas Nationl School Of Drama New Delhi
07.01.2017	Nedumpayanam Play	Loyola College Chennai
11.02.2017	College Day Tamil Play	Dr.K.Parthibaraja

Media Forum

Date	Events
01.07.2016	Selection of Office Bearers.
04.08.2016	Met Weekly once and had discussions
26.09.2016	Nedumpayanam
07.09.2016	Dengue Awareness Programme
30.10.2016	Programme on India 70 by Central Government
20.02.2017	Invited talk on "Media Education" by Prof Dr.P.Bala Subaramanian, Dept. of Tamil.
24.02.2017	Invited Talk on "How to Use Internet to the fullest?" by Prof. Bosco, Dept. of BCA.

National Service Scheme (NSS)

Date	Events
30.08.2016	Painting Competition entitled "Cleanliness"
31.08.2016	Cycle Rally entitled "Open Defecation Free"
06.09.2016	Short film on Drugs titled " Puthandu Parisu"
23.09.2016	Dengue Awareness Campaign
01.10.2016	Cycle Rally on "Awareness for Election 2016"
22.12.2016	Speech Competition titled " Voters Day"
09.01.2017	Blood donation camp
11.02.2017	SHC College Day Seating Arrangements
21.02.2017	Elocution Competition

Rotaract

Date	Events	Resource Person
04.07.2016	Special Lecture on "Functions and Benifits of Rotaract Club"	Prof. D. Adiyaman
01.08.2016	Documentary Session on "Who am I?"	Prof. G. Jayakumar
08.09.2016	Special Lecture on "Child Labour"	Mr. Poovarasan,
05.12.2016	SWOT analysis on "Fundamental and Learning skills"	Prof. G. Jayakumar Dept of Physics,
12.12.2016	Documentary Session on "Functionalities of Human Organs"	Prof. D.Adiyaman
17.12.2016	Mahatma Old Age Home visit	Mr. Kishore Kumar, Founder, Mahatma Old Age Home
09.01.2017	Documentary Session on "Kidney Stone Symptoms and Prevention"	Prof. D.Adiyaman
23.02.2017	Student Rally on "Creating Awareness on safe of Drinking Water"	Prof. D.Adiyaman
23.02.2017	Special lecture & Documentary Session on "Palio Diet"	Prof. D.Adiyaman
27.02.2017	Yoga practice	Mr.R. Senthil Kumar, Teacher, Ramakrishna Madam, Natrampalli

Red Ribbon Club

Date	Events
19.07.2016	"Celebrating Life" A Talk on HIV/AIDS Awareness
23.08.2016	"Azadi – 70"
09.09.2016	Rally on "Awareness for Dengue"
26.09.2016	Motivational Drama on " Nedum Payanum"
16.02.2017	" Getting Into Zero Ends" Invited Talk on HIV/AIDS Awareness
21.02.2017	Oratorical Competition: "Survival of Women in the Contemporary World and its Challenges"
06.03.2017	Exposure Visit to –ICTC, Government Hospital, Tirupattur. Blood Banks & HIV Homes.

Youth Red Cross

Date	Events	Chief Guest / Participants
15.07.2016	Students Meeting	All the YRC Students
29.07.2016	Students Meeting	All the YRC Students
04.08.2016	Programme: "Blood Donation"	Prof. Dr. J. Jacob Stanley Inbaraj,
23.08.2016	Programme: "Azadi-70: A talk on Freedom Movement of 1857"	Prof. Dr. P. Balasubramanaian
09.09.2016	Programme: Awareness Rally on "Dengue Fever"	Municipal Commissioner & Team, Tirupattur.
20.09.2016	Students Meeting	All the YRC Students
21.09.2016	Programme: "Psychological Issues"	Prof. C. R. Christi Anandan,
26.09.2016	Programme: "Nedum Payanam - Social Awareness Drama"	Prof. Dr. K. Parthibaraja,
29.11.2016	Students Meeting	All the YRC Students
09.12.2016	Students Meeting	All the YRC Students
14.12.2016	Programme: "Disaster Management"	Mr. G. Ganesh & Team, Govt. Boys Hr. Sec. School, Uthangarai.
04.01.2017	Students Meeting	All the YRC students
24.01.2017	Students Meeting	All the YRC Students
02.02.2017	Students Meeting	All the YRC Students
07.02.2017	Programme: "Prevention of Suicide"	Prof. Latha Munusamy,
23.02.2017	Programme: Awareness Rally on "Saving the Drinking Water"	Municipal Commissioner & Team, Tirupattur.

Department of Physical Education
Extramural activities and Achievements

Date	Event/Competition	Venue	Position
22.08.2016 TO 26.08.2016	Tercentennial South Zone Inter College Invitation Volleyball Tournament	SADT- MAK Stadium, Egmore Chennai	Runners
04.02.2016	Riviera South India Level Volleyball Tournament	VIT University, Vellore	Winners
04.02.2016	Riviera South India Level Basketball Tournament	VIT University, Vellore	Third Place
01.08.2016 TO 03.08.2016	29th Don Bosco Centenary Volleyball Tournament	Sacred Heart College, Tirupattur	Participated
26.07.2016 TO 28.07.2016	Fr.Guezou State Level Basketball Tournament	Sacred Heart College, Tirupattur	Third Place
26.07.2016 TO 28.07.2016	Thiruvalluvar University Intercollege Table Tennis Tournament	Shanmuga College, Tiruvananmalai	Runners
28.07.2016	Thiruvalluvar University Intercollege Badminton Tournament	Shanmuga College, Tiruvananmalai	Runners
02.08.2016	Thiruvalluvar University Interdivision Chess Tournament	Islamiah College, Vaniyambadi	Third Place
09.08.2016	Thiruvalluvar University Intercollege Kabaddi Tournament	Athiparasathi College, Kalavai	Participated
17.08.2016	Thiruvalluvar University Intercollege Kho-Kho Tournament	Aruna Vidhaya College, Tiruvananmalai	Participated
22.08.2016 TO 23.08.2016	Thiruvalluvar University Intercollege Football Tournament	Sacred Heart College, Tirupattur	Participated
29.08.2016 TO 30.08.2016	Thiruvalluvar University Intercollege Basketball Tournament	Sacred Heart College, Tirupattur	Winners
29.08.2016	Thiruvalluvar University Intercollege Hockey Tournament	Sacred Heart College, Tirupattur	Winners
31.08.2016 TO 01.09.2016	Thiruvalluvar University Interdivision Hockey Tournament	Sacred Heart College, Tirupattur.	Winners

30.08.2016 TO 31.08.2016	Thiruvalluvar University Interdivision Football Tournament	Sacred Heart College, Tirupattur	Combined Team Runners
12.09.2016	Thiruvalluvar University Intercollege Volleyball Tournament	Sacred Heart College, Tirupattur	Winners
14.09.2016 TO 16.09.2016	Thiruvalluvar University Interdivision Volleyball Tournament	St.Joseph College, Cuddalore	Winners
14.09.2016 TO 16.09.2016	Thiruvalluvar University Interdivision Basketball Tournament	St.Joseph College, Cuddalore	Winners
05.10.2016	Thiruvalluvar University Intercollege Cricket Tournament	Islamiah College, Vaniyambadi	Participated
20.10.2016 TO 21.10.2016	Thiruvalluvar University Inter College Ball Badminton Tournament	Aruna Vidhaya College, Tiruvananmalai	Participated
28.12.2016 TO 30.12.2016	Thiruvalluvar University Athletic Meet	SDAT Stadium Tiruvananmalai	Second Place
09.01.2017 TO 10.01.2017	Thiruvalluvar University Interdivision Best Physique & Power Lift Competition	SDAT Stadium, Sathuvachery, Vellore	2 Gold Medal

Intramural

Date	Event/Competition	Shift	Position	Department
23.07.2016	College Sports day	I	Winners	B.Com
		II	Winners	B.Com
23.11.2016	Interdepartmental Volleyball Tournament (Men)	I	Winners	BBA
			Runners	B.A. Economics
24.11.2016	Interdepartmental Throw ball Tournament (Women)	I	Winners	B.Sc. Biochemistry
			Runners	B.Com
24.11.2016	Interdepartmental Football Tournament (Men)	I	Winners	B.Sc. Physics
			Runners	B.Sc. Com. Science
23.11.2016	Interdepartmental Tennikoit Tournament (Women)	I	Winners	B.SC. Biochemistry
			Runners	B.SC. Chemistry
25.11.2016	Interdepartmental Basketball Tournament (Men)	I	Winners	B.Com
			Runners	B.Sc. Mathematics

Date	Event		Position	Winner
23.11.2016	Interdepartmental Volleyball tournament (Men)	II	Winners	B.Sc. Com.Science
			Runners	B.Sc. Chemistry
24.11.2016	Interdepartmental Throw ball Tournament (Women)	II	Winners	B.Com (CA)
			Runners	B.A Tamil
24.11.2016	Interdepartmental Football Tournament (Men)	II	Winners	B.Com
			Runners	B.A. English
23.11.2016	Interdepartmental Tennikoit Tournament (Women)	II	Winners	B.A. English
			Runners	B.C.A
25.11.2016	Interdepartmental Basketball tournament (Men)	II	Winners	B.A. English
			Runners	B.Sc. Com. Science
19.12.2016	Best Physique Competition	First Prize		K. Dinesh III B.Sc. Chemistry