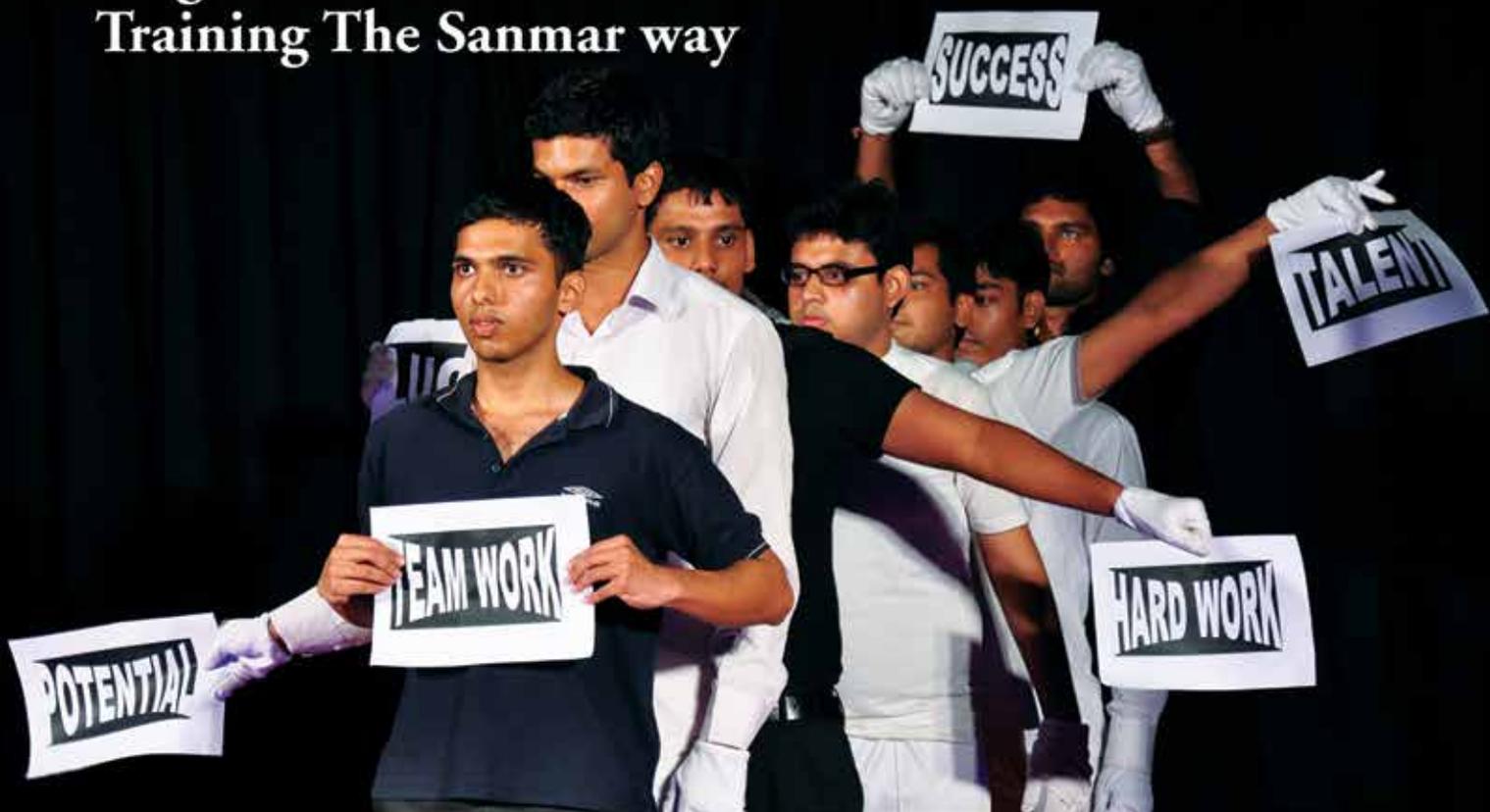




Turning Freshers into Performers Training The Sanmar way





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- Products Divn.

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Turning Freshers into Performers

Training The Sanmar way

Sanmar has always believed in selecting people with the most appropriate academic and career credentials and training them to fit the specific needs of its various businesses. For example, a programme to train graduate engineer recruits fresh out of college was put in place in the early years of Sanmar Engineering when it was a single product company manufacturing Durametallic mechanical seals. The programme has continued successfully through the decades. Similar training courses have been and continue to be held at Chemplast's chemical plants at Mettur and Cuddalore.

The HR strategy at Sanmar insists that all positions at the entry level must be filled with freshers from college, recruited and trained in-house. This means there is no lateral recruitment for entry level positions.

Sanmar has generally encouraged the hiring of local talent for junior and senior positions to enhance work-life balance and create an invigorating workplace leading to a healthy relationship with the community and its holistic development. Hence, campus recruitment is done not just at city colleges but also from rural catchment areas and the recruits are trained in Sanmar plants across locations - at Mettur, Cuddalore,

Karaikal, Berigai, Viralimalai and Karapakkam.

In addition to providing all-round technical training, the impetus from Day 1 is on inculcating organisational values. The Sanmar culture and the Sanmar way of doing things are essential parts of the diet so provided.

The flagship Sanmar Engineering GET training programme has its origins in 1981, much before the SR Seshadri Training Institute came into existence in 2007. "The success of the programme is that managers belonging to the first batch of GETs are still with us, one a Business Manager and the other



V Ramesh with GETs during a lecture session at Karapakkam.



the Engineering Head of Flowserve Sanmar”, exults V Ramesh, a Sanmar veteran, who is now mentoring the Training Managers at SRSTI. The programme, soon acquired a pan-Indian character, with fresh engineering graduates being hired from all over the country to be trained as Sales Engineers for the various SETL products.

Over the years, with additional training initiatives, several new programmes have been added. The number of training programmes has gone up sharply to about 16 per year and the number of persons to be trained has gone up from an annual number of about 30 to nearly 150!

When Sanmar flagged off SRSTI in September 2007, it was to integrate these programmes under one roof and meet a growing need for a

structured training programme and also to perpetuate the memory of SR Seshadri, a prime mover of Sanmar Engineering and The Technical Guru for many of those who rose to hold leadership positions in the various businesses. Two years down the line, it was felt that this initiative should be strengthened and institutionalised further on a much larger scale and this saw the emergence of SRSTI in its current avatar as an excellent training facility that brings under one umbrella structured and intense training of freshers recruited from renowned colleges. The institute serves as a preparatory set up to bootstrap freshers with specific training to take on positions in the various companies and divisions of The Sanmar Group.

When N Sankar articulated his vision, in order to make the whole

process, including the campus recruitment seamless, he wanted the recruitment process also to be attached to the institute. Thus, through dedicated HR resources attached to the institute, SRSTI takes care of recruitment of trainees as well. Not just recruitment, evaluation and mentoring the trainees are also done.

The infrastructure for SRSTI was initially built at Karapakkam and has expanded to Viralimalai where the Sanmar Engineering valve companies and foundries are located and to Mettur to cater to the training needs of Sanmar’s chemical plants.

All of Sanmar’s training centres are equipped with excellent classroom facilities, library and computer based training materials.

Assembly and testing facilities for SETL products at Viralimalai.



Significantly, in the seven years of its existence, SRSTI has grown from one or two programmes for Graduate/ Diploma Engineer Trainees, now to offer sixteen different training programmes covering – Chemicals, Engineering, Foundries and Common Accounts.

The institute has a team of ten professional managers with over 100+ years of total experience in various products, processes, plants, business systems in chemicals and engineering. This is in addition to the professional teaching and training faculty, who are experts drawn from different fields and functions. They have rich experience in manufacture, engineering services and operation of chemical plants. Sometimes, experienced managers who have retired from Sanmar are hired to conduct classes.

Trainees at work, SRSTI Mettur.



Training programmes at SRSTI

- Graduate Engineers – Mechanical, Electrical, Chemicals & Instrumentation
- Diploma Engineers – Mechanical, Electrical, Chemicals & Instrumentation
- Masters in Science & Commerce

Training programme covers various functions:

Chemicals

- Plant Operations, Plant Maintenance – Mechanical,

Electrical, Instrumentation at Engineers', Supervisory and Operating levels

Engineering

- Sales (Pan India), Operations – Product Engineering, Planning, Procurement, Production & Quality

Foundry

- Foundry Operations – Sand Foundry, Investment Foundry
- Product development in Foundry

A hallmark of the training at SRSTI is its emphasis on 'application', opportunity for the GETs to work on live problems in the plants during their in-plant training and during their on-the-job training.

The trainees develop result-oriented projects on the shop floor and come up with practical solutions in specific areas such as cost improvement, waste reduction, cycle time reduction, and development of tools and fixtures,



Common

- Various Accounting Functions – BPO and in Plant

Training programmes are well designed to cover:

- Product training in classroom
- Product training practical (hands-on) in manufacturing plants (In-plant training)
- Training in Manufacturing processes & Quality requirements (In-plant training)
- Training in manufacturing & business systems (SAP)

Training programme split into:

- 3-6 months training in product & processes in classroom & in plants
- 6-9 months of on-the-job training in the respective functions

Training programme methodology:

- Typical classroom training
- Hands-on training in building products/ trouble shooting
- Group activities in practicals
- Assignments
- Plant visits (Engineering trainees to Chemical plants & vice versa)

- Project work in plants

Stress given for application of knowledge gained in the work place including product applications.

Training evaluation is done at every stage to constantly give feedback to the trainees on the level of absorption.

Evaluation methodology includes:

- Weekly tests
- Assignments
- Technical presentations
- Project presentations

which they implement in the work place.

Several of these, carried out under the close mentorship of operating managers, have yielded significant results.

The thrust in Sanmar is on practical training and hence in addition to the classroom facility, ‘a mini workshop’ for hands-on training, for trainees to assemble, disassemble, and test all our products is available

at Viralimalai. Similar facilities are being set up at Mettur and Karapakkam also. Sometimes, Sanmar makes use of other institutes’ facilities for practical training in Mechanical Engineering Basics,

Trainees at Viralimalai.



DCS Operations, Instrumentation, Electrical Systems and other subjects.

“Our team works with the objective of creating technically competent professionals who meet global standards of excellence across multiple functions / businesses / plant operations”, says SRSTI President K Balasubramanian.

In addition to training freshers, SRSTI offers refresher training programmes for existing professionals in the plants to update their knowledge with the latest developments in their field and hone their skills. Practical workshops are conducted so that they apply the knowledge gained in real life problems in their plants. Examples are workshops which have been conducted on Statistical Problem Solving, Value Stream Mapping,



K Balasubramanian with the trainees.

Transaction Process Improvements and Work Place Management, among others.

A trained professional at Sanmar does not just do routine jobs but develops result-oriented projects/products at the plants. Many of them gain very quick recognition as “Excellent Performers” in the Group

even within a year of work. Such is the calibre of intense training and grooming imparted in Sanmar.

Graduate Engineering Trainees with their training manager T Subramaniyan at SRSTI, Viralmalai.



‘Trade arrangement with India will boost business ties’

Seminar on Emerging Business Opportunities in Egypt



A seminar on ‘Emerging Business Opportunities in Egypt’ was conducted under the aegis of FICCI and TCI Sanmar Chemicals S.A.E., in Delhi on 8 July 2014.

PS Jayaraman, Chairman, TCI Sanmar Chemicals S.A.E., said in his address that the Government of Egypt under the stewardship of the new President Abdel Fattah el-Sisi had signalled a continued interest in expanding business relations with India. “It is now time to take this relationship forward. It has all components of a very strong relationship, at the economic

level, at the level of engagement in science and technology areas, in information technology. There are many other sectors which can be looked at such as biotechnology, information technology and cyber security.”

Jayaraman added that the key business driver in Egypt was the country’s geo-strategic location. By having a manufacturing base in Egypt, Indian companies would be able to access markets in Europe, Africa, and the Middle East. This advantage of Egypt had become a major attraction. PS Jayaraman also shared his success story in ‘Doing Business in Egypt’.

The President of Egypt has shown considerable vision in conceptualising and announcing new policies and projects with tremendous scope for increasing participation from other countries into Egypt, thus heralding an era of positive change.

Egypt looked forward to enter into a trade arrangement with India to give a boost to two-way trade, said Khaled El-Bakly, Ambassador of the Arab Republic of Egypt to India. “Egypt connects Asia and Africa by the land route and also acts as a gateway to the European market. Indian companies can penetrate these markets by setting up businesses in Egypt”, the Ambassador added.

Sheila Sudhakaran, Assistant Secretary General FICCI, Mongy Badr, Minister Counsellor, Embassy of the Arab Republic of Egypt in New Delhi, and Pradip Tyle, Director, UFLEX were among those present.



“Aligning Employee Relations with Business Strategies”

B Visweswaran’s address at the EFSI National IR Conference

The National IR Conference of The Employers’ Federation of South India (EFSI) on “Forging Partnership – New Age Business Strategy” was held at GRT Grand, Chennai on 24-25 July 2014.

B Visweswaran, Director, The Sanmar Group Corporate Division, addressed the delegates on the topic, “Aligning Employee Relations with Business Strategies”.

Here are some key points from his speech:

The vision statement of The Sanmar Group lays emphasis on “all stakeholders” and the employees are among the primary stakeholders of any organisation.

The IT environment and the manufacturing environment are very different and employee management needs to be aligned suitably. When I moved from my earlier stints, which were predominantly in the IT space, the HR policies and philosophies

were a bit of a culture shock for me. But when I thought about it, it was clear that the policies were designed around the strategies of each of the businesses.

The current business environment is tough, with a hint of optimism. Customers have options resulting from the globalisation of the supply chain. Customers can pick and choose their suppliers based on volumes, lead time, price and quality. Logistics has improved tremendously and this allows customers to have a choice in where and from whom they can source.

Strategies to remain competitive can either come from being the lowest cost producer or from some form of differentiation. At Sanmar Engineering, the segment of the Group that I am part of, we aim to differentiate from competition in terms of product and people.

Our philosophies are competitive from an employee relations



A view of the audience.





KS Venkiteswaran, Chairman, EFSI TN Committee and Advisor, The Sanmar Group Corporate Division, presenting a memento to B Santhanam, Managing Director, Saint Gobain. Ramesh Datla, Chairman and Managing Director, Elico Ltd., and R Mukundan, Managing Director, Tata Chemicals Ltd., are also present.

standpoint. They revolve around a performance based culture with earnings linked to performance. Performance is measured through standardised metrics and dashboards. There is continuous communication and feedback on the performance against these metrics.

Business strategy is broken down into monthly, weekly and daily actions and again these are communicated to ensure that everyone knows how the parts add up to become the whole. Salaried, unionised and contract employees need to understand the business reality – options with

customers and the need to constantly differentiate and be best in class. This realisation should result in working together as a team and as responsible partners; to achieve productivity improvements through constant re-skilling and training.

(L to r): TM Jawaharlal, Secretary EFSI, A Aravamudan, Consultant, A Sundaresan, Vice Chairman and Managing Director, Schwing Stetter (India) Pvt Ltd., R Venkataramani, Chairman and Managing Director, India Pistons, B Visweswaran and KS Venkiteswaran.



Chemplast partners District Administration in mock off-site emergency drill at Karaikal

A first of its kind off-site emergency disaster management drill was held under the aegis of the Karaikal district administration at the offshore site of Chemplast Sanmar, Karaikal, on 6 July 2014.

The mock drill was conducted to ascertain the readiness of the district disaster management team to react to natural or man-made disasters including fire and chemical accidents.

The team was asked to respond to a stage-managed chlorine leakage

at Chemplast Karaikal and the rehabilitation and reaction timings of the disaster management teams were observed by Additional Collector Mohammed Mansoor in an exclusive emergency control room established near the mock drill site.

The mock drill encompassed various departments including the district's police personnel, traffic police personnel, and a variety of teams—pertaining to rescue and rehabilitation, medical and hazardous material response.

The rescued public and plant personnel were moved to safe houses and provided food and water. After the drill, a debriefing session was held, with the Additional Collector reviewing the performance of the various teams and providing dos and don'ts to ensure efficient disaster management during catastrophic incidents.

A video on the Off-site Emergency Mock Drill was released by District Collector E Vallavan on 30 August 2014.



Additional Collector Mohammed Mansoor (centre) with district disaster management team.



Mock off-site emergency drill in progress.

Training programme on oil pollution preparedness

The Indian Coast Guard in collaboration with AMET University conducted an IMO Level 2 training programme for senior terminal managers in Oil Pollution Preparedness Response and Cooperation from 7 to 14 August 2014 at the AMET campus in Kannathur, ECR.

The International Convention OPRC-90 mandates that all stakeholders in the oil and allied industries have responsible designated persons in their employ, at each location, fully capable of appreciating the complexities involved in containing and mitigating the effects of a spill.

While Chemplast Sanmar terminals at Karaikal and Cuddalore only handle gas and chemical cargo rather than oil cargo, the broad principles of pollution preparedness remain the same and hence three senior terminal managers from the Chemplast Cuddalore and Karaikal plants attended this training programme. They won prizes in the team competitions at the session.

Capt S Krishnamurti, Sanmar Shipping, the chief guest, delivering the valedictory address.



1. S Balamurali,
2. R Padmanaban and
3. A Arivudai Nambi of Chemplast Sanmar, receiving certificates and prizes from Col Dr G Thiruvassagam, Vice-Chancellor, AMET University, and Capt S Krishnamurti respectively.

Spotting talent

New TNCA rules

The recent amendment of the rules of the Tamil Nadu Cricket Association to allow two outstation players to be included by Chennai's first division teams has been a progressive move to enhance the quality of league cricket in Chennai. The outstanding 'imports' by Sanmar, for instance, include such exciting talent as Ankeet Bawane, Sheldon Jackson, Deepak Hooda and Vikas Mishra.

These have enabled the Sanmar teams Jolly Rovers and Alwarpet Cricket Club to add to their strength, as these new recruits are in addition to the national level players from other states already on Sanmar roles. Leg spinner Piyush Chawla,

a keen contributor to Jolly Rovers' triumphs in the recent past, is one such player already.

Right from the time the Group adopted Jolly Rivers nearly 50 years ago, it has sought to bring some of the best Indian talent to the Chennai league. From the first arrivals in KR Rajagopal, Najam Hussain, KVR Murthi, V Balaji Rao and PK Dharmalingam from other states back in the 1960s through some stellar recruits like Harbhajan Singh and Anil Kumble to the more recent recruits like Ajay Kuduva, Tinu Yohanan, Sujith Somasundar and Piyush Chawla, Jolly Rovers has maintained a continuous supply

of "imports" who have helped raise the bar for the local talent. Jolly Rovers CC has taken advantage of the new rules of the TNCA league that have opened the doors a little wider to outside talent. Here are a few thumbnail sketches of our guest stars:

Piyush Chawla (25). Outstanding leg spinner who has represented India in Tests, ODIs and T20. A member of the victorious Indian teams in the T20 (2008) and ODI (2011) World Cups. Represents Uttar Pradesh in the Ranji Trophy and plays for Kolkata Knight Riders in IPL. A good all rounder, he has scored 4046 runs and taken 354 wickets in 98 first class matches.

Piyush Chawla
Uttar Pradesh

Ankeet Ramdas Bawane
Maharashtra

Sheldon Jackson
Saurashtra

Robin Singh Bist
Rajasthan



from across India: boost Jolly Rovers' efforts

Ankeet Ramdas Bawane (21). Represents Maharashtra in the Ranji Trophy. Prolific right hand batsman who has played for India Under 23. Has a batting average of 55.32 with 8 hundreds and 16 fifties in 41 first class matches.

Sheldon Jackson (27). Explosive wicketkeeper batsman from Saurashtra. Has an average of 48.30 in 18 Ranji games, scoring 4 hundreds and 7 fifties. He has been with KKR and RCB in the IPL.

Robin Singh Bist (26). This diminutive Rajasthan batsman has 8 hundreds, 22 fifties and an average of 48.94 in 57 Ranji Trophy games. Has represented India A.

Prasanth Parameswaran (28). This tall, well built left arm fast bowler has been representing Kerala in the Ranji Trophy. In 21 Ranji games he has taken 49 wickets at an average of 31.34. Represents Sunrisers Hyderabad in the IPL.

Sandeep Sharma (21). Promising fast bowler from Punjab. A member of the India Under 19 World Cup champion team. The accurate Sharma moves the ball both ways. Having represented India Under-19, India Under-23, and India A, he is tipped to play for the country soon. Plays for Kings XI Punjab in the IPL. In 20 Ranji Trophy games, he has taken 83 wickets at an average of 22.78.

Deepak Hooda (19). A promising all rounder (right hand bat and off spinner), this tall lad represented India in the 2014 Under 19 world championship. His all round performance (76 not out and 3/31) against Sri Lanka won the match for India. Having represented Baroda in the T20 championship, he is awaiting a call to the Ranji Trophy team.

Vikas Mishra (21). This tall left-arm spinner is a consistent performer for Delhi in the Ranji Trophy, in which he has 81 wickets at an average of 29.19 in 24 matches. He has been selected for the Delhi Daredevils IPL team.

Prasanth Parameswaran
Kerala

Sandeep Sharma
Punjab

Deepak Hooda
Baroda

Vikas Mishra
Delhi



Jolly Rovers CC wins the VAP Trophy

Jolly Rovers-Chemplast Sanmar lifted the VA Parthasarathy Memorial trophy beating Vijay CC by 3 wickets at the IIT Chemplast grounds on 11 August 2014. The Rovers' triumph follows its win over the same opponent in the final of the TNCA first division league this year.

Jolly Rovers, with its formidable batting line-up, got off to a fantastic start with a fine partnership between KH Gopinath (77) and Sheldon Jackson. Later, Piyush Chawla (31) essayed some bright strokes. On a sluggish surface, runs became harder as the innings progressed.

Gopinath was adjudged the Player of the Tournament and Man of the Final.



K Srikanth, former India Test Captain was the Chief Guest. RI Palani, Joint Secretary TNCA, and

State Chief Selector S Sharath were present on the occasion.

The VAP Trophy champions.



Sanmar-TNTA League title retained by MCC

It was a display of quality tennis during The Sanmar - TNTA Chennai City Club League Championship 2014 at the Besant Nagar court in the months of April and June this year. Day one of the deciding rounds saw title holders Madras Cricket Club "A" defeat the Besant Nagar Club "A" to win in straight sets. The second day witnessed an interesting and entertaining doubles game by both teams in both the matches played.

N Sankar gave away the trophy to the proud winners.



Ninth Danish Consular Conference at Copenhagen

An eyewitness account by SB Prabhakar Rao

The Honorary Vice Consul of the Danish Consulate in South India, SB Prabhakar Rao, attended the Ninth Consular Conference 2014 for Honorary Consuls, organised by the Ministry of Foreign Affairs (MFA), Denmark, during 23 - 25 June at Copenhagen.

Prabhakar Rao reports that the meet was well attended by over 400 Consuls, most of them accompanied by their spouses. Prime Minister Ms. Helle Thorning-Schmidt addressed the assembled Consuls on the global challenges, with creative solutions for a prosperous and sustainable future for Denmark. She made an impressive exhortation and emphasised the significant role that Honorary Consuls could play to make Denmark economically strong. The Consuls had an occasion to meet with some leading Danish business organisations. There was a clear endorsement on the role of honorary consuls globally, and the MFA expressed keenness to involve them more effectively.

A dinner at the House of Confederation of Danish Industry was attended by Her Majesty the Queen of



Royalty at the Royal Danish Theatre.

Denmark and His Royal Highness the Prince Consort. An impressive performance of opera music and ballet dance at the Royal Danish Theatre in the august presence of royalty gave a fitting conclusion to the conference. Prabhakar Rao exchanged courtesies with Princess Benedikte who had presented the Belønningsmedalje Med Krone to him when she visited Chennai, in 2004 Rao met with former Danish Ambassadors to India, Mr. Bjarne H Sorensen, Ms. Birgit Storgaard and Mr. Ole Lonsmann Poulsen. He

paid a visit to the Director General of the Danish National Museum and the Director of the Danish National Archives where some rare original documents have been preserved for over four centuries, and discussed the progress of on-going projects at Tamil Nadu Archives.

Mr and Mrs SB Prabhakar Rao with former Danish Ambassadors to India Mr. Ole Lonsmann Poulsen and Ms. Birgit Storgaard in Copenhagen.



‘Coming Together’ at Madhuram Narayanan Centre

It was ‘Coming Together’ (*Samyam*) of sorts at the Madhuram Narayanan Centre when the exceptional children from three stages were brought together on 19 July 2014.

Samyam, which began last year was conceived to bring students past and present and new entrants together at the Centre. The present students and the new entrants find inspiration in meeting the past students and interacting with them. The past students find guidance and reassurance from the teachers that they are on the right track.

This programme provides a platform for healthy interaction, maintaining continuity with the Centre and to motivate new parents face the challenge in bringing up and training their children.

Chief Guest K Manivasan IAS, Commissioner for Differently Abled, Government of Tamil Nadu, addressed the gathering and distributed prizes to the children.



CSR activities at Chemplast Cuddalore and Karaikal

An RO system for providing clean drinking water was installed at the Government Girls Primary School, TR Pattinam, and the Government Primary School at Pattinacherry near Karaikal.



International Coastal Clean up day was organised by Coast Guard Station, Karaikal, on 20 September 2014 at Karaikal beach. Government Departments, NCC from schools and colleges and public participated in the cleanup. Chemplast Sanmar, Karaikal, sponsored the event.

A sizable financial contribution was made to fishermen in Chittarapettai village near Cuddalore to meet part of their medical expenses. The cheque was handed over to Chittarapettai Panchayat.



Chemplast's spoken English programme at Mettur

Chemplast has started a programme to impart basic and spoken English to the rural students of Vaidheeswara Higher Secondary School, Mettur. The programme aims to improve language proficiency in basic and spoken English and instil confidence in writing simple English as well as raise the overall quality and academic merit of the students. Students in Classes IX and X standard will benefit from this facility, extended for a four-hour duration every week for 25 weeks. An evaluation will be done at the end of each session to monitor the progress made by the students.



New batch at Chemplast Mettur tailoring training centre



A fresh batch of 56 women from the villages of Kozhipannai and Thangampuripattinam joined the Chemplast tailoring training centre at Mettur on 23 August 2014. After attending the training programme for three months, they will be equipped to stitch on their own, earning a decent income and supplement their family income.

Raja Ramanna (1925-2004)



Eminent nuclear physicist, accomplished technologist, able administrator, gifted musician, scholar of Sanskrit literature and philosophy—rarely has Indian public life witnessed a more versatile all rounder than Dr Raja Ramanna, who led the country's nuclear research programme with distinction and held its first nuclear test at Pokhran, Rajasthan, in 1974.

Born on 28 January 1925 to eminent judge B Ramanna and bibliophile Rukminiamma at Tumkur, Karnataka, Raja Ramanna drew

great inspiration from his parents. Another early influence was aunt Rajamma, widowed at an early age, who became the headmistress of a Government Middle School, battling the odds stacked against a woman in her position.

Raja had his early education in Mysore, and joined Bishop Cotton Boys' School, Bangalore, when his parents moved to that city. He went to St. Joseph's School for his intermediate studies, and eventually joined the Madras Christian College in Tambaram for B. Sc (Hons) degree

in physics. Graduating in 1945, he pursued higher studies in England, where he obtained a PhD in nuclear physics from King's College, London in 1948.

Ramanna was highly influenced by distinguished scientist Homi Jehangir Bhabha whom he met in 1944. On a visit to London, Bhabha offered Ramanna a job at the Tata Institute of Fundamental Research (TIFR), the cradle of India's atomic energy programme.

Joining TIFR on 1 December 1949, Ramanna was offered two adjacent rooms, the first one for him, and the second for his piano! The ground floor became the nuclear laboratory of physics from where he started his project on nuclear fission and scattering. Here, he made several contributions in different areas of neutron, nuclear, and reactor physics.

Ramanna organised the physics and reactor physics programmes at Bhabha Atomic Research Centre (BARC), Trombay. In 1956, when India's first nuclear reactor, Apsara, was commissioned, Ramanna was one of the youngest reactor physicists in the team. When the BARC Training School was established in 1957 to develop the skilled manpower required for facing the challenging problems in nuclear science and technology it was led by Ramanna. He held the position of the Director of BARC during 1972-78 and 1981-83.

Raja Ramanna was associated with a number of science academies and learning bodies across India. He helped in setting up the Centre for Advanced Technology at Indore in the early 1980s. It was dedicated to the development of advanced accelerators, lasers, and other related technologies. He also lent his support to the establishment of the Variable Energy Cyclotron Centre (VEC) in Calcutta. He became the founder-director of the National Institute of Advanced Studies (NIAS), an institution set up by JRD Tata in Bangalore. Ramanna served his later years in supporting science institutions throughout the nation as President of the Indian National Science Academy, Scientific Advisor Committee to Director General of International Atomic Energy Agency, President of 30th General Conference of the International Atomic Energy Agency, Vice President of Indian Academy of Sciences, President of Indian National Science Academy, and President of General Conference of Atomic Energy Agency at Vienna.

A truly hands-on scientist, Ramanna made several important contributions to nuclear physics. An admirer of his predecessors Homi Bhabha and Vikram Sarabhai in India's nuclear energy programme, Ramanna played a key role in placing the country's indigenous nuclear capabilities on a firm footing. His work helped shape the development of nuclear energy and nuclear energy security in quite significant ways. Like Sarabhai before him, he led the way in accelerating

India's growth in the field of science and technology.

India's first peaceful nuclear experiment was carried out underground in the Rajasthan desert on May 18, 1974. Ramanna said, "The Pokhran experiment was a landmark in the history of nuclear research in the country. It was an assertion of the technological advancement India had determined to perfect in the post-independence era."

An accomplished pianist, Ramanna authored, "The Structure of Music, in Raga and Western Systems", a comparative study of great merit. He was actively involved in setting up the Bangalore School of Music. He was seriously interested in philosophy and yoga. A simple man with a nice sense of humour, he remained accessible and friendly all his life.

Ramanna died on 24th September, 2004 at Mumbai after a cardiac arrest.

Honours

- Shanti Swarup Bhatnagar Award, 1963
- Padma Shri Award, 1968
- Padma Bhushan Award, 1973
- Padma Vibhushan Award, 1975
- Meghnad Saha Medal of the Indian National Science Academy, 1984
- Om Prakash Bhasin Award, 1985
- R.D. Birla Memorial Award, 1986
- Asutosh Mookerji Gold Medal, 1996
- D.Sc. (Honoris Causa) by several universities

Posts Held

- Chairman, Governing Council, Indian Institute of Science, Bangalore
- Council of Management, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore
- Chairman, Board of Governors, Indian Institute of Technology, Bombay, 1972-78
- President, Indian National Science Academy, 1977-78
- Vice-President, Indian Academy of Sciences, 1977-79
- Scientific Advisor to the Minister of Defence, 1978-81
- Director-General of Defence Research and Development Organisation (DRDO), 1978-81
- Secretary for Defence Research, Government of India
- Chairman, Atomic Energy Commission, 1983-87
- President, General Conference of Atomic Energy Agency, Vienna, 1986
- Secretary, Department of Atomic Energy
- Director, Bhabha Atomic Research Centre, 1972-78 and 1981-83
- Director, National Institute of Advanced Studies, IISC campus, Bangalore, 1987-89 and 1990-97.

