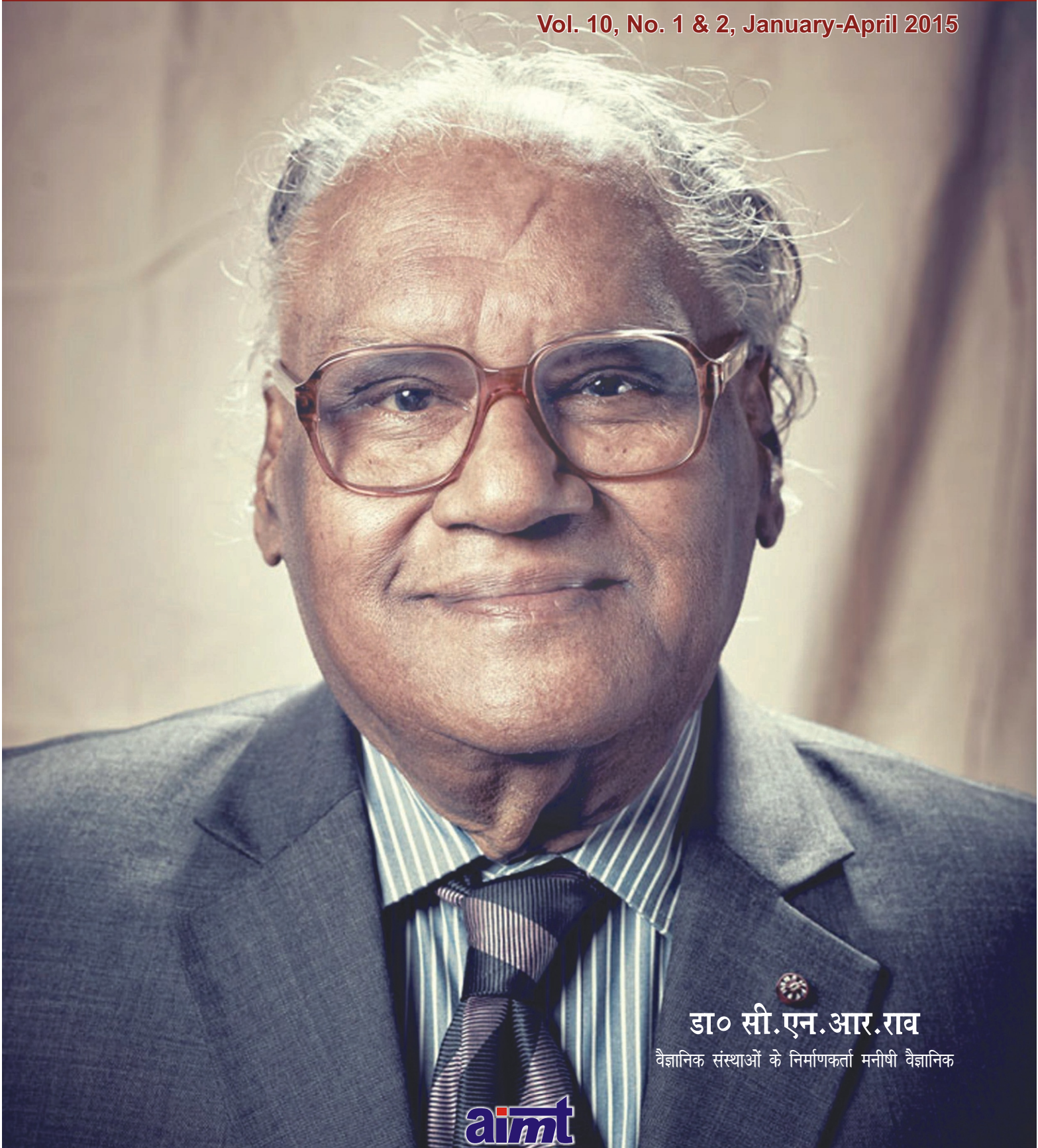


SCHOLASTIK WORLD

Vol. 10, No. 1 & 2, January-April 2015



डा० सी.एन.आर.राव

वैज्ञानिक संस्थाओं के निर्माणकर्ता मनीषी वैज्ञानिक

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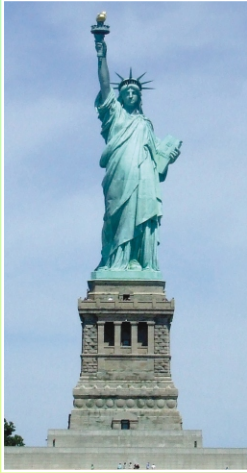
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डा० सी.एन.आर.राव
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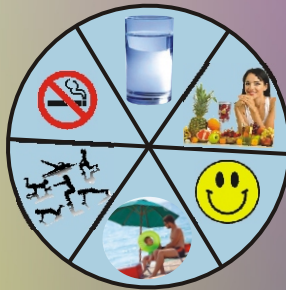
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Regular Features : Laugh, Great minds, Genius, Quiz.

All published material in SCHOLASTIK WORLD are the personal views of the authors. The Editorial Board and Publishers will not be held responsible on that count.

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Dr. C.N.R. Rao

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EDITORIAL



Let noble thoughts come to us from every side.
- Rig-Veda
3000 B.C. (EST)

FROM THE EDITOR'S DESK

Our last issue on Bankim Chandra Chattopadhyay was well received by our readers. We feel happy and satisfied to have been able to bring Bankim closer to the present day readers who know little about this great sage.

In the present issue we are delighted to carry the cover story on Dr. C.N.R. Rao a genius and a scientist who was awarded the Bharat Ratna in 2014 for his invaluable service to the nation and contribution to science and scientific research. We have no doubt that our readers will find the cover story on Dr. Rao interesting and informative.

Along with our regular chapter on Health, we have carried an essay on the ancient way of living life i.e., YOGA. We have no doubt that it will appeal to all our readers as we all are eager to lead a healthy and long life.

In our Travelogue section we are delighted to publish an account of crossing of the famous English Channel by a ferry service which nevertheless is as adventurous as it was when Mihir Sen swam across the Channel many decades ago and had the distinction of being the first Indian to have crossed it.

From this issue we are introducing a TRUE LIFE Series. In this issue we have a true experience of a teenage boy about his hostel life. We request our readers to send us their true stories. Selected stories will be published in the magazine.

The Wonders of the World Series has become quite popular since it gives an insight to these magnificent monuments or edifices which we marvel and rave. It would be our endeavour to give similar stories in every issue.

Summer is setting in at a fast pace and the temperature is rising with each passing day. It however, brings with it the arrival of the king of fruits - the Mangoe to everybody's delight. To beat the heat eat mangoes all the varieties that are available in the market, drink plenty of water and save yourself from heatstroke.

We trust you enjoy reading this combined issue.

With best wishes,

Editor-in-Chief

RESPONSE
LETTERS

The Editor-In-Chief,
Scholastik World,
Jamshedpur.



Dear Sir,

It has been only a few months since I have been following your magazine Scholastik World. Though I am not qualified enough to pass judgment on the magazine yet a few spelling errors in the last issue attracted my attention which were certainly avoidable in an otherwise perfectly balanced magazine.

I however, enjoyed reading the latest issue covering brief biography of Bankim Chandra Chattopadhyay as a cover story and Satyajit Roy under the Genius column. Invention and Quiz were found to be very interesting and were full of knowledge. The article on Leadership and the Tips on Time Management will be useful to young managers.

Your magazine covers a wide spectrum of subjects from Art & Culture to Science, from Biography to stories of patriotism, from poetry to environment, from history to management skills and so on. I find it to be a complete magazine in all respect.

I wish the magazine a long life,

Yours faithfully,

Zishan Patra
C/o - Anand Medical Store,
New Purulia Road, Mango,
Jamshedpur-831012,
Ph. : 8969399960

The Editor,
Scholastik World,
Jamshedpur.



Dear Sir,

I have recently subscribed to your magazine Scholastik World to keep the connection with my hometown alive. But sadly I did not receive the copy of the magazine which was said to have been posted to me by your office. However, I have received a copy from one of my well wishers in Jamshedpur who recommended your magazine to me.

However, I hope this does not occur in future.

I could never imagine that such a beautiful magazine was being published from Jamshedpur for the past ten years. I congratulate your editorial team for bringing out such a brilliant academic magazine.

In the latest issue the Cover Story on Bankim Chandra Chattopadhyay made an interesting reading. Many facts were unknown to me before I read them in the magazine. The features on Invention and Wonders of the World were found to be quite informative.

I wish the magazine a long life,

Yours faithfully,

Sanjib Roy
2/2 Bhagwati Krupa,
3rd Main Sultan Palya,
R.T. Nagar, Bangalore,
Karnataka-560032

**RESPONSE
LETTERS**

The Editor-In-Chief,
Scholastik World,
Jamshedpur.

The Editor,
Scholastik World,
Jamshedpur.

Dear Sir,

The last issue carried a moving tribute to Sri. T. P. Ghose, who, I believe, was the moving force behind the magazine "Scholastik World". Passing away of Mr. Ghose has indeed left a vacuum which will be difficult to bridge. His stories, mostly biographical essays on eminent personalities, were thoroughly researched piece of journalism. Such committed and devoted writers are a rare breed in present times. I always read articles written by Sri Ghose with interest as it gave rare insight into the life of a renowned personality bringing out unknown facts. I never had the opportunity to meet him in person but I developed a rapport with him through his writing. May his soul rest in peace.

I am also forwarding an article "When the Indian Constitution was Amended for the First Time". This article gives an insight into the history leading to the first amendment to the Indian Constitution as early as in 1951. Since the nation shall be celebrating the 65th Republic Day (the day the constitution came into force in 1950) on 26th January 2015, the piece of article is timely and worth for publication in January number.

Thanks,

Rajesh Sahay
A-14, Aman Apartments,
Sector-13, Rohini,
New Delhi-110085

Dear Sir,

I recently came through your esteemed magazine Scholastic World enriched with various articles on history, health, modern India and various other informative and useful topics.

I complement your editorial team for trying to do its best in bringing our a bi-lingual magazine to have a wider reach in the society.

Wishing a long life of this academic magazine,

Sincerely,
Debasish Jyotishi
Received via e-mail

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The readers whose subscription tenure has come to an end with this issue or has ended earlier, are requested to renew their membership for a period of 1 year or 5 years as per their convenience. Payment can be made by Cheque or Draft in favour of **Dr. B.R. Ambedkar Educational & Cultural Trust, payable at Jamshedpur.**

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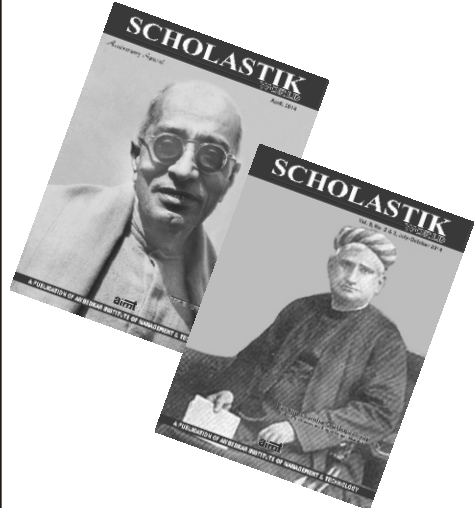
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GREAT MINDS

SARDAR VALLABHBHAI JHAVERBHAI PATEL

The Iron Man of India
(1875 - 1950)



“ It is the prime responsibility of every citizen to feel that his country ...is free and to defend its freedom is his duty.

●
My only desire is that India should be a good producer and no one ...should be hungry, shedding tears for food in the country.

●
Even if we lose the wealth of thousands, and our life is sacrificed, we ...should keep smiling and be cheerful keeping our faith in God and Truth.

●
Manpower without Unity is not a strength unless it is harmonised and ...united properly, then it becomes a spiritual power.

●
Every citizen of India must remember that ...he is an Indian and he has every right in this country but with certain ...duties.

●
There is something unique in this soil, which despite many obstacles has always remained the abode of great souls.

●
No one would die of starvation in independent India. Its grain would not be exported. Cloth would not be imported by it. Its leaders would neither use a foreign language nor rule from a remote place 7,000 feet above sea level. Its military expenditure would not be heavy. Its army would not subjugate its own people or other lands. Its best-paid officials would not earn a great deal more than its lowest-paid servants. And finding justice in it would be neither costly nor difficult.

●
Your goodness is an impediment in your way, so let your eyes be red with anger, and try to fight the injustice with a firm hand.

●
Work is undoubtedly worship but laughter is life. Any one who takes life too seriously must prepare himself for a miserable existence. Anyone who greets joys and sorrows with equal facility can really get the best of life.”

आवरण आलेख

डा० सी.एन.आर.राव

वैज्ञानिक संस्थाओं के निर्माणकर्ता मनीषी वैज्ञानिक

भारत रत्नों की सूची में सी.एन.आर. राव एक ताजा नाम है। 2014 में सचीन तेंदुलकर के साथ ही उनको 'भारत रत्न' की उपाधि से नवाजा गया है। वे एक वैज्ञानिक हैं, एक गहन शोधकर्ता तथा वैज्ञानिक संस्थाओं के निर्माणकर्ता भी। उनकी शोध उपलब्धियों की एक लम्बी सूची है और एक सामान्य नागरिक के लिए उनके शोध विषयों की गहनता अनधिगम्य है। फिर भी इसी कारण उनकी उपलब्धियों को अनदेखा करने की धृष्टता हम नहीं कर सकते। उन्होंने सॉलिड स्टेट केमिस्ट्री और मोलेकुलर स्ट्रक्चर स्पेक्ट्रोस्कोपी के अलावे सुपर कन्डक्टिविटी तथा नैनो पार्टिकल्स, नैनोरोड्स, नैनो ट्यूब्स पर महान कार्य किया है। रसायन शास्त्र को अन्य विषयों के समकक्ष प्रतिष्ठा दिलाने में उनका अन्यतम योगदान है। महान लीनस पाउलिंग, जी.एन.लेविस तथा नेविल मोर्ट उनके हीरो हैं। तथा भारत में जे.सी.बोस और सी.वी. रमन उनके प्रेरणा के अक्षय स्रोत। परडू (यू.एस.), कैलिफोर्निया (बर्कले), आक्सफोर्ड तथा कैम्ब्रिज (इंग्लैंड) ने उनकी वैज्ञानिक प्रतिभा को गढ़ा है। भारत में आई.आई.टी. (कानपुर) तथा इंडियन इंस्टीट्यूट ऑफ साइंस,

रिसर्च प्रोफेसर तथा इंडियन इंस्टीट्यूट ऑफ साइंस, बंगलोर में आनरेरी प्रोफेसर। वे इन संस्थाओं के पूर्व डायरेक्टर तथा अध्यक्ष भी रह चुके हैं। अब तक उनके 1400 शोध पत्र प्रकाशित हो चुके हैं तथा विभिन्न विषयों यथा सॉलिड स्टेट केमिस्ट्री, स्पेक्ट्रोस्कोपी, मेटिरियल केमिस्ट्री, सुपर कन्डक्टिविटी, नैनो मेटिरियल पर 43 से अधिक पुस्तकों का उन्होंने प्रणयन किया है। विभिन्न भारतीय



डा० सी.एन.आर. राव

और विदेशी विश्वविद्यालयों से उन्हें 48 आनरेरी डॉक्टरेट की डिग्रियाँ सम्मान में दी जा चुकी है। विश्व की मानद वैज्ञानिक अकादमिक संस्थानों के वे आज भी सदस्य हैं। ये कुछ संस्थाएँ हैं रॉयल सोसायटी ऑफ लंदन, यू.एस. नेशनल अकाडमी ऑफ साइंसेज, रॉयल सोयटी ऑफ कनाडा तथा फ्रांस, स्पेन, जापान, ब्राजिल के श्रेष्ठतम शोध संस्थान।

विभिन्न वैज्ञानिक पुरस्कारों की तो मानो उनपर वृष्टि ही हुई है। मॉरलो मेडल ऑफ दी फ़ैराडे सोसायटी (1968), चेकोस्लोवाक अकाडमी का हेवरोवस्की गोल्ड मेडल (1989), यूनेस्को का आइंस्टाइन गोल्ड मेडल (1996), रॉयल सोसायटी ऑफ लंदन का सेंटनरी गोल्ड मेडल (2000)। ह्यूजेस मेडल (2000), रॉयल मेडल (2009), निक्की प्राइज (2008) इत्यादि कुछ प्रमुख अन्तरराष्ट्रीय सम्मान हैं। इसके अलावे

डेन डेविड प्राइज फॉर साइंस (2005), तथा जर्मन केमिकल सोसायटी का आगस्ट-विलहेम-वॉन-हाफमैन मेडल (2010) उनकी वैज्ञानिक उपलब्धियों के प्रशस्ति सम्मान हैं। ब्राजिल के राष्ट्रपति ने 2002 में उन्हें ग्रैंड क्रॉस (जो ब्राजिल का सर्वोच्च वैज्ञानिक सम्मान है) प्रदान किया है। इसी प्रकार का सर्वोच्च वैज्ञानिक सम्मान



पिता नागेश राव



राव की माँ नागम्मा

बंगलोर उनके अधीन महान संस्थाओं के रूप में विकसित हुए हैं। वे एक महान इंसान भी हैं। रवीन्द्रनाथ टैगोर की रचनाओं से वे प्रेरणा पाते रहे हैं। मातृ पितृ भक्त श्री राव विज्ञान के अतिरिक्त अपनी माता के प्रति विशेष भक्ति भाव रखते हैं। श्री राव में आध्यात्मिक अणु माता से मिले तथा विज्ञान भाव पिता से। श्रीमती इंदु के रूप में उन्हें एक श्रेष्ठ जीवन संगिनी मिली जिन्होंने श्री राव के उत्कर्ष में अपनी महती भूमिका निभाई। आज श्री राव नवीन शोधार्थियों के लिए एक प्रेरणा स्रोत हैं और इस महान वैज्ञानिक परम्परा की एक गरिमामयी कड़ी जो सहस्राब्दियों से मनुष्य मात्र के जीवन में सुख एवं सुविधा की एकांत इच्छा से अख्यात, अज्ञात रूप से अपने को खपाती रही है।

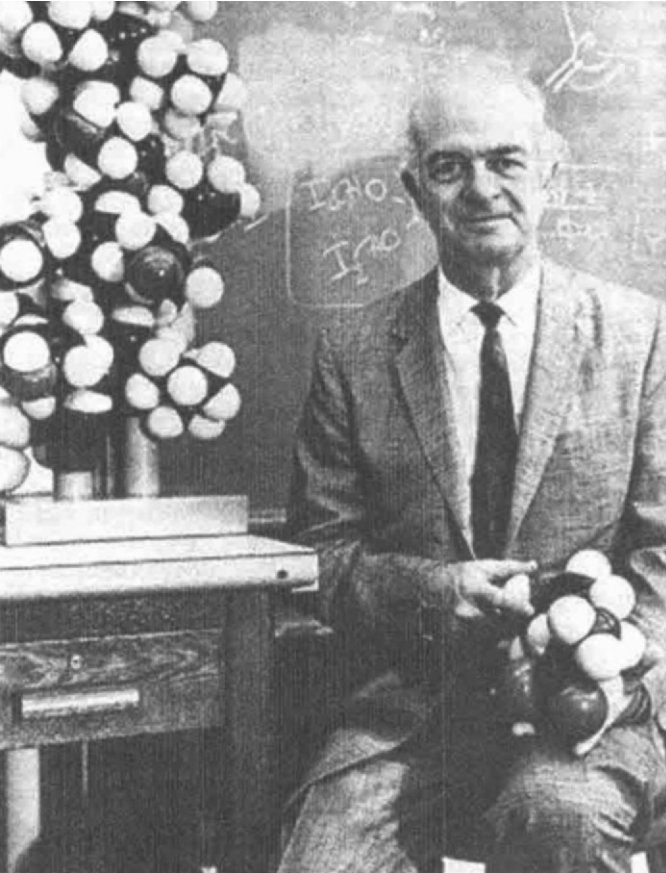
सी.एन.आर. राव नेशनल रिसर्च प्रोफेसर हैं। जवाहरलाल नेहरू सेन्टर फॉर एडवान्स साइंटिफिक रिसर्च में लीनस पाउलिंग



फ्रांस की सरकार ने भी उन्हें प्रदान किया है। भारत सरकार उन्हें पहले ही पद्मश्री (1974) तथा पद्म विभूषण (1985) पुरस्कार प्रदान कर चुकी है। वे भारत के प्रधानमंत्री मनमोहन सिंह के साइंटिफिक एडवायजरी काउंसिल के अध्यक्ष भी रहे हैं।

सी.एन.आर. राव का जन्म 30 जून, 1934 में बंगलोर के वसावनगुडी में हुआ।

कॉलेज विद्यार्थी श्री राव वसावनगुडी के नागरिक तत्कालीन बंगलोर के सांस्कृतिक संरक्षक माने जाते थे। शिक्षा में गहन रुचि और परंपरागत भारतीय सांस्कृतिक मूल्यों के चरम पोषक। प्रसिद्ध कन्नड़ साहित्यकार डी.वी. गुन्डप्पा, न्यायविद निततूर श्री निवास राव, आर. एल. नरसिम्हैया, सोमशेखर राव उस दशक के बंगलोर के प्रसिद्ध नागरिक थे जिनकी प्रतिभा का लाभ तत्कालीन बंगलोर के समाज को मिला और जिन्होंने किसी न किसी रूप में बालक सी.एन. आर. राव के अवचेतन को भी प्रभावित किया। राव के मातृ पक्ष और पितृ पक्ष दोनों के पूर्वज गहन आध्यात्मिक और साहित्यिक बोध के धारक थे। सरल जीवन, अकृत्रिम व्यवहार, अनुशासित आचार, ईश्वर प्रेम, शास्त्र प्रेम, रामायण और महाभारत के प्रति अनुराग, सामाजिक कार्यों के प्रति



डॉ० लीनस पाउलिंग

प्रतिबद्धता, सन्त महापुरुषों के वचनों के प्रति श्रद्धा इनके व्यक्तित्व के विभिन्न पहलू थे। राव की माता नागम्मा एक गहरी सात्विक महिला थीं। ईश्वर प्रेम ही उनका एकमात्र ऐश्वर्य था। वे अपना अधिकांश समय ध्यान और प्रार्थना में बिताया करती थीं। सात वर्ष की उम्र तक उन्होंने राव को रामायण और महाभारत की सारी कथाओं और चरित्रों से भिन्न करा दिया था। गणित में अत्यन्त पटु थीं और बड़े-बड़े गुणा भाग जुबानी ही करती थीं। मां की इस प्राकृत क्षमता का लाभ बालक राव को भी मिला। पिता नागेश राव तत्कालीन मैसूर राज्य के शिक्षा विभाग में कार्यरत थे। उन्होंने



बी.एच.यू. कैम्पस में विद्यार्थी श्री राव

इतिहास, अर्थशास्त्र और राजनीति शास्त्र में एम.ए. किया था। अध्ययन में उनकी गहरी रुचि थी। वे अत्यन्त मितव्ययी थे लेकिन विनोबा के भूदान यज्ञ में अपने पैतृक भूखण्ड को गरीबों में दान कर दिया था। राव के मातृ पक्ष और पितृ पक्ष दोनों माधवाचार्य के द्वैताद्वैत दर्शन के पक्षधर थे। इसके अनुसार ईश्वर और संसार दोनों सत्य हैं और दोनों के बीच संतुलन आवश्यक है।

राव की प्रारंभिक शिक्षा माता के अधीन घर पर ही हुई। छः वर्ष की उम्र में वे विद्यालय जाने लगे। 1944 में लोवर सेकेन्ड्री (7वीं कक्षा) प्रथम श्रेणी में उत्तीर्ण की। पुरस्कार स्वरूप पिता ने चार आना आइसक्रीम खाने को दिए तथा दादी ने एक रुपये। हाई स्कूल में पिता की इच्छा के अनुरूप उन्होंने कन्नड़ भाषा को अपनी शिक्षा का माध्यम चुना। लेकिन पिता के साथ घर पर संवाद अंग्रेजी में ही करते थे। सरकारी सेवा में रहने के कारण पिता का स्थानांतरण अनेक स्थानों पर हुआ जिसके परिणाम स्वरूप राव को नये-नये स्थान घूमने समझने को मिले। सुरम्य वन्य प्रांतर, नीरव प्राकृतिक स्थल, विविध वन्य जीव तो मैसूर राज्य की विशेषता ही थे। प्राकृतिक मनोहरता के उपासक राव को इस घुमक्कड़ी में बड़ा मजा आया। उनका ज्ञान भी समृद्ध हुआ। उनके विद्यालय जीवन के विज्ञान के शिक्षक अत्यन्त मेधावी थे और इसका लाभ राव की वैज्ञानिक दृष्टि के विकास में भी खूब रहा। स्कूली जीवन में ही एक बार प्रसिद्ध वैज्ञानिक सर सी.वी. रमन उनकी पाठशाला में गए और एक सुन्दर भाषण दिया तथा मैडम क्यूरी के एक चित्र का अनावरण भी किया। इसी समय राव में एक भावी वैज्ञानिक ने जन्म लिया। 1947 में राव ने सेकेन्ड्री स्कूल की परीक्षा प्रथम श्रेणी में पास की। शिमोगा से इन्टरमीडियट करने के उपरान्त राव ने सेन्ट्रल कॉलेज बंगलोर में दाखिला लिया। भारत की स्वतंत्रता, मैसूर राज्य के

भारत में विलय से पूर्व की उथल पुथल, महात्मा गाँधी की हत्या (1948) इत्यादि घटनाओं से गहरे प्रभावित होते हुए भी युवा राव ने अपनी शैक्षणिक निष्ठा में कमी नहीं आने दी। कॉलेज के दिनों में वाद-विवाद प्रतियोगिता में भाग लेते रहे। 1951 में उन्होंने बी.एस.सी. की परीक्षा मैसूर यूनिवर्सिटी से प्रथम श्रेणी में पास की।

स्नातक की परीक्षा उत्तीर्ण करने के पश्चात् राव के अन्तर्मन में शोध वैज्ञानिक बनने की आकांक्षा सुगबुगाने लगी। उचित मंत्रणा पाकर वे बी.एच.यू. की ओर मास्टर डिग्री के लिए उन्मुख हुए। बी.एच.यू. में मास्टर डिग्री कोर्स में रिसर्च आवश्यक था। अतः यह प्रवास उनके लिए उत्साहवर्धक और दिशा निर्देशक दोनों बना।

जून 1951 में किशोर राव ने बनारस के लिए बंगलोर छोड़ा। तीसरे दर्जे की रेलयात्रा की। बी.एच.यू. तब भी सेंट्रल यूनिवर्सिटी थी। भारत के विभिन्न भागों से ज्ञानपिपासु विद्यार्थी वहाँ पहुँचते थे। राव के भी सहपाठियों में तमिलनाडु, केरल, कर्नाटक, बंगाल,

प्रथम तीन श्रेष्ठ विद्यार्थियों में परिगणित होने लगे। एम.एस.सी. फाइनल परीक्षा 1953 मई में हुई और होनहार राव ने फर्स्ट क्लास सेकेन्ड रैंक प्राप्त किया।

बनारस ने राव को न केवल बौद्धिक विकास की दिशा में आगे बढ़ाया अपितु उनके आध्यात्मिक संस्कारों को भी सुगठित किया।



वर्कले में राव

परवर्ती काल में भी बनारस सदा उनके दिल के करीब रहा। बी.एच.यू. कैम्पस में प्रसिद्ध संगीतकार पंडित ओंकारनाथ ठाकुर ने उनकी संगीत में अभिरूचि पैदा की। वे एक महान संगीतकार थे तथा वहाँ संगीत महाविद्यालय के प्रधान आचार्य भी थे। महान संगीतकार पंडित विष्णु दिगम्बर पुलस्कर तथा महान शहनाई वादक बिस्मिल्लाह खाँ की प्रस्तुतियाँ वहाँ होती ही रहती थीं।

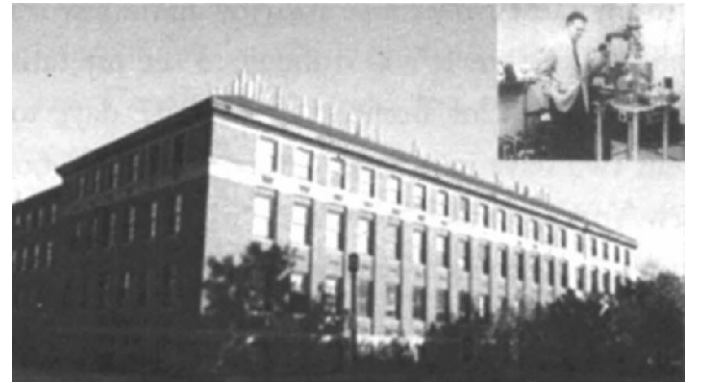
बनारस में ही पहली बार विश्व के महान रसायनशास्त्री लीनस पाउलिंग की प्रसिद्ध पुस्तक 'द नेचर ऑफ दी केमिकल बॉन्ड' पढ़ी और इस पुस्तक ने भविष्य की उनकी शोध सम्बन्धी महत्वाकांक्षाओं को सुस्थिर दिशा दी। यहाँ यह कहना युक्ति संगत होगा कि इस गुरु शिष्य की जोड़ी भविष्य में कभी मिली और इसी पुस्तक के तृतीय संस्करण में स्वयं लीनस पाउलिंग ने राव के कुछ शोध निबंधों को प्रकाशित कराया। यहीं राव को ज्ञात हुआ कि कैसे रसायन शास्त्र का अध्ययन मानवता के लिए महान उपयोगी सिद्ध हो सकता है।



जी.एन. लेविस, वर्कले, यू.एस.ए.

आसाम सभी राज्यों के विद्यार्थी थे। तब बी.एच.यू. के रसायन शास्त्र विभाग के विभागाध्यक्ष प्रो. एस. एस. जोशी थे। युवा राव ने फिजिकल केमेस्ट्री को अपने शोध का विषय चुना। विभाग में दाखिले के एक सप्ताह बाद ही डा० जोशी ने राव को, परम्परा को तोड़ते हुए, अपने अधीन शोधकार्य करने का आदेश दिया। सामान्यतः यह विद्यार्थी के एक वर्ष पर्यन्त अध्ययन के बाद ही मिलता था। उनका शोध विषय था — गैसों में इलेक्ट्रिकल डिसचार्ज का अध्ययन करना। राव को यह सारा कार्य रात्रि में ही करना पड़ता था। वे देर रात अपने कमरे में विश्राम के लिए पहुँच पाते थे।

उन दिनों के अपने अनुभव के सम्बन्ध में राव ने लिखा है कि बी.एच.यू. में दिन रात शोध अध्ययन हुआ करते थे। वातावरण अत्यन्त शोध प्रवण था। नित नूतन विचार वैज्ञानिक गोष्ठियों में उठा करते थे और युवा वैज्ञानिकों को प्रोत्साहित करते थे। कैम्ब्रिज के लार्ड रोड जो केमेस्ट्री के नोवल लॉरिडिट थे अकसर उन शोध विचार गोष्ठियों में भाग लिया करते थे। राव ने कॉस्मिक किरणों और एटामिक हाइड्रोजन पर भी अपने विचार उन गोष्ठियों में रखे थे। युवा राव ने इस वातावरण में पूर्णतः मनोयोग पूर्वक अपना अध्ययन जारी रखा। परिणामस्वरूप एक वर्ष के अन्तराल में वे



परडू विश्वविद्यालय, इंडाना, यू.एस.ए.

एम.एस.सी. में सफलता के बाद युवा शोध वैज्ञानिक राव का अगला कर्मक्षेत्र आई.आई.टी. खड़गपुर रहा। खड़गपुर में राव का मन नहीं लगा। उन्हें शीघ्र ही यह बात समझ में आ गई कि खड़गपुर में उनके शोध सम्बन्धी विकास की संभावनायें नगण्य हैं। अतः 1954 में श्री राव ने यू.एस. अमेरिका की ओर रूख किया। अविलम्ब उन्हें कोलम्बिया और परडू विश्व विद्यालय से आमंत्रण

मिला। उन्होंने परडू (इन्डियाना) में नामांकन लेना उचित समझा क्योंकि तब उस विश्वविद्यालय में राबर्ट लिविंग स्टोन कार्यरत थे। वे इलेक्ट्रान डिफ्रैक्शन विधि से मोलेक्युलर स्ट्रक्चर सम्बन्धी विषय के विशेषज्ञ थे और यह विषय युवा राव के दिल के करीब था। राव के यू.एस. के प्रति अभिरूख सम्बन्धी निर्णय से राव के माता पिता हर्षित हुए और उन्हें सार्शीवाद विदा किया। इस मौके पर धर्मसम्पन्न उनकी माता ने भगवान विष्णु की एक तस्वीर उन्हें भेंट की और प्रार्थना की कि भगवान विष्णु उनकी रक्षा और मार्गदर्शन करें। परडू में नामांकन सम्बन्धी परिक्षाओं को उन्होंने सरलता से पास की और उसके नवीन शोधार्थी बने। परडू विश्वविद्यालय में राव ने 4 वर्ष बिताये और ये वर्ष उन्हें रसायन शास्त्र सम्बन्धी ज्ञान में इतना कुछ दे गये कि उनका जीवन धन्य हो गया।

परडू विश्वविद्यालय में उन्होंने प्रोफेसर यूजेन लीबर के अधीन रिसर्च असिस्टेंट के रूप में अपना कार्य शुरू किया। प्रोफेसर लीबर ने उन्हें कतिपय हेट्रोसाइक्लीक कम्पाउंड्स के भौतिक और स्पेक्ट्रोस्कोपिक गुणों के अध्ययन के प्रति प्रोत्साहित किया। इस प्रेरणा के प्रभाव से राव ने स्पेक्ट्रोस्कोपी का अच्छा अध्ययन किया और कालान्तर में इस विषय के विशेषज्ञ बने। प्रो लीबर एक नेक और दयालु इंसान थे और राव को पुत्रवत मानते थे। राव ने उनसे



आई.आई.एस. बंगलोर में डॉ० सतीश धवन के साथ श्री राव

बहुत कुछ सीखा और दोनों के बीच यह मधुर सम्बन्ध बाद में भी बना रहा। प्रो. एच. सी. ब्राउन जो स्वयं लोबल प्रतिष्ठा प्राप्त वैज्ञानिक थे, ने भी राव को अपने ढंग से गढ़ा। उन्होंने राव को नये-नये विचारों के सृजन एवं उनको प्रकाशित करने की प्रेरणा दी। श्री राव कृतज्ञतापूर्वक उनकी मंत्रणाओं को याद करते हैं। राव ने वहाँ अणुओं की संरचना सम्बन्धी विषय पर बहुत काम किए। राव ने अपना पी.एच.डी. कार्य प्रो० राबर्ट लिविंग स्टोन के अधीन किया। प्रो० लिविंगस्टोन महान रसायन शास्त्री लीनस पाउलिंग के स्कूल से थे और परडू विश्वविद्यालय में ही राव की भेंट अपने सपनों के सम्राट लीनस पाउलिंग से हुई और गुरु शिष्य दोनों एक दूसरे से प्रभावित हुए। यहीं राव को रिसर्च फिलोशिप का एक महान सम्मान मिला। यह सम्मान अत्यंत प्रतिभाशाली विद्यार्थियों को ही मिलता था। तब परडू विश्वविद्यालय में 350 विद्यार्थी पी.एच.डी. कर रहे थे लेकिन यह विशिष्ट सम्मान केवल राव को ही मिला। 1958 की जनवरी में राव को पी.एच.डी. डिग्री भी मिल गयी। वहीं परडू में ही



पत्नी इंदू के साथ श्री राव

राव को अच्छी नौकरी भी मिल गयी। उन्हें केमेस्ट्री विभाग में इन्स्ट्रक्टर का कार्यभार मिला। सैलरी भी अच्छी थी। वे ग्रेजुएट कोर्स में फिजिकल केमेस्ट्री और इन्फ्रारेड स्पेक्ट्रोस्कोपी पढ़ाते थे। लेकिन राव कहीं रुकने वाले थे। जल्द ही उन्हें यूनिवर्सिटी ऑफ कैलिफोर्निया, वर्कले में रिसर्च असिस्टेंट प्रोफेसर का आकर्षक प्रस्ताव मिला जिसे राव ने सहर्ष स्वीकार कर लिया। कैलिफोर्निया विश्वविद्यालय का केमेस्ट्री डिपार्टमेंट विश्व में सर्वोत्तम शोध सम्बन्धी विषयों के लिए विख्यात था और राव को वहाँ जाकर बड़ी



आई.आई.टी. कानपुर में कार्यरत श्री राव

खुशी मिली। इस विश्वविद्यालय की स्थापना माडर्न केमेस्ट्री के पिता कहे जाने वाले महान रसायनशास्त्री जी.एन. लेविस ने की थी। उन्होंने अनेक शोधार्थियों को मार्गदर्शन किया था जिसमें अनेकों ने नोबल पुरस्कार प्राप्त किए। ग्लेन सी बॉर्ग, मेलविन

कैलविन, हैरोल्ड यूरी जैसे कुछ प्रमुख नाम हैं। इन्हीं महान जे.एन. लेविस के महान शिष्य थे केनेथ पिजर जो बर्कले में राव के गुरु थे। बर्कले में राव का अध्ययन अध्यापन काल अत्यंत सुखद रहा। उन्हें प्रति माह 625 डालर वृत्तिका (Stipend) मिलती थी जो राव के लिए पर्याप्त थी। यहाँ उन्होंने एन.एम. आर. स्पेक्ट्रोस्कोपी तथा हीट कैपेसिटी ऑफ सालिड्स पर महत्वपूर्ण कार्य किये और प्रोफेसर पिजर के साथ अनेक शोध पत्र प्रकाशित किए। सन फ्रांसिस्को का सुन्दर मनोहर समुद्र तट राव के लिए बड़ा विश्राम स्थल था। प्रयोगशाला के व्यस्त घंटों के बाद वे यहाँ शारीरिक एवं मानसिक विश्राम पाते थे। उन्हीं दिनों एक बार मैसूर के महाराजा जया चामराज वोडयार बर्कले गये और राव ने उन्हें बर्कले की प्रयोगशालाओं को दिखाया जिससे महाराज बहुत प्रभावित हुए। राव को भी बड़ी आनन्द आया। बहुत दिनों के बाद कन्नड़ में बात करनेवाला कोई स्वदेशी मिला था।

1958 के प्रारंभ में राव को अमेरिका में अपने पिता का एक पत्र मिला। उन्होंने पुत्र से भारत लौटने का आग्रह किया था। विशेषकर मां पुत्र से मिलने के लिए लालायित थीं। ज्ञान की पिपासा और मातृभक्ति के मध्य एक शीतयुद्ध प्रारंभ हो चुका था। राव के लिए ये दिन तनाव भरे थे। अंततः मातृभक्ति की विजय हुई और राव भारत लौटे।

भारत लौटने पर राव ने इंडियन इंस्टीट्यूट ऑफ साइंस में अपना योगदान दिया। आइ.आइ.एस. का काल राव के लिए अनेक संघर्षों से भरा था। सबकुछ भूमितल से प्रारंभ करना था। आवश्यक शोध उपकरणों एवं वस्तुओं की नितांत अभाव से उन्हें जूझना पड़ा। अन्य सुविधाएं भी नगण्य ही थीं। किन्तु युवा राव ने हार नहीं मानी। आवश्यक उपकरणों को स्वयं बनाने की ठानी। राव के प्रारंभिक विद्यार्थी यहाँ मात्र छः ही थे और इन्हें वे सालिड स्टेट केमेस्ट्री



इंडियन इंस्टीट्यूट ऑफ साइंस, बंगलोर

पढ़ाते थे। अपने कार्यों को आगे बढ़ाने के लिए राव अक्सर पूना के नेशनल केमिकल लेबोरेटरी जाते थे और उन्हें इस संस्थान से सहायता भी मिलती रहती थी। यहीं पर राव ने अणुओं के दृश्य (visible) और अल्ट्रावायलेट स्पेक्ट्रोस्कोपी पर एक पुस्तक लिखने का संकल्प लिया। इस विषय पर अब तक कोई पुस्तक नहीं छपी

थी। इस संदर्भ में राव नोबल विजेता श्री वेंकटरमन से मिले और रमन ने उनको आवश्यक सहयोग प्रदान किया। 1860 में यह पुस्तक प्रकाशित हुई लेकिन दुर्भाग्य ही कहा जाएगा कि पुस्तक की एक प्रति को लंदन में भेजने के लिए आवश्यक डाक खर्च भी आई.आई.एस. उनको न दे सका।



राजीव गांधी से जी.एम. मोदी पुरस्कार ग्रहण करते हुए

श्री राव का विवाह 15 मई 1960 ई० में बंगलोर में ही हुआ। उनकी पत्नी इंदुमति बंगलोर के जाने माने एक अति प्रतिष्ठित, संस्कारवान एवं सम्पन्न परिवार की कन्या थी। प्रतिभासम्पन्न, प्रखर, सुशील एवं सुन्दर। उन्होंने अंग्रेजी साहित्य में बी.ए. किया था। विवाह के उपरान्त राव दम्पति बंगलोर में मालेश्वरम् में रहने लगे। शीघ्र ही उनकी पुस्तक 'अल्ट्रावायलेट एण्ड विजिबल स्पेक्ट्रोस्कोपी' प्रकाशित हुई। इस पुस्तक का अनेक भाषाओं में तत्काल अनुवाद हुआ।

श्री राव की प्रथम पुत्री सुचित्रा का जन्म मार्च 30, 1961 में बंगलोर में हुआ। राव दम्पति के लिए यह प्रसन्नता का अवसर था। 1961 में ही राव को डाक्टर ऑफ साइंस की उपाधि मिली। 1961 में ही इंडियन साइंस कांग्रेस में डा० विक्रम साराभाई ने राव को केमिस्ट्री में स्पेक्ट्रोस्कोपी की उपयोगिता पर अपने शोध सम्बन्धी ज्ञान को प्रकट करने के लिए आमंत्रित किया था। पंडित नेहरू ने इस विज्ञान सम्मेलन का उद्घाटन किया था। महान एस.एन. बोस जैसे वैज्ञानिक उसमें उपस्थित थे। उसी वर्ष डा० एम. विश्वेश्वरैया का शताब्दी समारोह बंगलोर में मनाया गया। 1961 में अमेरिका के एक अन्तरराष्ट्रीय विज्ञान सम्मेलन में भाग लेने के लिए श्री राव को अमेरिका जाना पड़ा। वहाँ वे दुबारा छः महीने रहे और अपने शोध से सम्बन्धित कुछ रसायनों को वहाँ से ले आये। लेकिन आई.आई.एस. बंगलोर में कतिपय कारणों से राव का मन उदास रहने लगा। विकास की संभावनाएँ उपकरणों के अभाव और उचित उर्ध्वधर तालमेल के अभाव में क्षीण दिखीं। अतः अगली बार राव ने आई.आई.टी. कानपुर ज्वाइन किया। यह नया संस्थान नई आशाओं को उद्दान देने के लिए यू.एस. की कई यूनिवर्सिटी के सहयोग एवं आश्वासन से खोला गया था।

आई.आई.टी. कानपुर में भी सब कुछ भूतल से ही प्रारंभ करना था। यद्यपि वहाँ, जैसी की उम्मीद थी, प्रारंभिक सुविधाओं का नितांत अभाव था। लेकिन भविष्य आशाओं और आदर्शों से

अनुप्राणित था। आई.आई.टी. कानपुर के रसायन विभाग को अपने आदर्शों के अनुरूप खड़ा करने में राव ने कड़ी मशक्कत की। और इसे एक प्रीमियर विभाग के रूप में खड़ा भी कर दिया। सब कुछ अन्तरराष्ट्रीय मानकों के अनुरूप ढला। इस काम में आई.आई.टी. कानपुर के तत्कालीन डा० पी० के० केलकर तथा डियुटी डायरेक्टर डॉ० एम. एस. मुथाना का भरपूर सहयोग मिला। सभी सशक्त भारत के निर्माण के उद्देश्य से अनुप्राणित थे। इस संस्थान के निर्माण में अमेरिका के अनेक विश्वविद्यालयों का एक सहयोग संघ (Coonsortium) बना था जो हर प्रकार से सहयोग करने के लिए तत्पर थे। इस सहयोग संघ में एम.आई.टी. बोस्टन, काल्टेक, बर्कले, प्रिंसटन, परडू तथा ओहियो जैसे नामी गिरामी अमेरिकी विश्वविद्यालय थे। इन विश्वविद्यालयों से न केवल विश्वप्रसिद्ध विद्वान बल्कि हर प्रकार के वैज्ञानिक उपकरणों को उपलब्ध कराने के संकल्पबद्ध प्रयास किये गए। तत्कालीन आई.आई.टी. कानपुर के डायरेक्टर डॉ० केलकर एक आध्यात्मिक प्रवृत्ति वाले चिन्तक एवं प्रबुद्ध इंसान थे। इनके नेतृत्व में इस संस्थान ने न केवल अपनी मजबूत आधारशिला रखी वरन् उचित शैक्षणिक एवं शोध वातावरण भी पैदा किया। डॉ० केलकर नये विचारों एवं प्रयासों को अग्रगति देने के लिए युवा वैज्ञानिकों को न केवल प्रोत्साहित करते थे वरन् उन्हें आवश्यक सुविधायें भी प्रदान करते थे। यही प्रवृत्ति महान वैज्ञानिक डॉ० होमी भाभा एवं डा० विक्रम साराभाई में भी थी। अतः



जवाहर लाल नेहरू सेन्टर फॉर एडवांस साइंटिफिक रिसर्च के उद्घाटन समारोह के अवसर पर राष्ट्रपति के.आर. नारायणन के साथ श्री राव

उनके काल में आई.आई.टी. कानपुर दिन दूना रात चौगुना बढ़ता गया। डॉ० राव ने वहाँ एसोसिएट प्रोफेसर के रूप में ज्वाइन किया और वे फिजिकल केमेस्ट्री पढ़ाते थे। उन्होंने विद्यार्थियों में शोध प्रवृत्ति के प्रति उमंग एवं उत्साह (Passion) पैदा किया। डॉ० राव ने 1963 में इस संस्थान को ज्वाइन किया और 1965 तक उन्हें स्पेक्ट्रोस्कोपी, आणविक संरचना (Molecular Structure) तथा सालिड स्टेट केमेस्ट्री में श्रेष्ठ वैज्ञानिकों को लगाया। जुलाई 1964 में श्री राव ने इन्फ्रारेड स्पेक्ट्रोस्कोपी पर एक श्रेष्ठ पुस्तक की रचना की जिसका अभिनन्दन प्रख्यात डॉ० सी.वी. रमन ने भी किया। डॉ० रमन की इच्छा थी कि राव इंडियन अकादमी आफ साइंसेज के फेलो पद स्वीकार करें। उस समय राव केवल 30 वर्ष के थे। 1963-67 तक का सम्पूर्ण कार्यकाल श्री राव ने शोध और शोध पत्रों को प्रकाशित करने में एकान्त भाव से लगाया। उन दिनों राव ने 'Wide range of properties and phenomenon exhibited by transition metal oxides' पर विश्वस्तरीय शोध पत्र प्रकाशित कराये। वे अपने इस कार्य से विश्व के महानतम वैज्ञानिक हेगेनमूलर (फ्रांस) तथा गुडेनआउ (MIT, US) के समकक्ष स्थापित हो गए। 1967 में ही उन्हें फ़ैराडे सोसायटी, लंदन से मारलो मेडल, सोलीड स्टेट केमेस्ट्री और स्पेक्ट्रोस्कोपी के क्षेत्र में कार्य के लिए मिला।

अब तक के विश्वव्यापी अनुभव एवं आत्म गवेषणा से राव को यह बात अनुभव में आ गयी थी कि सालिड स्टेट केमेस्ट्री का क्षेत्र उनका अपना क्षेत्र है और विश्व में एक नयी दिशा का अन्वेषण प्रयास भी। अतः उन्होंने अपने को इस कार्य को गति देने के लिए कृतसंकल्प किया। 1969 से 1971 के बीच आई.आई.टी. कानपुर कैम्पस में विन्टर सेशन में सालिड स्टेट केमेस्ट्री पर उच्चस्तरीय कक्षाएँ चलायी गयी। इस कक्षा में विश्वस्तरीय वैज्ञानिक अध्यापक बने। उदाहरण के लिए जे.एस. एण्डरसन (आक्सफोर्ड), जी.डी. गुडेनबाऊ (एम.आई.टी. बोस्टन), लिरोय आइरिंग (एरिजोना, यू.एस.), जे. एम. होनिग (परडू, यू.एस.) इत्यादि। इस सेशन की व्याख्यान माला को एक पुस्तक के रूप में प्रकाशित किया गया, न्यूयार्क से 1974 में। नाम रखा गया — 'मार्डन आस्पेक्ट ऑफ सालिड स्टेट केमेस्ट्री' इस विषय पर यह संभवतः विश्व की प्रथम प्रामाणिक पुस्तक थी। इस समय (1974) तक आई.आई.टी. कानपुर



माता पिता के साथ युवा श्री राव



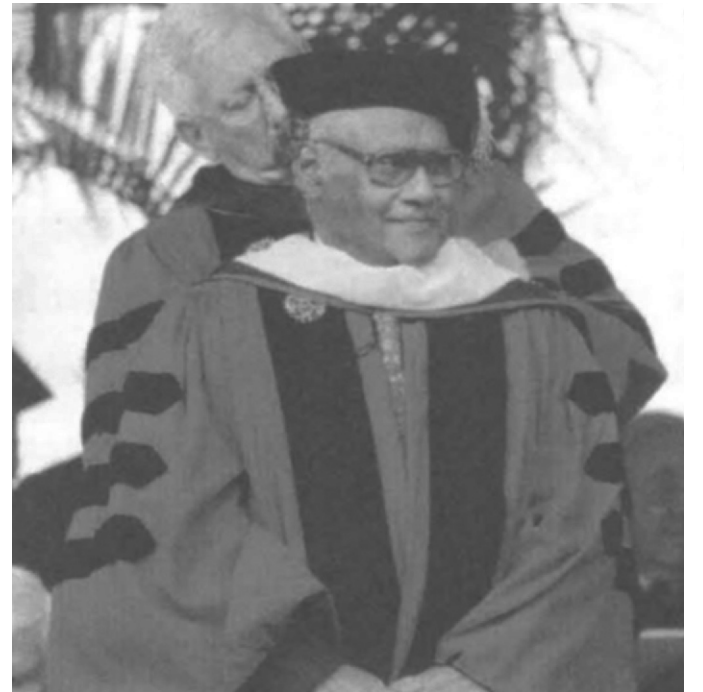
ऑक्सफोर्ड, यू.के. में डॉ० राव

का केमेस्ट्री डिपार्टमेंट भारत का सर्वश्रेष्ठ केमेस्ट्री डिपार्टमेंट बन चुका था। श्री राव के लिए यह जीवन का एक श्रेष्ठ काल था। वे सपरिवार आई.आई.टी. कैम्पस में रहते थे जहाँ का वातावरण अत्यन्त प्रेम और सौहार्द से भरा था। गुरुओं और शिष्यों के बीच अतुलनीय प्रेम तथा संवाद प्रक्रिया बनी हुई थी। श्री राव प्रति वर्ष सपरिवार हिमालय भ्रमण की यात्रा पर निकलते थे। हिमालय उनके लिए बहुत बड़ा आकर्षण था। कानपुर में ही श्री राव की भेंट डॉ० होमी भाभा तथा बाद में डॉ० विक्रम साराभाई से हुई थी। दोनों ने इनकी मौलिक प्रतिभा को पहचाना था और राव को लेकर इनके मन में कोई योजना थी जो इन दोनों महान वैज्ञानिकों के अकाल देहावसान के बाद धरी की धरी रह गई। डॉ० भाभा की मृत्यु 1966 तथा डॉ० विक्रम साराभाई का देहावसान 1971 में भारत के लिए एक अपार क्षति थी। राव जब 37 वर्ष के थे तभी केन्द्रीय शिक्षा मंत्री ने श्री राव से आई.आई.टी. कानपुर का डायरेक्टर पद ग्रहण करने का प्रस्ताव रखा जिसे राव ने अस्वीकार कर दिया। उनका मन शोध कार्य में पूर्णतः रमा हुआ था।

अक्टूबर 1974 में श्री राव एक वर्ष के लिए ऑक्सफोर्ड गये, सपरिवार। पत्नी इन्दु भी साथ थीं। ऑक्सफोर्ड एक ऐतिहासिक शिक्षण नगरी थी। भव्य भवन एवं गरिमामय प्राचार्य एवं विद्वतगण। ऑक्सफोर्ड दोनों को खूब भाया। ऑक्सफोर्ड में श्री राव ने विश्व विख्यात सॉलिड स्टेट केमिस्ट, (F.R.S.) प्रोफेसर एंडरसन के साथ मिलकर इस विषय पर कार्य किया। प्रोफेसर एंडरसन इनके

पारिवारिक मित्र भी बन गये। वे इन्दु के हाथ का बादाम का हलवा बहुत पसंद करते थे। इन्दु ने भी ऑक्सफोर्ड से 'सर्टिफिकेट ऑफ एजुकेशन' प्राप्त किया। ऑक्सफोर्ड में श्री राव ने प्रो० एंडरसन के साथ 17 शोध पत्र प्रकाशित किए। 1975 अक्टूबर में भी राव भारत लौट आये। कानपुर में नये डायरेक्टर के अधीन कैम्पस का वातावरण बोझिल हो चुका था। अतः उन्होंने कानपुर छोड़ने का मन बना लिया। ऑक्सफोर्ड में श्री राव नोबल लॉरिडिट विश्रुत प्रो० नील मौर के साथ भी अनेक शोध पत्र प्रकाशित कराये।

इंडियन इंस्टिट्यूट ऑफ साइंस बंगलोर में डॉ० सतीश धवन उनका लम्बे समय से इंतजार कर रहे थे। 1976 मई में एक बार पुनः श्री राव ने आई.आई.एस. बंगलोर की तरफ रूख किया। डॉ० राव के अनुसार सतीश धवन एक उच्च कोटि के इंसान थे और किसी भी वैज्ञानिक संस्थान के निर्माण एवं सशक्तिकरण में उनके मानवीय गुणों की मिसाल गर्व के साथ दी जा सकती है। उन्होंने डॉ० राव को सालिड स्टेट और स्ट्रक्चरल केमेस्ट्री के विकास की पूरी स्वतंत्रता दे रखी थी। प्रारंभिक कठिनाईयों के बाद डॉ० राव को अपने लक्ष्य के प्रति समर्पण रंग लाने लगा। भारत सरकार के 'डिपार्टमेंट ऑफ साइंस एण्ड टेक्नोलोजी' ने भी आवश्यक आर्थिक सहायता की। नये भवन बनाये गए एवं आवश्यक उपकरण मंगाये जाने लगे। श्री धवन की प्रेरणा से वहाँ एक मेटिरियल रिसर्च सेंटर की भी स्थापना हुई। यूनिवर्सिटी ग्रांट कमिशन भी आर्थिक सहायता के लिए आगे आया। विद्वान फेकल्टी मेम्बर आने लगे। वहाँ डॉ० राव के एक प्रमुख साथी वैज्ञानिक रहे जी.एन. रामचंद्रन। वे रायल सोसायटी ऑफ लंदन के फेलो थे। मई 1982 में डॉ० राव को भी फेलो ऑफ रायल सोसायटी (FRS) चुना गया। 1979-1983 का काल डॉ० राव के लिए गहन शोध का रहा। 1983 में रसायन विज्ञान में उनके महान योगदान के लिए कैम्ब्रिज यूनिवर्सिटी ने उन्हें प्रथम नेहरू प्रोफेसर के लिए चुना। श्रीमती



नॉर्थ वेस्टर्न यूनिवर्सिटी, यू.एस.ए. में सम्मान पाते हुए

इंदिरा गाँधी ने उन्हें उपयुक्त अवसर पर अपनी शुभकामनायें प्रेषित की। उन्हें किंग्स कॉलेज का प्रोफेसर भी निर्वाचित किया गया। कैम्ब्रिज में उन्होंने इलेक्ट्रान माइक्रोस्कोपी तथा इनऑरगेनिक मेटेरियल केमेस्ट्री पर अन्य वैज्ञानिकों के साथ शोध किए। वे वहाँ प्रोफेसर नोबेल प्राप्त नेविल मोर्ट से भी मिले और काफी समय उनकी संगति में बिताया। किंग्स कॉलेज की सदस्यता मिलने के कारण उन्हें वहाँ नोबेल प्राप्त जिन मैरीलेन, मार्टिन रीज (रायल सोसायटी के अध्यक्ष), फ्रेड सेंगर, सिडनी ब्रेनर, स्टीफन इलियट, बिल जोन्स जैसे महान वैज्ञानिकों की संगति का लाभ उठाया। कैम्ब्रिज के निवास काल में ही उनकी पुस्तक 'न्यू डायरेक्शन्स इन सालिड स्टेट केमेस्ट्री' प्रकाशित हुई। कैम्ब्रिज यूनिवर्सिटी प्रेस से प्रकाशित इस पुस्तक का चीनी और रूसी भाषाओं में तत्काल अनुवाद हुआ। 1984 के अन्त में डॉ० राव पुनः भारत लौट आये। 1984 में डॉ० राव इंडियन इंस्टीच्यूट ऑफ साइंस के डायरेक्टर बने और इस संस्थान की साख को बुलंदियों तक पहुँचाया। 1985 में उन्हें भारत के राष्ट्रपति से पद्म विभूषण पुरस्कार मिला। स्वयं श्रीमती इंदिरा गाँधी ने उनको इस पुरस्कार के लिए नामित किया



राष्ट्रपति ज्ञानी जैल सिंह से 1985 में पद्म विभूषण सम्मान पाते हुए

दिसम्बर 1986 में राव के शोध प्रयासों को एक अन्य नया आयाम मिला। इसी वर्ष एक उच्च तापीय सुपरकंडकटर का निर्माण हुआ। यानी उच्च तापक्रम पर भी सुपरकंडकटर अब बन सकते थे। श्री राव को पता चला कि जिस मेटेरिअल से वह बना था वह लेन्थनम कॉपर आक्साइड था जिस पर राव 1971 में काम कर चुके थे। अब तो राव की खुशी का ठिकाना नहीं रहा। अब उनका ध्यान सुपरकंडकटर मेटेरिअल के निर्माण की तरफ झुका। अनेक रातों के जागरण एवं मंथन के बाद राव ने प्रथम लिक्विड नाइट्रोजन सुपरकंडकटर बना ही डाला। इसके लिए उन्होंने एक नयी तकनीक का प्रयोग किया था। इसके पहले तक सुपरकंडकटर के निर्माण में लिक्विड हिलियम का प्रयोग होता था। नया कम्पाउंड था $YBa_2Cu_3O_7$ । इसका निर्माण बंगलोर की प्रयोगशाला में ही किया गया। इसके उपरान्त तो उच्च तापक्रम वाले सुपरकंडकटरों के निर्माण के लिए शोध प्रयत्नों की बाढ़ सी आ गयी। भारत का गौरव बढ़ा और रसायन विज्ञान की महत्ता भी।



पोप जॉन पाल-II से पांटिफिकल एकेडमी ऑफ साइंस फेलोशिप पाते हुए

था। 1985 में ही उन्हें 'इंटरनेशनल यूनियन ऑफ प्योर एंड एप्लायड केमेस्ट्री' का अध्यक्ष चुना गया। उसी वर्ष उन्हें इंडियन नेशनल साइंस अकादमी (INSA) का भी अध्यक्ष चुना गया। अतः ये वर्ष उनके व्यस्ततम वर्ष रहे। लगभग उसी काल में उन्हें भारत के प्रधानमंत्री की वैज्ञानिक सलाहकार परिषद का अध्यक्ष नामित किया गया। स्वयं प्रधानमंत्री राजीव गाँधी ने उनका चयन किया था। बाद में भी वे देवगोड़ा, चंद्रशेखर, आइ. के. गुजराल के काल में भी इस परिषद का नेतृत्व करते रहे। इस परिषद के अन्य सदस्य थे रोदम नरसिंहा, अशोक गांगुली, माधव गाडगिल, जयन्त नारलिकर, पी. एन. टंडन, सैम पित्रोदा, आर. ए. माशेलकर, शेखर राहा और पी. रामा राव। इस समिति ने भारत में विज्ञान के विकास के लिए महत्वपूर्ण सलाह दिए और उन्हें क्रियान्वित भी किया गया। भारत-सोवियत सहयोग के लिए 1985 जब राजीव गांधी गोर्बाचोव घोषणापत्र पर सहमति बनी तो राजीव गांधी ने उन्हें इस सहयोग संघ का अध्यक्ष चुना।



प्रधानमंत्री मनमोहन सिंह से इंडिया साइंस प्राइज (2004) पाते हुए

1989 में जवाहरलाल नेहरू शताब्दी समारोह मनाया जाना था। उस अवसर पर नेहरूजी की स्मृति में एक नये वैज्ञानिक शोध संस्थान की आधारशिला रखी गयी। नवीन संस्थान था – जवाहरलाल नेहरू सेंटर फॉर एडवान्स साइंटिफिक रिसर्च (JNCASR)। इसके निर्माण और इसकी कल्पना की जिम्मेदारी भी डा० राव को ही दी गयी। निर्माण स्थल पुनः बंगलोर ही बना। प्रख्यात अणु वैज्ञानिक डा० राजा रमन्ना, डा० राव के घनिष्ठ मित्र थे और उन्होंने इस कार्य में डा० राव का पूरा साथ दिया।

1989 वैज्ञानिक प्रयत्नों के लिए एक महान वर्ष था। उसी वर्ष भारत में 'मेटेरिअल्स रिसर्च सोसायटी ऑफ इंडिया' की स्थापना हुई और डा० राव को उसका भी संस्थापक अध्यक्ष चुना गया। 1990 में उन्हें यू.एस. नेशनल अकाडमी ऑफ साइन्सेज तथा पॉटिफिकल अकाडमी ऑफ साइन्सेज का सदस्य चुना गया। यू. एस. की नेशनल अकाडमी ऑफ साइन्सेज भी ब्रिटेन की रायल सोसायटी की तरह ही एक अति प्रतिष्ठित संस्था है। इसका सदस्य चुना जाना डा० राव के लिए महान प्रतिष्ठा का विषय था। डा० राव 'अकाडमी ऑफ साइन्सेज फॉर डेवेलपिंग वर्ल्ड' के संस्थापक सदस्य 1980 से ही रहे। बाद में वे इसके उपाध्यक्ष और अध्यक्ष भी बने। 2000 में रॉयल सोसायटी ऑफ लंदन ने उन्हें हयुजेज मेडल से सम्मानित किया। यह सम्मान वर्षों पूर्व डा० सी.वी. रमन को भी



फ्रांसीसी सरकार का उच्चतम वैज्ञानिक पुरस्कार ग्रहण करते हुए अवचेतन में आज भी एक निराशा का भाव बना रहता है कि लक्ष्य अभी बहुत दूर है और उस तक कभी भी पहुँचा नहीं जा सकता।''

एक दिन एक अन्तरराष्ट्रीय समारोह में भाग लेने के उपरान्त डा० राव एक यूरोपीय एअरपोर्ट पर खड़े थे। सामने से एक व्यक्ति उनसे बोला – हेलो ! मैंने आपका व्याख्यान सुना। मैंने 1960 में प्रकाशित आपके ही नाम के एक अन्य व्यक्ति का शोध प्रबंध इसी विषय पर पढ़ा है। वे अब तक अवश्य मर गये होंगे।' डा० राव ने कहा वह व्यक्ति अभी जीवित है और मैं ही वह व्यक्ति हूँ।

ईश्वर से प्रार्थना है कि डा० राव को वे एक लम्बी आयु और स्वस्थ जीवन दें।

श्रीराव अपनी बेबाक टिप्पणियों के लिए भी चर्चा में रहे हैं। पूर्व प्रधानमंत्री मनमोहन सिंह की वैज्ञानिक सलाहकार परिषद् के अध्यक्ष रहे राव ने कहा – जो विज्ञान हम स्कूलों-कॉलेजों में पढ़ा रहे हैं वह आज की आधुनिक प्रयोगशाला में प्रयोग ही नहीं किया जाता। हम बहुत ही उबाऊ चीज बच्चों को पढ़ा रहे हैं। जो विज्ञान पढ़ाया जा रहा है वह समय के साथ अपनी महत्ता खो चुका है। एसोचैम की ओर से आयोजित जे.आर.डी. टाटा मेमोरिअल लेक्चर में यह पूछे जाने पर कि क्या विशेषज्ञों की ओर से जो सुझाव सरकार को दिए गए, वह पूरी तरह लागू हो पाए तो राव ने कहा – अगर सभी सुझाव मान लिए गए होते तो भारत आज वहां नहीं होता, जहां आज है।

श्री राव का मानना है कि शिक्षा और विज्ञान को हमारे देश में जरूरी महत्त्व नहीं दिया जाता। उन्होंने कहा कि भारतीय विज्ञान के पेटेंट जहाँ 40,000 हैं वहीं चीन में यह संख्या लाखों में है। उन्होंने कहा कि शिक्षा के क्षेत्र में निवेश बढ़ाना बेहद जरूरी है। राव ने कहा – दक्षिण कोरिया जहाँ अपनी जी.डी.पी. का 3 फीसदी विज्ञान पर खर्च करता है वहीं चीन 1.7 फीसदी और भारत अपनी जी.डी.पी. का 0.97 प्रतिशत। उनके अनुसार विज्ञान और शिक्षा क्षेत्र पर जी.डी.पी. का कम से कम 6 प्रतिशत खर्च किया जाना चाहिए। •

– रामानुज सिंह



दी रॉयल सोसाइटी ऑफ लंदन का 'रॉयल मेडल' पाते हुए मिल चुका था। 2003 में कर्नाटक सरकार ने उन्हें 'कर्नाटक रत्न' से सम्मानित किया। 2014 में राव को भारत सरकार ने भारत का सर्वोच्च सम्मान 'भारत रत्न' से उन्हें सम्मानित किया।

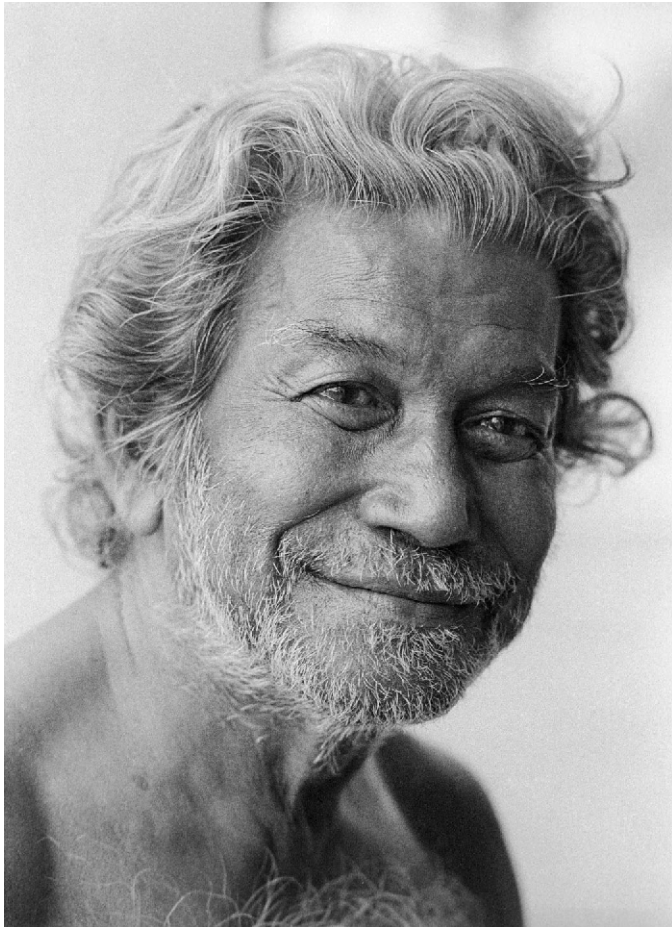
इतना सम्मान पाने के बाद डा० राव की अपने संबंध में निम्नलिखित मान्यता है – "1976 से 2009 तक का 33 वर्षों का मेरा विद्योचित एवं शैक्षणिक शोध अध्यवसाय बड़ा ही महत्वपूर्ण रहा। इस मध्य मैंने बहुत कुछ सीखा और अपनी रुचि के अनेक क्षेत्रों में पूर्ण मनोयोग से लगा रहा। 1960 के दशक में सालिड स्टेट और मेटेरिअल केमेस्ट्री के बीज बोये गए लेकिन ठोस कही जाने वाली उपलब्धियाँ 20वीं शताब्दी के अन्तिम वर्षों में दिखीं। 2000 के आसपास मुझे और मेरे विद्यार्थियों को यह बात का अनुभव में आने लगी कि हमलोगों ने वास्तव में कुछ सार्थक कार्य किया है। ...मेरे

ART

RAM KINKAR BAIJ

(1906 - 1980)

A Key Figure of Contextual Modernism



Ram Kinkar Bajj was born in an economically modest family in the Bankura district of West Bengal. He grew by the sheer dint of talent and determination into one of the most distinguished early modernists in Indian art. As a young boy he grew up watching local craftsmen and image makers at work; and making small clay figurines and paintings with whatever came his way. His talent, prodigious for his age attracted the attention of local people specially of the nationalists with whom he was associated.

His artistic skills and intellectual horizons acquired new depth and complexity at Visva Bharati University at Shantiniketan after he joined it as a student of fine arts. Soon after completing his studies at Kala Bhavan he became a member of its faculty and along with Nandalal Bose and Benode Behari Mukherjee.

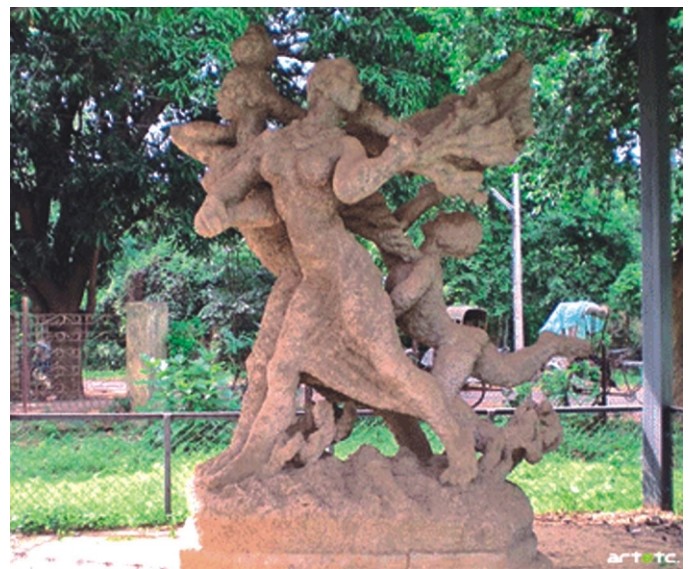
He made monumental public sculpture undertaken entirely at his own initiative. Beginning in early thirties he began to fill the campus with sculptures one after the other which were innovative in subject and personal in style. His

first magnum opus in this genre was the Santhal Family done in 1938. In this larger than life sculpture he represented the tribal peasants of the region.

The use of cement and mortar to model the figures and the use of a personal style in which modern western and Indian pre-classical sculptural values were brought together was equally radical. With these work Ram Kinkar established himself as a modern Indian sculptor.

Ram Kinkar was a bachelor throughout his life; he lived with Radharani Dashi. He did not want to have any bindings in his life and never married despite insistence by his parents.

Ram Kinkar Bajj was no introvert or recluse, he responded to the natural zest for life and took a great interest in human figures. Some of his sculptures are preserved and displayed at locations including Kala Bhavan, Shantiniketan, Late Rani Chanda Collection and Academy of Fine Arts, Calcutta, H.K. Kejriwal collection and Karnataka Chitrakala Parishat, Bangalore, Lalit Kala Academy, New Delhi, National Gallery of Modern Art, New Delhi, Reserve Bank of India, New Delhi, Jane and Kito de Boer, Dubai and the Delhi Art Gallery in New Delhi.



A sculpture by Ramkinkar Bajj at Shantiniketan

He came to Shantiniketan at 19 and stayed there till his death in 1980.

A portrait bust in bronze by a student of Ram Kinkar at Shantiniketan, the Sculptor K.S. Radhakrishnan, is found at the entrance of the Museum of Modern Art in Bhopal in India. •

HEALTH

HOW TO MAINTAIN VITAL ORGANS OF THE BODY AND KEEP GOOD HEALTH

Chapter - 5

In our last issue we had discussed about a vital organ called SKIN. Though it is very essential, yet it is given very little care. It produces Vitamin D and regulates blood pressure. It detects pain, touch, heat, cold and it instantly passes the findings to the brain. Its network of nerves is really awesome.

The skin has kept our total body covered with it . Some parts of our body are covered under clothes and some are exposed. Somewhere the skin is tough and somewhere it is tender and soft. But its elastic characteristic holds everything together. Its care thus has to be different. Exposure to the sun is essential but over exposure may cause skin cancer. Our face and neck need delicate care with cream, oil etc as recommended by Dermatologists.

However, like snakes, humans too shed their skin in slow and gradual process. New skin is formed in the innermost part of the skin (called epidermis) and it pushes itself outward. Old skin in the shape of cells is washed away while we bathe and new skin comes on the surface. The birth and death cycle of skin is about 27 days.

Our skin is no different from our body and its ability to fight of damage. Some DOs are suggested below to maintain a healthy skin:

- Drink plenty of water to avoid dehydration that causes the skin to look dull, flaky, saggy and loose.
- Eat foods with antioxidants to fight disease and ageing.
- Have a rainbow-colored plate of food to neutralize the effects of free radicals.

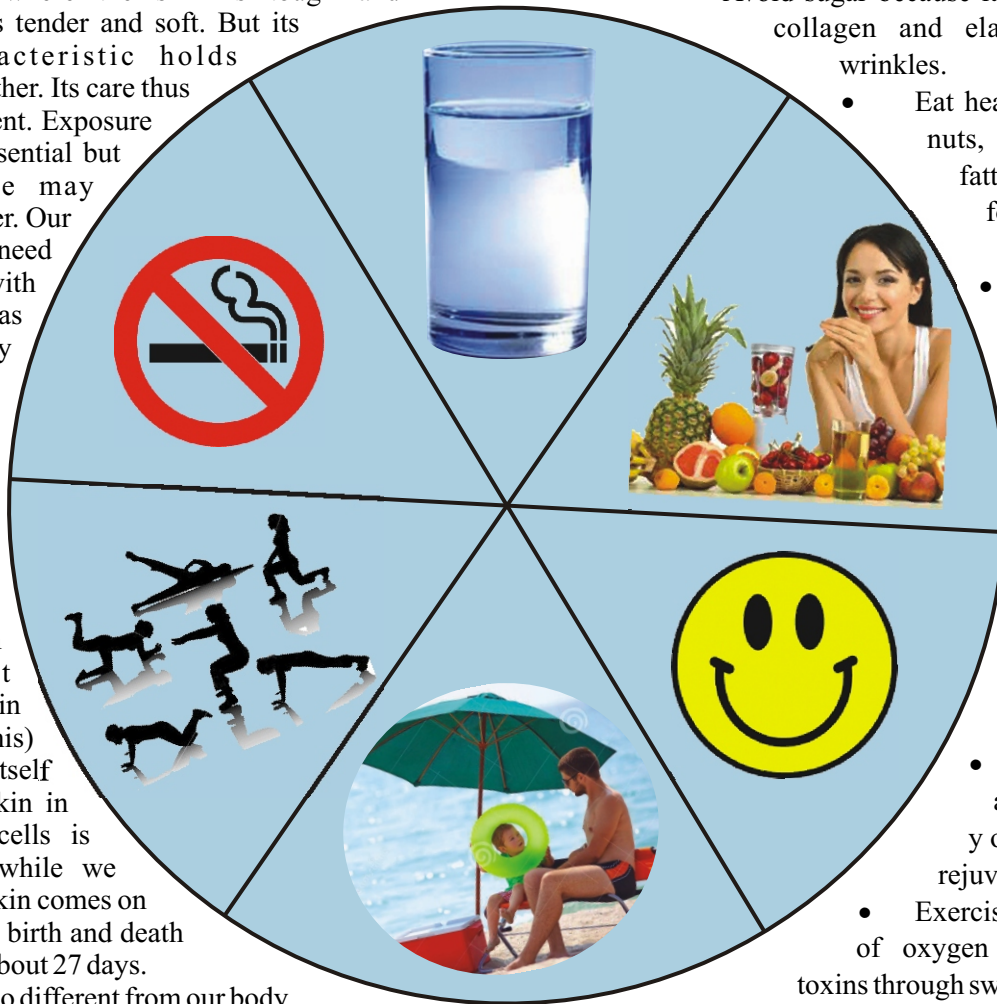
- Eat organic foods to preempt intake of ageing toxins.
- Avoid smoking.
- Limit your sun exposure. Small amounts of daily sun are beneficial but too much may damage your skin.
- Use natural skin products because most skin care products contain harsh chemicals.
- Get enough vitamin C as it leads to fewer wrinkles.
- Avoid sugar because it leads to damage collagen and elastin that cause wrinkles.

- Eat healthy fats such as nuts, fish, olive oil, fatty acids are crucial for your skin to look youthful.
- Engage in activities that relieve stress such as Yoga or meditation . Think positive and do not harbour ill feelings towards anybody.
- Sleep adequately for your skin to rejuvenate.
- Exercise for circulation of oxygen and release of toxins through sweat.

• SMILE

We hope our readers will benefit from the above suggestions and will have a glowing skin for themselves. In the next issue we will delve into other vital organs of the body such as Kidney, Liver etc and until then take care of your health. •

A Doctor
.....to be continued



GENIUS

CHARLIE CHAPLIN

(Born 16 April 1889 - Died 25 December 1977)

Who Made The Whole World Laugh

Charles Spencer Chaplin was born to Hannah Chaplin and Charles Chaplin, Sr. His parents were entertainers and used to perform in a music hall. His mother was the daughter of a shoemaker and father was the son of a butcher.

Chaplin's childhood was fraught with poverty and hardship making his eventual trajectory the most dramatic of all the rags to riches stories ever told. When he was seven years old he was sent to workhouse (where paupers and destitute children find food, accommodation and employment) because his father stopped providing financial support.

His mother Hannah was admitted to a mental asylum. His father became a severe alcoholic and eventually he died at the age of 38 due to cirrhosis of the liver. His mother died in 1928 when Charlie Chaplin was 39.

As a young Chaplin performed in the play **Sherlock Holmes**. During the time he was in poor schools and his mother was admitted in mental asylum, Chaplin began to perform on stage. In fact his first amateur appearance was at five years old. It was his mother who made him feel that he had some acting talent. Through his father's connections, Chaplin became a member of a troupe and toured English music halls during 1899-1900. Though his act was popular with audiences, he was not satisfied with dancing. He wanted to do comedy act.

Though his mother wanted him to continue his studies, he left his school at 13 and supported himself with a range of jobs and nursed his ambition to become an actor.

He subsequently registered himself with a theatrical agency in London where the manager felt that Chaplin had potential and was given his first role. Though the play was unsuccessful, Chaplin's comic performance was singled out for praise.

By the time he was 18 years of age he was an accomplished comedy actor.

His brother warily recommended Chaplin's name to his employer a prestigious comedy company in 1906 for a two week trial. Chaplin made an impact on his first night and he was quickly signed to a contract. After playing a series of minor parts he eventually was given the lead role in Jimmy the Fearless. It was a big success and Chaplin received considerable press attention.

During his second American tour he was invited to join the New York Motion Picture Company. He liked the idea of working in films as it would mean a new life. He signed \$ 150 per week contract in September 1913.

And from here he never had to look back. He



attempted to learn the process of filmmaking. His first film appearance was in Making A Living in 1914 followed by as “**The Tramp**” character in Kid Auto Races at Venice the same year. For this film he selected the costume with which he became identified. The pants baggy, the coat tight, the hat small and the shoes large. He also added a small moustache.

During the filming of his eleventh picture, he clashed with his director and obtained the permission to direct his films. His directorial debut was highly successful. Thereafter he directed almost every short film in which he appeared. This was the exciting time of his career because every week a new film was being released.

After such successes he demanded \$ 1000 a week which was refused to him. He then joined Essanay Film Manufacturing Company who offered him \$ 1250 per week.

Chaplin asserted a high level of control over his pictures and started to put more time and care into each film.

During 1915 Chaplin became a cultural phenomenon. Shops were stocked with Chaplin merchandise, he was featured in cartoons and comic strips, and several songs

were written about him. As his fame grew worldwide, he became the film industry's first international star.

As his popularity soared, offers with bigger sums came to him. The best of which came from the Mutual Film Corporation at \$ 10,000 per week.

By 1916 Chaplin was a global phenomenon. A contract was negotiated with Mutual that amounted to \$670,000 a year, which Robinson says made Chaplin at 26 years old one of the highest paid people in the world. The high salary shocked the public and was widely reported in the press. John R. Freuler, the studio president, explained: "We can afford to pay Mr. Chaplin this large sum annually because the public wants Chaplin and will pay for him."

Chaplin referred to his Mutual years as the happiest period of his career yet he left it and signed a contract with First National Exhibitors Circuit at \$ 1 million. Here Chaplin was given freedom over the making of his pictures at his own studio.

He married his first wife Mildred Harris a 17-year old actress in Los Angeles but the marriage ended in April 1920. Chaplin married for the second time with Lita Grey. She was 16 and he was 35. This marriage too did not last beyond two years.

He later met 21-year-old actress Paulette Goddard and married her in Canton. But this marriage too did not work and they finally divorced in 1942. Chaplin's fourth wife Oona O'Neil to whom he married in 1943 lasted until his death. The couple had eight children.

The Kid was Chaplin's longest picture to date. It took nine months to complete and was of 68 minutes. It dealt with issues of poverty and parent child separation and is thought to have been influenced by Chaplin's own childhood. It was released in January 1921 with instant success and by 1924 it had been screened in over 50 countries.

He acted and made films from the silent film era to talkie era.

Parallels between himself and Adolf Hitler had been widely noted: the pair were born four days apart, both had risen from poverty to world prominence, and the German dictator wore the same toothbrush moustache as **The Tramp**. It was this physical resemblance that supplied the plot for Chaplin's next film, **The Great Dictator**, which directly ridiculed Hitler and attacked fascism. This film released in 1940 was a talkie film and was very successful though it brought about a huge criticism due to political situations prevalent at that time.

In 1952 he left for the UK to have a world premiere of his film **Limelight** and the very next day his re-entry to the US was revoked due to "his political views". This film met with a wide scale boycott in the USA. This was the fall for him from an unprecedented height of popularity. He and his family later settled in Switzerland. Both of them renounced their US citizenship and became British

citizens. There they established a film producing company and produced several films.

In 1957 he made a film called **A King In New York** casting himself as an exiled king who seeks asylum in the US. It was a personal attack on the USA through celluloid.

In the early morning of 25 December 1977, he died at home after suffering a stroke in his sleep. He was 88 years old.

Six of Chaplin's films have been selected for preservation in the National Film Registry by the United States Library of Congress.

Chaplin received three Academy Awards (OSCAR) : for "versatility and genius in acting, writing, directing and producing *The Circus*" in 1929.

From the film industry, Chaplin received a special Golden Lion at the Venice Film Festival in 1972, and a Lifetime Achievement Award from the Lincoln Center Film Society. The latter has since been presented annually to filmmakers as The Chaplin Award Chaplin was given a star on the Hollywood Walk of Fame in 1970, having been previously excluded because of his political beliefs.

Chaplin was the subject of a Biographical Film Chaplin 1992, directed by Richard Attenborough.

He was undoubtedly the best comedian the world has ever produced. •

The Famous Quotes of Chaplin

A day without laughter is a day
wasted.



We think too much and feel too little.



A man's true character comes out
when he's drunk.



Nothing is permanent in this wicked
world - not even our troubles.



Mirror is my best friend. Because
when I cry it never laughs.



Failure is unimportant. It takes
courage to make a fool of yourself.



To truly laugh, you must be able to
take your pain, and play with it !

MANAGEMENT SKILL COUNSELLING

Counselling has become a buzz word today. Everywhere people talk of it and people do feel the need of it. We need to understand counselling thoroughly and have to experience it. If we just posterise and sloganise counselling we will trivialize it. What needs to be understood is "HOW WE ACTUALISE AND REALISE COUNSELLING PROCESS ITS PRACTICE AND PURPOSE".



The Author

Counselling in some form or the other has been in use since the beginning of mankind and this was offered by -

PARENTS
TEACHERS
FRIENDS
ELDERS
FAMILY DOCTORS
RESPECTED PERSONS and so on...

Man is a social being. In a society we know each other and try to help each other. In the society at times we also disturb each other. Where the disturbance is more, it becomes one kind of society and where help, understanding each other is more, it becomes a different kind of society. Creating a helping relationship is the main factor in helping people with solution.

While counselling based on research, we need to keep the following conditions in our mind :-

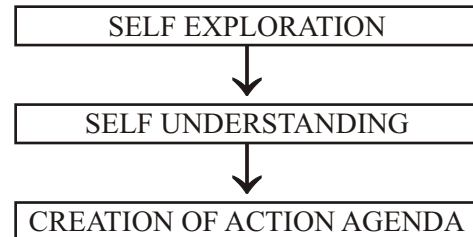
1. The counsellor must be so congruent, that his words must be in line with his feelings (Congruence).
2. The counsellor must have a warm acceptance and esteem of the counsellee as a separate person (Acceptance).
3. The counsellor must have the ability to see the counsellee and her/his world as the counsellee sees it (EMPATHY).
4. The counsellee must experience herself/himself as being fully absorbed and his feelings and expressions, such as silence, gestures, fears, use of words etc. are felt and understood by the counsellor (COMMUNICATION).

So, it becomes a two-dimensional model. It includes the person of the counsellor (one dimension) and person of the counsellee (The other dimension). The Counsellor must in his relationship with the Counsellee adopt the following :-

- A. THE ATTITUDES OF CONGRUENCE
- B. THE ATTITUDE OF ACCEPTANCE
- C. THE ATTITUDE OF EMPATHY

4. THE ENVIRONMENT OF TWO WAY COMMUNICATION

The above attitudes and open communication lead to :-



So when we see the process of proper counselling the following vital points emerge very clearly -

1. Counsellor's Attitude

Counsellor attitudes include the following -

- Respect
- Genuineness
- Concreteness
- Empathy
- Self disclosure
- Confrontation

2. Counsellor skills include the followings -

- Attending
- Responding
- Personalizing
- Initiating

3. Counsellee's Learning Process includes the following -

- Get Involved
- Self Exploration
- Self Understanding
- Action

From Attending comes getting involved

From Responding comes self exploration

From Personalizing comes self understanding

From Initiating comes ACTION

Based on the experience and study, we can say that a counsellor should have the following qualities :-

1. Superior intellectual ability and judgement
2. Originality, resourcefulness and versatility
3. Curiosity and self learner
4. Interest in persons as individuals that is a respect for the integrity of other persons

5. Sense of humour
6. Knowing oneself clearly
7. Various levels of motivation
8. Tolerance
9. Ability to establish warm and effective relationship
10. Ability to tolerate pressure
11. Acceptance of responsibility
12. Tact and co-operativeness
13. Integrity
14. Self control
15. Stability
16. Deep sense of ethical values
17. Understanding of culture and cultural background
18. Understanding of evaluative process
19. Supportive
20. Art of probing without hurting
21. Understanding of very high order

If the counsellor possesses the above qualities, it will help him in many ways.

Given below are the steps of a practical counselling session -

STEP-I	<p style="text-align: center;"><u>ATTENDING PHYSICALLY</u></p> <ul style="list-style-type: none"> ● Sit facing the counsellee ● Lean forward ● Make eye contact <p style="text-align: center;">AVOID DISTRACTING BEHAVIOUR</p>
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STEP-II	<p style="text-align: center;"><u>OBSERVING</u></p> <p>PHYSICALLY - Body Build Physical appearance Level of energy</p> <p>EMOTIONALLY - Facial Expression Posture Grooming</p> <p>INTERPERSONALLY - Positive - Negative - Neutral</p>
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STEP-III	<p style="text-align: center;"><u>LISTENING</u></p> <ul style="list-style-type: none"> ● Know what you are listening to ● Listen for the specifics ● Do not judge ● Resist Distractions ● Recall tone of voice, feeling words
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STEP-IV	<p style="text-align: center;"><u>RESPONDING</u></p> <ul style="list-style-type: none"> ● Integrate seeing and hearing ● Ask ● Feel if I were the counsellee how would I feel ● Identify feeling intensity and appropriate word ● Confirm it ● Find reason
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STEP-V	<p style="text-align: center;"><u>PERSONALIZING THE MEANING</u></p> <ul style="list-style-type: none"> ● Ask yourself what does the situation mean to the counsellee ● Point out problem ● See, think, feel
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STEP-VI	<p style="text-align: center;"><u>PERSONALIZING PROBLEM AND GOAL</u></p> <ul style="list-style-type: none"> ● Ask the counsellee what he/she doing or not doing that contributes to his/her problem? ● Ask yourself the same ● Use, you feel and you want to feel
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STEP-VII	<p style="text-align: center;"><u>INITIATING</u></p> <ul style="list-style-type: none"> ● Understand the goal, ask "your goal is..." ● What steps could you take to reach the goal ● Read and Repeat the goal ● Appreciate ● Make a contract for FIRST STEP
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For each counsellor, behaviour leads to an important counsellee activity. Attending leads to involvement, responding leads to exploration. Personalizing deepens understanding and initiating leads to action in a constructive way.

We should remember that counselling is combination of deep understanding and with great amount of knowledge, right attitude and sharpened skills. It should not be taken as a Casual Approach which is happening at times. •

- Prof. Geeta Khan Jha

IN THE NEWS

MAHATMA GANDHI'S STATUE IN PARLIAMENT SQUARE IN LONDON



Philip Jackson selected this photo out of several photos for designing his statue

The most proud moment for all Indians was when it was decided to install a statue of Mahatma Gandhi at the Parliament Square in England alongside the already installed statues of Abraham Lincoln, Nelson Mandela and Winston Churchill the then British Prime Minister who contemptuously described Gandhi as "a seditious fakir of a type well known in the East, striding half-naked up ...to negotiate and parley on equal terms with the representative of the King". What an irony of the destiny!

Justifying the decision to install the statue, the British Prime Minister David Cameron said that the initiative would lead to Britain cementing its historical connection with India. Cameron also said that there were "lots of reasons for the Gandhi statue to be installed at the British Parliament. One such reason is the importance of Gandhi to Indian history and the importance of Gandhi's teachings of non-violence and peaceful protests." He reiterated that Gandhi's teachings are relevant to anyone who wants to try to build a bigger and stronger society alongside a prosperous economy.

Gandhi's statue will be the 11th Statue to be installed on the Parliament Square. The statue was announced during a UK delegation visit to India two years ago following which the Gandhi Statue Memorial Trust founded by NRI economist Lord Meghnad Desai has been raising funds for it. The project would cost the Trust 7,50,000 Pounds and the entire amount will be raised by contributions. To support the cause 28 distinguished artists had organized an exhibition in Delhi in December 2014. A UK based NRI hotelier has donated 1,00,000 Pounds for the Statue early February this year.

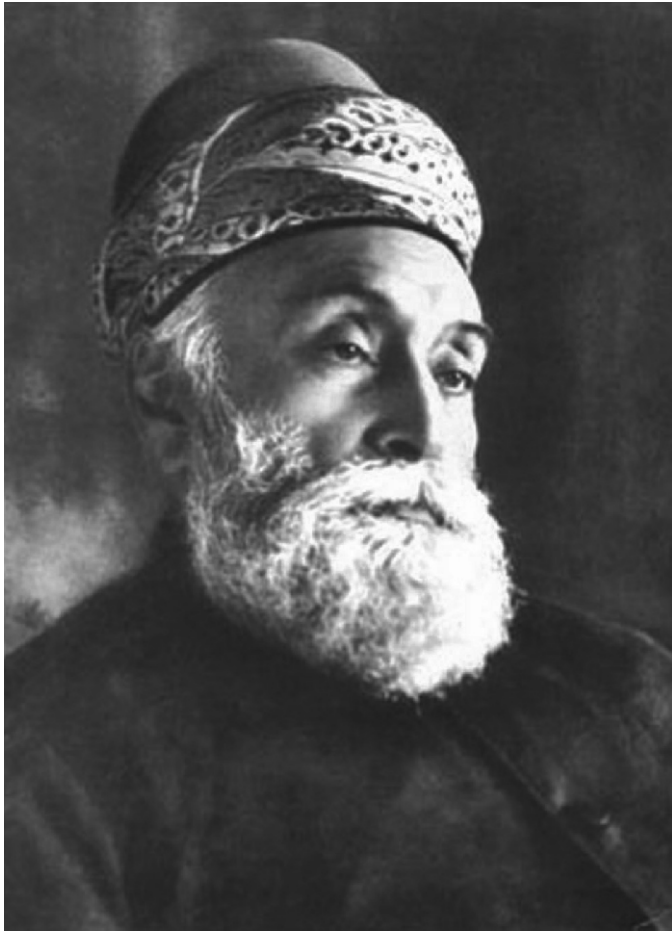
The UK Culture Secretary, Sajid Javid, who is leading an advisory group to support the project, said: "My parents were born in British India with first-hand experience of partition. The effect it had on millions of people contributed to my decision to take up public service. "Celebrating Mahatma Gandhi's reverence and greatness, a man who fought equally for everyone, in the form of a statue in Parliament Square is a fitting tribute. No matter what your background, history or religion, this statue will allow people from around the world to look upon him and appreciate his endeavour and successes for humanity."

The statue will become a focal point for commemorations this summer on the 100th anniversary of Gandhi's return to India from South Africa to start the struggle for self-rule.

The bronze statue created by sculptor Philip Jackson based on Gandhi's last visit to London in 1931 was selected from a collection of many photographs. This photo shows Gandhi standing outside 10 Downing Street. The statue will be of 9 foot tall, roughly one and a half times life size.

Clearly the Mahatma does not belong only to India. He belongs to the whole world. •

IN THE NEWS
**COMMEMORATIVE COINS
 RELEASED ON J. N. TATA**



Specially for the denizens of Jamshedpur it was indeed a great moment when the Prime Minister of India Mr. Narendra Modi released commemorative coins on 6 January 2015 at his residence, to mark the 175th birth anniversary of Jamsetji Nusserwanji Tata, the founder of The Tata Iron & Steel Company Limited (now Tata Steel).

This was the first time when any industrialist was felicitated in such a manner by the Government.

Jamsetji was chosen by the government because he is regarded as the “father of the Indian industry” for setting in motion what became Asia's first integrated steel company despite the hostile investment environment of a colonised India and his own failing health.

A collector's item, the set of Rs 100 and Rs 5 coins in silver depicting Jamsetji's bust, has been fabricated

by the Kolkata mint of the Security Printing and Minting Corporation of India and would be priced at Rs 4,500 each.

In the past, Jamsetji has been honoured by India Post through release of stamps one in 1958 to mark the golden jubilee of the steel industry in India and another in 1965 in recognition of his contribution to the industrialisation of India.

Incidentally, Tata Group now is India's biggest conglomerate company.

“Jamsetji Nusserwanji Tata, who created history, without seeking or holding power, is truly great” said Prime Minister Narendra Modi while releasing the commemorative coins. While Praising Jamsetji Tata, Prime Minister said his vision of environment friendly energy and for his initiatives for welfare of the people associated with the Tata Group are indeed



remarkable. He said “It was a privilege to release a commemorative coin in honour of Shri Jamsetji Tata”.

Speaking on the occasion, Chairman of Tata Sons Cyrus P Mistry said Jamsetji's focus was two-pronged, each equally important and interconnected. “The first was the industrialisation of the country and building the requisite human capital. The second was conducting business in a fashion that positively impacted the quality of lives of the people it touched,” he said. •

WHEN THE INDIAN CONSTITUTION WAS AMENDED FOR THE FIRST TIME

The complete story of the first amendment to the Indian Constitution

65 years ago on this day, we, the people of India, gave ourselves the Constitution and declared India a sovereign republic. The Constitution of India was a huge document, the largest in the world, and was a symbol of the aspiration of the masses. 65 years down the line it has undergone a number of amendments to keep pace with time and as on date it has been amended more than a hundred times. In this backdrop, when we today celebrate the Republic day, an insight into the political developments that led to an amendment of this document for the first time makes for interesting study. The first amendment was carried out as early as 1951 i.e. only after a year after its adoption, even though the document had taken nearly three years to complete and was drafted by an august assembly of over 480 eminent personalities who had taken due care and diligence in drafting the document taking into account the existing political and social conditions of the nation and its future goals.

The arrival of Lord Louis Mountbatten in India in February 1947 as the last Viceroy of the British monarch set the deck for transfer of power in India. The Constituent Assembly had already come into existence on 6th December 1946 with 482 members of which 389 came from British provinces while the rest 93 were from the Indian princely states. The Assembly had eminent personalities of the day as its member and it included freedom fighters, barristers, educationists and leading luminaries from all walks of life. The Constituent Assembly embarked on its job in right earnest calling its first meeting as early as on 9th December 1946 and adopted the “Objective Resolution” proposed by Pandit J. L. Nehru on 13th instant. This “Objective Resolution” set the tone and tenor of the task at hand of this August gathering. The arrival of Mountbatten

with clear instructions on transfer of powers expedited this process of the framing of Constitution. After independence, the truncated Constituent Assembly with 369 members (299 from British Province and 70 from Princely States) carried on with its work and by February 1948 the first draft of the Indian Constitution was published. The second reading of the Constitution was completed on 17th October 1949. The third and final reading was completed on 26th November 1949 and thus after passage of two years, eleven months and twenty one days, the effort of 369 leaders culminated in adoption of Constitution on 26th January 1950. The Constitution of India was unique in the sense that it was the longest written constitution in the world and it borrowed the positive features of a number of Constitutions, thus making it a complete document.

The transfer of powers to the government of the two dominions namely India and Pakistan on 15th August 1947 had led to formation of Government in States also. The popular government of the States vied with each other in expediting the process of establishing a welfare state. In Bihar, Congress formed the government under the leadership of Sri. Krishna Sinha. Krishna Ballabh Sahay was made the Revenue

Minister in Sri Krishna Sinha's ministry. At the same time K. B. Sahay along with his mentor Sri Krishna Sinha and 34 other leaders from Bihar were also the members of the Constituent Assembly and had contributed to the process of Constitution writing. K. B. Sahay was keen at changing the land settlement systems established by the British, especially the Permanent Settlement introduced by Lord Cornwallis in 1793 in Bihar, Bengal and Gangetic plains, since these were oppressive to the peasants and was loaded in favour of the Zamindars- a class which was largely loyal to the British. He was of the opinion that in order

The Parliament of India recently passed the Constitution (99th Amendment) Act 2014 and the National Judicial Appointments Commission.

Few Constitutional Amendments have generated so much heat and debate in recent times as this. The present essay unfolds the history of the first amendment to the Indian Constitution which had drawn similar attention and had led to nationwide debate and protest.

to develop a welfare State, the Zamindari System, which was a natural by-product of Permanent Settlement, must go. Even during the independence struggle K. B. Sahay had taken up the issue of peasants' emancipation from the cruel hands of Zamindars. During the twenty eight months rule of the Congress in 1937-1939, K. B. Sahay, as one of the two Parliament Secretary, under the tutelage of Sri Krishna Sinha, was instrumental in introduction of a number of measures for the welfare of peasants. These measures included reduction in rent; giving occupancy rights to *ryots* with absolute right to transfer their holding for a nominal payment to the landlord and ownership rights to under *ryots* if they had tilled the land for the last twelve years. The landlord's share in crop produce was decreased to 9/20 and all land seized during the period of 1929 to 1937 (*bakasht* land) were restored to the previous tenant against payment of nominal amount. More importantly the landlord's power to realize rent was greatly reduced and their powers to attach land or charge rent whimsically or to get the tenant imprisoned for their inability to pay rent were taken away. All these measures fell short of actual abolition of Zamindari System. However the Sri Krishna Sinha's ministry was unable to abolish Zamindari during this period despite all effort of K. B. Sahay only because the constitutional structure of the 1935 Act did not extend adequate powers to the provincial Ministries. Moreover, the administrative set-up, of which Zamindars were an integral part, was protected by Viceroy at Centre and by the Governor at State level.

In this background when K. B. Sahay took over as the Revenue Minister of Bihar after independence, he made it his goal to introduce legislation to abolish the Zamindari System. K. B. Sahay regarded Zamindars as petty rulers whose loyalty rested largely with the British. He believed that, while at the macro level

merger of princely state was essential for integration of the nation geographically, abolition of the Zamindari System was essential for social integration of the nation at the micro level.

With this aim in mind, K. B. Sahay made an in-depth study of the revenue settlement of the British, particularly the Permanent Settlement Act, 1793. He even visited the National Library at Calcutta with his close aid Mr. Bajrang Sahay- a lawyer of eminence of Patna High Court to study the legalities of this Act in order to draft a suitable legislation as its replacement. This apart, K. B. Sahay also made an in-depth study of the rural class composition where the Permanent



Shri K. B. Sahay

Settlement was in force. In 1950s, there were 2, 05,927 regularly revenue-paying, permanently settled, holdings. They accounted for 90% of the land area. Legally the Zamindars were considered to be the owners of the land. But in reality their role was that of government-appointed middlemen who collected revenue from the title-holders. Revenue used to be paid in cash to the government and it used to be 90% of the revenue paid by the title-holders to the Zamindars. But Zamindars had the right to collect any amount of revenue as they wished from the title-holders. And then there were the title-holders at the second level who had obtained the right

from the owners of the land or from other title-holders to collect revenue. At the third level there were the occupancy *ryots* who used to pay revenue for the land they had occupied and cultivate the lands by themselves or with the help of the members of their family or by hired labourers or with the help of their partners. They could transfer their rights to someone else. Below them were the non-occupancy *ryots* who had to pay revenue for occupying the land on a temporary basis. Then there were sub-tenants who had to pay revenue for getting land on a temporary basis from the *ryots*. At the lowest level of this arrangement were the labourers who in spite of

putting in very hard labour did not have any right on the land and who were caught in various exploitative agrarian relations. Thus the Zamindars were nothing more than a middleman, a creeper in the words of Sardar Vallabh Bhai Patel. The Zamindari Abolition legislation drafted by K. B. Sahay tended to improve the lot of the downtrodden peasants and landless labourers, relieving them from the cruel clutches of Zamindars.

Ever since the intentions of the Bihar Government to abolish the Zamindari system became clear to the clan of Zamindars, they came to unite under the leadership of Raja Kameshwar Singh of Darbhanga in north Bihar and Raja Kamakhya of the Ramgarh estate in south Bihar to oppose it tooth and nail. The almost abrupt uprising of the Zamindars had an alarming effect, so much so that at one stage even Gandhi came to question the propriety of bringing about social change through legislative measures. The opposition faced by K. B. Sahay during this period (1946 to 1948) was unparalleled. K. B. Sahay found himself almost alone in his crusade for land reforms in these formative years. At a time when politics and to a large extent, society was controlled by the landed gentry, it was no mean achievement for K. B. Sahay to come up with the Bill which was sure to cause convulsions in the tradition bound, land steeped society. Sure enough, the entire land owning class controlled by the rajas and Zamindars who went about displaying the honours and titles bestowed to them by an alien rulers for the service rendered to the latter, ganged up against him. Apart from legal maneuvers that they resorted to, the Zamindars made direct appeals to the national leaders with a view to stemming the tide against them and arresting the historical process. Dr. Rajendra Prasad, who became the first President of the Indian Republic lent a receptive ear to them and wrote to K. B. Sahay: "Any hope that you may have of giving satisfaction to tenants by simply getting rid of Zamindars is doomed to failure unless it is accomplished by some positive steps for the betterment of the tenants' lot but I gathered....that you were not thinking of the next step and that for the present you would be satisfied if you can remove the Zamindars.... I have never been able to understand the justice or fairness of depriving a man of the management of his propriety." In picking holes in the Act, Dr. Prasad had, perhaps, been influenced by the large number of memoranda and

telegrams, one of which read: "**HON'BLE RAJENDRA PRASAD NEW DELHI IN HONOUR GANDHI-JAYANTI APPEALING PEACE KINDLY DROP ABOLITION ZAMINDARI SAVE COUNTRY CIVIL WAR**" sent to him by the Zamindars. Since they had to eat humble pie they sought to undermine K. B. Sahay's political career.

However, K. B. Sahay could go ahead with the epoch making legislation despite the bitter opposition it generated among even a section of the ruling party with the support of Sri Krishna Sinha- the then Chief Minister of Bihar. Bihar under K. B. Sahay was the first to introduce legislation to abolish Zamindari. The challenge before K.B. Sahay to present the Bill on the floor of the House was so immense that an attempt was made to even physically eliminate him. K. B. Sahay survived this assault and when he presented the Bill on the floor of Bihar Legislative Assembly in 1947, head bandaged and bleeding profusely, he was the epitome of agrarian reforms in independent India. It was a historic moment. The Bill was passed by the Bihar Government as the Zamindari Abolition Act in 1947. It was further amended in 1948 and published as Bihar Zamindari Abolition Act, 1948. With this Act the rights of Zamindars and title-holders on land and at the same time trees, forests, fish-breeding ponds, markets, mines and minerals, were legally terminated. And all these rights came to be directly vested with the State Government.

The Zamindars sprung up in quick opposition to this Act and challenged it in the Patna High Court on grounds of violation of their Fundamental Rights. The courts accepted their plea and issued injunctions restraining the State from implementing it. Finally, the Act was set aside by the Patna High Court, as it felt it had contravened some provisions of the Constitution.

This set the stage for the first amendment to the Indian Constitution. The Central Government of Pandit Jawahar Lal Nehru stepped in to introduce the first amendment to the Indian Constitution to strike down the Patna High Court verdict. Addressing the Parliament, Pandit Jawaharlal Nehru presented the Statement of Objects and Reasons of this Amendment on 10th May 1951. This statement was appended to the Constitution (First Amendment) Bill, 1951 which was enacted as the Constitution (First Amendment) Act, 1951, and read as under:

“Another article in regard to which unanticipated difficulties have arisen is Article 31. The validity of agrarian reform measures passed by the State Legislatures in the last three years has, in spite of the provisions of clauses (4) and (6) of Article 31, formed the subject-matter of dilatory litigation, as a result of which the implementation of these important measures, affecting large numbers of people, has been held up.

The main objects of this Bill are, accordingly to amend Article 19 for the purposes indicated above and to insert provisions fully securing the constitutional validity of Zamindari abolition laws in general and certain specified State Acts in particular.

14. Addition of Ninth Schedule.-After the Eighth Schedule to the Constitution, the following Schedule shall be added, namely:-

“NINTH SCHEDULE [Article 31B]

1. The Bihar Land Reforms Act, 1950 (Bihar Act XXX of 1950).”

Article 31B imposes restriction on Article 31 in so far as provisions of Land Reforms Acts are concerned. A new Schedule was added to the Constitution incorporating the Bihar Land Reforms Act (Bihar Act XXX of 1950). Thus the Bill drafted by Sri. K. B. Sahay and passed by the Bihar Legislative Assembly as Bihar Land Reforms Act (Bihar Act XXX of 1950) was the first piece of legislation to get a place in the Ninth Schedule of the Indian Constitution. It is the genius and effort of K. B. Sahay that gets acknowledged as the Ninth Schedule of the Indian Constitution which was incorporated through the first amendment to the document. Henceforth all legislation on land reforms came to be placed under this Schedule making them immune from the Fundamental Rights granted under Article 31.

This Amendment to the Constitution was also challenged by the Zamindars in the Supreme Court which however, held the amendment valid. The Zamindars could only take solace from the fact that they could earn a respite from the law which promised to “replace the Zamindari system of land tenure by a Ryotbari system under which raiyats will hold their lands directly under the provincial government (Bihar) and to transfer to the Provincial Government all the rights of proprietors and tenure holders in land,

including rights in forests, fisheries and minerals” for as long as 5 years.

As an epilogue to this story of the first amendment to the Indian Constitution it is worth mentioning that K. B. Sahay had staked his political career in ensuring passage of the Zamindari Abolition Bill. His grit and determination can well be judged from the fact that no leader after him ever had the courage to take up these reforms with the same authority and strength. No wonder he is regarded as the “**Iron man of Bihar**” on the same line as Sardar Vallabh Bhai Patel is regarded as he “Iron Man of India”. By eliminating the Zamindars and their fiefdom K. B. Sahay was successful in integration of the nation at the village level and therefore can well be regarded as the “**Chhota Sardar**”. His leadership qualities and his contribution were acknowledged by the leading newspaper of Bihar of those days in following words: *“The genius of Mr. K. B. Sahay was not restricted to land reforms only. Bihar has not produced a better administrator than Mr. K. B. Sahay. He was ruthless. All the files of the departments he held charge in various capacities were almost on his fingertips, so prodigious was his memory. No officer could bluff him. During the regime of Dr. Sri Krishna Sinha he was the main spirit behind all the reform measures introduced by the Congress government. And he had the traits of a soldier; he was straight forward in his dealings and quick in decisions-right or wrong. Efficient and smart as he was he could not tolerate slackness and inefficiency. Not a few institutions in this state of Bihar owe their origin to the zeal of Mr. K. B. Sahay-the one time Iron Man of Bihar.”* (The Indian Nation, 04.06.1974). It was this administrative skill of politicians like K. B. Sahay that had put Bihar on a high pedestal and had led Appleby Committee to declare Bihar to be India's best administered state in those days. It is high time the nation acknowledges the contribution of this son of the soil and the Government of India issues a special commemorative postage stamp in his name in the freedom fighters series. This will be a fitting tribute to this forgotten hero whose single handed effort led not only to the abolition of Zamindari system in India and paving the way for social justice in the process but also caused to be instrumental in effecting amendment to the Indian Constitution for the first time . .

- R. Sahay

INVENTION

WHEN WAS THE WASHING MACHINE INVENTED ?

There is hardly anyone today, who does not know about washing machine. Gradually it is transforming itself from being a luxury item to an item of necessary house hold gadgets and it is finding its place in every home.

As per the information available the first patent for a Washing and Wringing Machine was issued in 1691. The machine involved more manual labour. Some advanced technology to wash clothes developed in 1797 was to reduce manual labour.



An earlier washing machine model

The earliest machines were hand-operated and had wooden or galvanized tubs. The clothes were rubbed on a corrugated washboard to take the water and dirt out. Then the wash was put through a wringer to squeeze out the excess water and finally it was hung out on a line to dry.

A modern style washing machine was designed by James king in 1851. It employed a drum device that is still used in washing machines today. But a major draw back in that machine was that it needed hand power.

The first home washing machine was made and patented in 1858 by Hamilton Smith of Pittsburgh, Pennsylvania. This was operated by turning a crank that rotated paddles inside the tub. Some machines were operated by gasoline engines too.

In 1874, William Blackstone of Indiana built a birthday present for his wife. It was a machine which removed and washed away dirt from clothes. This was truly the first washing machine designed for convenient use in the home.

But these machines were also not successful. The clothes often became tangled, knotted or torn. Then the water had to be carried from the well or spring involving a great deal of manual labour for the housewives. The water had to be heated on a fire and poured into the tub and mixed with soap.

Later on machines were made of metal for fire to heat the water in the machines.

It wasn't until 1907 that a practical washing machine was developed that operated by motor. By 1912 nearly all makes of home washing machines were designed to be driven by electric power. The first electric powered washing machine was introduced in 1908 by the Hurley Machine Company of Chicago, Illinois. This was invented by Alva J. Fisher. It was a drum type washing machine with a galvanized tub and an electric motor. It was patented on 9 August 1910.

In the earlier days the tubs were made of wood. Gradually, the manufacturers turned to metal: copper, galvanized steel, aluminium and zinc. By 1961 practically all tubs were made of porcelain enamel, because such machines could resist the strong washing powders and withstand all temperatures of water.

The fully automatic washing machine first appeared in 1937. Most washing machines hold between three to four kilos of wash. They generally use about one hundred and fifty litres of water per wash and the water temperature is usually kept between 55 and 70 degrees centigrade.

The first successful home dryer was built in 1930. A combination washer dryer was first put on the market in 1953.



A modern washing machine laden with the latest features

Before the washing machine, people had to use fresh water, rocks, and other scrubbing devices to remove dirt from their clothes. How lucky we are today that we are able to throw our clothes in a machine that does all of the work for us! •

TRAVELOGUE

OUR EUROPEAN TOUR

Crossing The Famous English Channel

Europe is an interesting place and it is undoubtedly the most prosperous and beautiful continents in the world. My wife Sandhya and I set on a journey from London to Aberdeen situated on the North-East of Schotland on the North Sea to meet my son Ashish, our daughter-in-law Indrani and our grandson Aditya. My son is a doctor in Aberdeen.

On arrival at Aberdeen we learnt that they had organized a European Tour for us and then we realized why they were insisting on our availing of Schengen Visa.

The trip was arranged with a tour operator called STAR Tours and it started from London on 2 May 2011. It was a 7-day tour and it covered three countries. Those were Heidelberg (Germany), Mount Titlis etc (Switzerland) and Paris (France).

In this travelogue of mine, I will recount our experiences event-wise instead of giving day-to-day account.



We came to London from Aberdeen the previous day. Our accommodation was arranged by our son at a Hotel in London called “Ibis” which was close to the office of Star Tours. After we checked into our hotel, we decided to visit the place from where our journey would commence the next morning at 5.30. We reached the place and made enquiries and were fully convinced that this was the point from where our voyage would start the next day.

Incidentally during summer in London the sun sets at 9.25 and it rises at 4.25.

We reached the starting point before 5.30 the next morning. Some more families had already gathered there. We were happy that all of them were Indians. After the bus reported at six the Tour Manager read out the names of the passengers and their corresponding seat numbers. We were allotted seat number 3 and 4. Sitting in the front has many advantages and one of them is able to see things before



Crossing of the English Channel

The English Channel had fascinated me since the time I was a school boy, and read about Mihir Sen the first Indian who crossed the English Channel from Dover, England to Calais, France on 27 September 1958. Thereafter many Indians had crossed the English Channel but the heroic and adventurous deed of Mihir Sen remained alive in my memory always.

I was very excited to learn that we shall cross the English Channel by a Ferry from Dover in England to Calais in France the same route taken by Mihir Sen to cross the Channel. There is a tunnel too under the English Channel connecting the two countries England with France.



others can see. This was nothing but childish.

Except the hand baggage, our other luggage was kept in the storage compartment of the bus. The tour started soon thereafter. The Tour Manager introduced himself as



Atul Surve. He told that a family of three members would join us later on the way. After a drive of about thirty minutes we picked up the last family and proceeded towards Dover.

We reached Dover as per schedule. This was the place where we had to show our Schengen Visa at the Immigration Office. The officers at the Immigration Office checked our Visas and returned after stamping them.

With our stamped Visas we came back to our bus. Just like trains and buses these ferry services also maintain a time schedule. Our Tour manager had to fix our departure time accordingly. There were not only buses but cars, trailers and many other vehicles on the ferry to cross the



English Channel. Atul informed us that our bus would be on the 5th deck. There was color coding to guide the passengers to their respective places. Our arrangements

were made on the 7th deck. We could however, go up to the 8th deck. Atul insisted that at the end of the journey we should follow and come back through the same color route, so that there would not be any difficulty to find out our bus. Our bus drove onto the ferry that would take us across the English Channel. Our bus stopped at a red colored gate and through that we reached for the staircase that led us to the 7th deck. There were restaurants, money exchangers and shops where one could buy duty free articles. We never felt that we were in a small ship except for the continuous rolling of the ship. We sat in one of the enclaves from where we could see the sea.

The blue water of the ocean was enchanting and inviting. We were thankful to God for giving us this opportunity to enjoy this pristine beauty. Some ferries that were returning to Dover were visible at a distance from the deck where we were sitting.

It took only one and a half hours to cross the English Channel. But half-way when both the shores were out of sight the height of the waves was very high though we could not feel it very much except that the ship was rocking



heavily at times preventing us from going over to the 8th deck.

When the ferry touched the shore of Calais we were amazed to see the number of cars waiting to be ferried to the UK side.

We reached for the “Red Gate” and alighted from the ship following our color code. On reaching our bus, Atul took the attendance of the passengers and when he was satisfied we left for our next destination i.e., Heidelberg in Germany where we would reach in a few hours time.

And what happened there and what we saw will be told to you in the next issue. •

- Anil Kumar Mukhopadhyay

WONDERS OF THE WORLD

THE STATUE OF LIBERTY

A Technological Wonder And A Masterpiece of The Human Spirit

The best known statue in North America, and perhaps in the world, was dedicated by President, Grover Cleveland on October 28 1886 to the roar of a 21 gun salute, the blasts of ships' foghorns, and a din of fireworks. Ever since passengers on ships entering New York Harbour have seen the towering figure holding aloft

Liberty's torch. The statue is of a robed female figure representing Libertas, the Roman Goddess of freedom, who bears a torch and a tabula ansata (a tablet evoking the law) upon which is inscribed the date of the American Declaration of Independence, July 4, 1776. It was then a welcoming signal to the immigrants arriving from abroad.

For many thousands of immigrants, the statue promised freedom from oppression and poverty in the Old World, and it has become a symbol of the United States of America. The Liberty statue stands on Liberty Island in New York Harbour in Manhattan, New York city in the United States. It was a gift to the United States from the people of France.

The statue has its origins in French politics. In 1865 with Emperor Napoleon III on the throne, an academician and a politician named Edouard de Laboulaye and his circle hoped for an end to the monarchy and the establishment of a new French Republic. They hatched the idea of the statue of liberty as a joint project between France and the United State, to express approval of the great republic across the Atlantic and to stimulate the notion of sympathy between the peoples of these two countries.

However, due to the troubled political situation in France, work on the statue did not commence until the early 1870s. In 1875, Laboulaye proposed that the French finance the statue and the Americans provide the site and build the pedestal. A young sculptor from Alsace, Frederic-Auguste Bartholdi who was encouraged by Laboulaye to consider the project, completed the head and the torch-bearing arm before the statue was fully designed, and these pieces were exhibited for publicity and fund raising at international expositions.

Fund raising proved difficult, especially for the Americans, and by 1885, work on the pedestal was threatened due to lack of funds. Publisher Joseph Pulitzer started a drive for donations to complete the project that attracted more than 120,000 contributors, most of whom gave less than a dollar.

The construction of the statue was finally over in Paris, where it was formally presented to the American ambassador on July 4, 1884, as a gift from the French people to the American people. It was then taken to pieces and shipped in crates to New York; to be reassembled on the massive pedestal built for it at American expense on Bedloe's Island which was later renamed Liberty Island.

The selection of the site was accidental. Bartholdi took a trip to the US in 1871 and was struck by the fact that vessels arriving in New York had to sail past Bedloe's



The Statue of Liberty and its Pedestal with Golden Door

Island. He was delighted to learn that the island was owned by the US government. Bartholdi then visited President Ulysses S. Grant, who assured him that it would not be difficult to obtain the site for the statue.

The pedestal designed by the American architect Richard Morris Hunt, stands 154 feet high. The statue is 151 feet tall, so the tip of the torch is 305 feet above ground. The statue weighs 229 metric tons with a 35 feet waist and a mouth 3 feet wide. The right arm, holding the torch is 42 feet long and the index finger alone is 8 feet long. The figure has the broken shackles of tyranny at her feet. In her left hand she holds a tablet representing the Declaration of Independence. Her crown of seven rays stands for freedom spreading across the seven seas to the seven continents. A spiral staircase inside the statue enables visitors to reach the crown, a climb equivalent to walking up a 12 storey building.

Bartholdi's Liberty figure was influenced by a famous painting by Delacroix, Liberty Guiding the People, and her face reflects the stern features of his own mother.

The huge size of the statue and its exposure to wind and weather posed severe technical problems for Bartholdi and his engineer, the brilliant Alexandre-Gustave Eiffel, creator of the Eiffel Tower. Eiffel built an ingenious iron frame work supported by a central pylon. Onto this flexible interior skeleton was attached the statue's visible outer layer, which is only 2.4mm thick. Starting with a small model of the statue 4 ft tall, Bartholdi then made three more, each bigger than the last, until the full magnificent size reached.

The Golden Door:

The Statue of Liberty's Pedestal contains a museum dedicated to the story of immigration to America. Opened in 1972 it begins with the prehistoric ancestors of the American Indians who crossed into the unexplored continent from Asia, to the mass immigration of modern times. Audiovisual displays, models, photographs, drawings, costumes and artifacts provide material on every incoming group including the West Africans shipped to the new world as slaves and the massive Irish, Italian and Jewish immigrations of the 19th century.

From 1892 onwards, the huddled masses actually arrived at Ellis Island near Liberty Island, where boatloads of Germans and Irish, Italians, Slavs and Jews were processed in a babble of languages and an intense atmosphere of nervous apprehension mingled with hope and excitement. An average of 2000 new arrivals a day passed through the great hall in the early 1900s and in its peak year of 1907, Ellis Island handled more than a million people. The immigration station closed in 1954 and the complex has been restored as a national monument and visitors can be taken there through guided tours. •

WISDOM

**Keep Peace With Your Soul & Strive To Be Happy
Go Placidly Amid the Noise and Haste**

And remember what peace there may be in silence.
As far as possible without surrender be on good terms with all persons.
Speak your truth quietly and clearly and listen to others, Even the dull and ignorant; they too have their story.
Avoid loud and aggressive persons; they are vexations to the spirit.
If you compare yourself with others, you may become vain and bitter;
For always there will be greater and lesser persons than yourself.
Enjoy your achievements as well as your plans.
Keep interested in your own career, however humble; It is a real possession in the changing fortunes of time;
Exercise caution in your business affairs;
For the world is full of trickery.
But, let this not blind you to what virtue there is;
Many persons strive for high ideals;
And everywhere life is full of heroism.
Be yourself; Especially do not feign affection.
Neither be cynical about love; for in the face of all aridity
And disenchantment, it is perennial as the grass.
Take kindly the counsel of years,
Gracefully surrendering the things of youth.
Nurture strength of spirit to shield you in sudden misfortune.
But do not distress yourself with imaginings.
Many fears are born of fatigue and loneliness.
Beyond a wholesome discipline, be gentle with yourself.
You are a child of the universe; no less than the trees
And the stars; you have a right to be here
And whether or not it is clear to you
No doubt the universe is unfolding as it should.
Therefore, be at peace with God, whatever you conceive him to be.
And whatever your labour and aspirations, in the noisy confusion of life.
Keep peace with your soul.
With all its sham, drudgery and broken dreams.
It is still a beautiful world.
Be cheerful,
Strive to be happy.

Found in Old St. Paul's Church, Baltimore, Dated 1692

A STEAMING CUP OF MEDICINE : GREEN TEA

One Cup - Many Benefits

Green tea is one of the oldest beverages preferred by people around the globe and at all times. It has been considered as one of the most utilitarian drinks providing energy and removing traces of stress to refresh and rejuvenate the mind and soul. It contains no calories - so is useful to those who want to lose weight. Today's scientific research in both Asia and the West is providing hard evidence for several wide ranging health benefits associated with drinking green tea. So, we should go ahead to formulate a newer kind of green tea mixed anti-ageing drink and enjoy the magical drink which would have myriad therapeutic and medicinal properties.

Tea is the most consumed drink in the world after water, well ahead of coffee, beer, wine and carbonated soft drinks. An accumulated number of population studies suggest that consumption of green and black tea beverages may bring positive health effects. An ancient Chinese proverb goes thus – "*Better to be deprived of food for three days than tea for one*". Of the three major beverages of the world - tea, coffee and cocoa – tea is the most popular. Tea has a long and ancient history and has been associated with man since time immemorial. The use of green tea as a beverage dates back to 3000 BC. Green tea is tea made solely with the leaves of *Camellia sinensis* that have undergone minimal oxidation during processing. Green tea originates from China and has become associated with many cultures in Asia from Japan to the Middle East. Recently, it has become more widespread in the West, where black tea is traditionally consumed.

Green Tea is one of the elements that have proved its versatility in terms of various uses to a great extent. It is one of the oldest beverages preferred by people round the globe and at all times it has been considered as one of the most utilitarian drinks providing energy and removing traces of stress to refresh and rejuvenate the mind and soul. Green tea is believed to have several wide ranging health benefits now supported by recent research. The Chinese have known about the medicinal benefits of green tea since ancient times, using it to treat everything from headaches to depression. It has been used as a medicine in China for at least 4000 years. The difference between green tea and other teas is that green tea is not fermented, thus keeping the powerful antioxidants lost in the fermenting process. Green tea is not oxidized at all; the leaves are steamed, rolled and dried. Green tea is the variety that keeps the original colour of the tea leaves without fermentation. Green tea is prepared from unfermented leaves, the leaves

of oolong tea are partially fermented, and black tea is fully fermented. The more the leaves are fermented, the lower the polyphenol content and the higher the caffeine content. Green tea catechin and black tea directly act on the influenza virus and inactivate it. It appears that gargling with green or black tea is very effective in preventing influenza.

NUTRIENT PROFILE AND ANTI-OXIDANT PROPERTIES OF GREEN TEA

One of the major benefits of green tea happens to be that, it acts as a major anti oxidant, which inturn provides the body protection from free radicals. The free radicals are the natural components which add up momentum to the ageing process and gives rise to illnesses of various forms. So, the most prominent goodness of green tea lies in the fact that it helps in delaying age and saves you from getting affected by different diseases. The more a person will be exposed to sunlight, pollution and smoking, the more the free radicals will increase in the blood stream. Including green tea in your lifestyle will help in preventing the harmful effects and keep you young for a longer period of time. Tea is also an important source of flavonoids in the diet with levels approaching 200 mg/cup for a typical brew of black tea. The flavonoids found in green and black tea is very effective antioxidants in vitro and may therefore be active as antioxidants in the body. Green tea contains polyphenols which are thought to improve health, particularly catechins, the most abundant of which is epigallocatechin gallate. *In vitro* and animal studies as well as preliminary observational and clinical studies of humans suggest that green tea can reduce the risk of cardiovascular disease and cancer as well as beneficially impact bone density, cognitive function, dental cavities, and kidney stones. However, the human studies are sometimes mixed and inconsistent. Green tea also contains carotenoids, tocopherols, ascorbic acid (vitamin C), minerals such as chromium, manganese, selenium or zinc, and certain phytochemical compounds. It is a more potent antioxidant than black tea although black tea has substances which green tea does not such as theaflavin. In addition to this there are four primary polyphenols in green tea and they are often collectively referred to as catechins. Powerful antioxidants, catechins have been shown in recent studies to fight viruses, slow aging and have a beneficial effect on health. The principal catechin is EGCG whose composition in green tea is believed to be 100 times more potent than vitamin C and 25 times better than vitamin E as an antioxidant. The production of free radicals

in the body is the main cause of many 'lifestyle' diseases like diabetes, cataract, atherosclerosis, Alzheimer's disease and skin cancer. The antioxidants in green tea fight these free radicals and therefore these diseases. The main green tea benefits include helping with cancer, infections, high cholesterol issues, impaired immune function, cardiovascular diseases and rheumatoid arthritis. The components that make drinking green tea bring all these benefits are called catechin polyphenols, and inside this group there is one particular anti-oxidant that stands out among the rest: epigallocatechin gallate or EGCG. As an antioxidant, EGCG inhibits the growth of cancer cells, and also kills these cells without making any damage to healthy tissue. As it has been said, it lowers cholesterols and aids in preventing heart attacks and strokes and also prevents the formation of abnormal blood clots. This component also limits the negative effects of smoking and a diet with fat. Over the last few decades green tea has been subjected to many scientific and medical studies to determine the extent of its long-purported health benefits, with some evidences suggesting regular green tea drinkers may have lower chances of heart disease and developing certain types of cancer. Green tea has also been claimed as useful for "weight loss management" possibly by inducing thermogenesis and stimulating fat oxidation.

Biochemical significance of Green tea : Green tea antioxidants are vitamin C, E, minerals, and particularly polyphenols which are the powerful antioxidants found in green tea. Polyphenols are naturally occurring compounds in green tea that accounts for its unique flavor and antioxidant potential. Its color is due in part to chlorophyll and in part to the polyphenols in green tea. Polyphenols, main green tea antioxidant, were found to be two hundred times the antioxidant punch of vitamin E (www.oxidantdaily.com). Green tea's antioxidant polyphenols have four types. They are epicatechin, epicatechin gallate, epigallocatechin, and epigallocatechin gallate. These four polyphenols are often called catechins as a group. Among the polyphenols found in green tea, epigallocatechin gallate or EGCG stands out. According to research, the strong antioxidant properties of green tea are mainly due to the higher concentration of EGCG. EGCG extends its protective action over the fatty acids and lipids in the brain. These fatty acids and lipids, unfortunately, are very susceptible to the effects of free radicals resulting in rapid ageing of the brain. By keeping these parts of the brain fresh, EGCG helps to keep us young and alert.

Green tea can be found in the form of "tea bags", capsules and even powder.

HEALTH BENEFITS OF CONSUMING GREEN TEA :

Cardiovascular Diseases

Green tea represents a promising tool for the

prevention of cardiovascular disorders. The antioxidants in green tea decrease the risk of blood clots, blood pressure, blood sugar and bad cholesterol and so provides protection against cardiovascular diseases. A series of animal and human studies have highlighted the heart-friendly activity of green tea. Green tea is also believed to improve the LDL-HDL cholesterol ratio, triglycerides and fibrinogen - all blood indicators of heart disease. Green tea helps to reduce cholesterol levels. Japanese studied and confirmed that regular green tea consumption provides protection against coronary artery disease. The more green tea people consume the less likely they are to have coronary artery disease. Underlying mechanisms for the heart beneficial effects of tea include vasculoprotective, anti-oxidative, anti-thrombogenic, anti-inflammatory, and cholesterol-lowering properties of tea flavonoids.

Cholesterol-Lowering Effect

Green tea lowers total cholesterol and LDL cholesterol levels and improves the ratio of HDL cholesterol to LDL cholesterol. Studies have shown that people who drink green tea as a daily part of their diet have lower cholesterol levels than those who do not drink any green tea. It was observed that, on average, the more green tea that people drink the lower their total and LDL cholesterol levels were observed. In one human study, as little as 2 cups per day lowered LDL cholesterol levels by as much as 13 mg. Green tea may also help keep cholesterol levels down even when the diet is high in fat. Studies of animals fed a diet rich in lard and cholesterol found that those receiving green tea catechins had lower cholesterol levels and other indicators of heart disease risk than those that didn't receive the catechins. Researchers believe that one of the underlying mechanisms by which green tea lowers blood cholesterol levels is by reducing lipids absorption in the digestive tract and promoting their excretion from the body.

Good for Teeth

Green tea is effective and proven remedy to prevent tooth decay. It kills the bacteria that causes dental plaques and halitosis (bad breath) and increases the acid resistance of tooth enamel. Green tea also contains fluoride which is good for teeth. It can kill the bacteria that causes dental plaque. It checks dental decay by inhibiting the growth of oral bacteria and so fights cavities. When used as a mouth rinse, this herbal drink reduces plaque formation. It also counters bad breath.

Cancer Fighting Properties

A new study published in the Clinical Cancer Research reveals how green tea works to curb the development of bladder cancer. Green tea extract inhibits the growth and proliferation of cancerous cells, the study

claims. Researchers at the University of California Los Angeles (UCLA) have found that green tea was able to target cancer cells while leaving healthy cells alone.

Liver Protection

Green tea appears to support healthy liver, Population-based study has shown that men who drink more than 10 cups of green tea per day are less likely to develop disorders of the liver. Animal studies demonstrated that green tea helps to protect liver from the damaging effects of toxic substances such as alcohol.

Stress Buster

Catechin, present in green tea removes sleepiness and works as a stress buster. If you are in need of an extra boost, then green tea with the caffeine content is a good stimulant for short time energy. The drink has got a diuretic effect and prevents rashes, indigestion and disease called beriberi. Green tea chemicals destroy harmful microbes only.

Helps in Losing Weight

There is strong evidence that green tea has fat-burning properties and promotes weight loss, especially when combined with increased physical activity and a healthy diet. Green tea polyphenols are known to promote weight loss by increasing the metabolism of fats by the liver (thermogenic effect), inhibiting lipase (fat absorption enzyme) in the digestive tract, and providing a feeling of satiety and fullness. Recent high-quality study demonstrated that green tea can reduce body weight in obese persons by increasing energy expenditure and fat oxidation. The results of a Japanese study also confirm fat-burning properties of green tea. Dulloo et al. showed the effects of green tea extract on energy "burning" in humans. It was concluded that the men who took daily doses of a green tea extract containing EGCG plus caffeine, in an amount equivalent to that found in about 3 cups of green tea, burned about 80 more calories per day than those who didn't take the extract.

New evidence is emerging that green tea can even help dieters. It contains no calories – so is useful to those who want to lose weight. Researchers have found that men who were given a combination of caffeine and green tea extract burned more calories than those given only caffeine or a placebo. Green tea is less processed than black tea and contains rich sources of antioxidants which protect the body's cells from damage.

Antimicrobial Activity

Green tea catechins have anti-bacterial, anti-viral and anti-fungal activity. These include some types of salmonella, influenza virus and herpes simplex. Its bacteria-destroying abilities can help prevent food

poisoning. A US study suggests a component of green tea may be useful in treating severe sepsis, an abnormal immune system response to a bacterial infection.

GREENTEA AND INTESTINAL BACTERIA

Lee *et al.* showed the amazing effects of tea catechins was their ability to destroy disease-causing bacteria like *E. coli*, *Salmonella*, *Staphylococcus aureus* and *Clostridium*, especially when they reside in the digestive tract. Catechins also inhibited the growth of the disease-causing bacteria, especially *Clostridium perfringens* (a common cause of food poisoning), *Clostridium difficile* (which is linked to colitis), and *Bacteroides* (which can cause abscesses if the bacteria escape from the intestines). But the gut's "friendly" bacteria, including *Bifidobacterium* and *Lactobacillus*, were relatively unaffected by the tea catechins.

Retarding the Development of Arthritis, Parkinson's and Alzheimer's

Green tea has the power to subdue the enzyme that ruins cartilage and thus helps you in keeping away from contracting arthritis. Alzheimer's is mainly caused due to reduction in the level of acetylcholine in the brain. Green tea defends against the reduction of acetylcholine and aids in slowing down the process of Alzheimer's contraction. Green tea protects the destruction of brain cells thereby making the probability of contracting Parkinson's to minimal levels within our body. Parkinson's is a chronic, progressive movement disorder that causes symptoms such as tremor, slowness of movements, limb stiffness, and difficulties with balance and coordination. Researchers at Singapore's Yong Loo Lin School of Medicine and National Neuroscience Institute have recently found that drinking just 6 oz. of black tea per day may lower the risk of developing Parkinson's by over 70 percent. They speculated that the flavonoids, with their anti-inflammatory effects on the cardiovascular system, may help ward off Parkinson's by increasing circulation to the brain.

Anti-clotting Effect

Green tea also appears to prevent the formation of blood clots (thrombosis). Green tea catechins produce potent antithrombotic effect by inhibition of platelet aggregation (blood clot formation).

Increased Exercise Endurance

Animal studies indicate that green tea increases exercise endurance. Green tea catechins increase

metabolic capacity and utilization of fatty acid as a source of energy in skeletal muscle during exercise.

As a Beauty Aid

Many skin preparations contain green tea extracts - from deodorants to creams. Recent research suggests that green tea may protect the skin against the damage caused by ultraviolet rays.

OTHER HEALTH BENEFITS

Green tea helps to reduce the severity of rheumatoid arthritis, cataract, diabetes and impaired immune infection. It fights viruses and can help protect your joints and stave off arthritis in two ways – by reducing inflammation and by protecting against cartilage breakdown. It can even help improve joint mobility. It is believed to help boost immunity with its stimulating effect on the immune system. It acts as a herbalist for aiding in the circulation of the blood, a detoxifier for the blood and an aid in curing liver ailments. Green tea is also good for women experiencing menopause, being a good source of vitamins and minerals.

Fights Against HIV

Being an anti bacterial agent, green tea is said to prevent the HIV from getting bound to the healthy cells of your body with ease.

Improved Memory and Learning Ability

One of the important health benefits of regular green tea drinking is improved memory and learning ability. Population-based study in Japan revealed that high green tea drinking maintains cognitive function. Also, according to the results from animal studies, green tea consumption may enhance learning and memory ability. The main components of green tea that are thought to work on improving brain function are polyphenols, epigallocatechin-3-gallate (EGCG), a very strong antioxidant. The high use of oxygen during the metabolic processes leads to the generation of a large number of free radicals (a highly reactive molecule). EGCG can penetrate the brain's blood barrier and is able to enact its antioxidative affects on the free radicals that cause damage in the brain.

Today's scientific research in both Asia and the West is providing hard evidence for the health benefits long associated with drinking green tea. So, we should go ahead to formulate a newer kind of anti-ageing formulated drink and enjoy the magical drink which would have myriad therapeutic and medicinal properties.

- **Rakesh Kumar and Binita Rani**

Acknowledgement :
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QUIZ

- Q.1 Who is the author of the book “Train to Pakistan”?
- Q.2 Which country does Al Jazeera TV Channel belong to?
- Q.3 Who set Bande Mataram to tune?
- Q.4 In which year the first General Election was held in Independent India?
- Q.5 Which country is the largest tea producer?
- Q.6 Who is the first Dalit woman chief minister?
- Q.7 What is the name of the first Newspaper published in Indian language?
- Q.8 Whose autobiography is : Daughter of the East?
- Q.9 Where is the SAARC Head Quarters situated?
- Q.10 Which Mughal Emperor gave permission to the East India Company to conduct business in India?
- Q.11 What is the real name of Chanakya?
- Q.12 Whose quote is this? “ I know nothing but the fact of my ignorance”
- Q.13 Who was the editor of the magazine 'Harijan'?
- Q.14 Name the architect who outlined the borders between India and Pakistan?
- Q.15 Where was Sher Shah buried?
- Q.16 Which chemical element derives its name from a Green word meaning “bearer of light” because of its ability to glow in the dark?
- Q.17 Which freedom fighter composed Srimad Bhagavadgita Rahasya while he was imprisoned in the Mandalay Jail?
- Q.18 In Hindu Mythology, Swaha is the wife of which God?
- Q.19 What was the name of Rani Laxmibai in her childhood?
- Q.20 What is the name of the Physician who invented cornflakes?
- Q.21 Who invented the computer mouse?
- Q.22 Who is the author of Betal Panchvimsati?
- Q.23 The name of which Indian Union Territory means a “hundred thousand islands” in Sanskrit?
- Q.24 What is the study or collection of coins, banknotes and medals called?
- Q.25 Tripitaka is the sacred text of which religion?

For answers see page 48

सामाजिक जीवन में योग एवं आध्यात्म का महत्त्व

योग का ज्ञान आवश्यक है, ताकि हमारा कर्म उन्नत हो, चित्त एकाग्र हो, मन संतुलित हो, सम भावना हो और हम दुःख के प्रभाव से प्रभावित न हों। हमें आघातों से बचने की क्षमता प्राप्त हो, जीवन में बहुमुखी प्रतिभा का विकास हो, सफलता मिले, तनाव और भौतिक जीवन में अगर हम असफल भी होते हैं तो उसका सामना हम हिम्मत के साथ करें तथा जीवन कल्याणमय हो।

योग का सामाजिक जीवन में व्यावहारिक प्रयोग एवम् उपयोग है। भगवान, श्री कृष्ण ने अर्जुन को लड़ाई के मैदान में जो गीता सुनाई, उसका यही प्रयोजन था। यह गीता उन्होंने न तो साधु-संन्यासियों को सुनाई और न ही धर्मराज युधिष्ठिर को। गीता किसको सुनाई एक विषाद और निराशा से भरे हुए मनोकायिक रोग से पीड़ित व्यक्ति को।

आज योग समाज का अभिन्न अंग बन चुका है। बिहार योग विद्यालय के संस्थापक श्री स्वामी सत्यानन्द जी का यह कथन अब पूर्णतया साकार होता प्रतीत होता है — “योग अतीत के गर्भ में प्रसुप्त कोई कपोल-कथा नहीं है। यह वर्तमान की सर्वाधिक मूल्यावान विरासत है। यह वर्तमान युग की अनिवार्य आवश्यकता और आने वाले युग की संस्कृति है।”

योगाभ्यास द्वारा हमें अपनी भारत की संस्कृति तथा जीवनशैली को देखने की वह अन्तर्दृष्टि मिल सकती है, जो आज तक प्राप्त न हो सकी। यह चमत्कार योग द्वारा ही सम्भव है।

योग धर्म नहीं है। वह प्रकृति के नियमों के अनुसार जीने का विज्ञान है। योग शब्द संस्कृत धातु ‘युज्’ से बना है जिसका अर्थ होता है ‘जोड़ना’। इस जोड़ने को आध्यात्मिक शब्दावली में व्यष्टि चेतना का समष्टि चेतना से मिलन कहा जाता है। इसके अनुसार योग की अन्तिम परिभाषा है — “योग चेतना का विज्ञान है”। संक्षेप में योग का लक्ष्य है समन्वित व्यक्तित्व का विकास। व्यावहारिक स्तर पर योग शरीर, मन और भावनाओं में संतुलन और सामंजस्य स्थापित करने का साधन है।

योग शारीरिक, मानसिक और आध्यात्मिक स्वास्थ्य की एक सुव्यवस्थित प्रणाली है। योग दर्शन के अनुसार मानव तीन आधारभूत तत्त्वों — जीवनी शक्ति (प्राण), मानसिक शक्ति (चित्त) और आध्यात्मिक शक्ति (आत्मा) का सम्मिश्रण है।

स्वास्थ्य का रहस्य — प्राण, मनस, और आत्म शक्तियों का उचित और संतुलित वितरण। योग के कई अंग हैं जिन्हें हम समन्वित योग के नाम से जानते हैं। हठयोग, कर्मयोग, ज्ञानयोग, राजयोग, भक्तियोग, कुण्डलिनी योग, मंत्रयोग, सेवा-योग और समर्पण योग। मानव के सम्पूर्ण व्यक्तित्व के विकास के लिए इन योग के अंगों का ज्ञान भी जरूरी है।

योग का प्रथम चरण — योगाभ्यास के प्रथम चरण में हठयोग का अभ्यास आता है। हठयोग के अभ्यास द्वारा शरीर-शुद्धि, प्राणायाम के द्वारा नाड़ी शुद्धि और मंत्र योग द्वारा आध्यात्मिक शक्ति का विकास कर मन, प्राण और आत्म शक्तियों को संतुलित किया जा सकता है। सम्पूर्ण स्वास्थ्य के लिए हमारे साधारण जीवन का आधारभूत जीवन आध्यात्मिक है।

आसन और प्राणायाम — शारीरिक स्वास्थ्य आसन और प्राणायाम के द्वारा प्राप्त किया जाता है। हर व्यक्ति के लिए पाँच ही आसन अनिवार्य है। क्योंकि इनसे रोगी का रोग भी दूर होता है और स्वस्थ व्यक्ति के स्वास्थ्य में वृद्धि भी होती है। शरीर के अनुशासन के लिए, प्राणों के प्रवाह को सुचारु रूप से चलाने के लिए जो पाँच मुख्य आसन हैं, वे हैं — ताड़ासन, तिर्यक ताड़ासन, कटि चक्रासन, सूर्य नमस्कार और सर्वांगासन। इन पाँच आसनों के अतिरिक्त और कुछ करने की आवश्यकता नहीं।

पाँच आसनों के बाद दो प्राणायाम। पहला प्राणायाम है नाडीशोधन प्राणायाम, जिससे हम स्नायुओं एवम् मस्तिष्क के तनावों को दूर कर सकते हैं और मस्तिष्क के केन्द्रों में प्राणों का पुनर्संचार कर सकते हैं। दूसरा है भ्रामरी प्राणायाम। ये दो प्राणायाम मस्तिष्क की चंचलता और उत्तेजना को शांत करने में सक्षम है।

आज के वर्तमान में जीने की जीवनशैली में प्रत्येक व्यक्ति तनाव से पीड़ित है लेकिन उससे निपटने में सक्षम नहीं है। योगाभ्यास, योग साधक को माँ की तरह लालन-पालन करता है एवम् सुख, शांति और प्रसन्नता का शाश्वत उपहार प्रदान करता है।

योग एक ऐसा शब्द है जिसे सबने सुना और इसके विषय में सबकी अपनी-अपनी कल्पना, मान्यताएँ एवम् विचार हैं। भारत में इस विषय में अधिकतर मान्यता यही थी कि योग मार्ग उन थोड़े-बहुत लोगों के लिए है जिनका घर-द्वार से कोई मतलब नहीं। इसीलिए देश में कई शताब्दि तक योग के प्रति उदासीनता बनी रही। यद्यपि उस समय भी ये लोग योगी-महात्माओं से सत्संग करते, प्रवचन सुनते थे परन्तु योग की शुरुआत तब करते थे जब कर्म के त्याग का समय आ जाता था।

अर्जुन युद्ध भूमि में खड़ा था और उसने मोह से वशीभूत होकर युद्ध करने से इन्कार कर दिया। तब भगवान श्री कृष्ण ने अर्जुन के मोह को योग के उपदेश से दूर किया। इसी प्रकार जब श्री राम मोहाबिष्ट हो गये तब वशिष्ठ ने योग वशिष्ठ का उपदेश देकर उनका मोह दूर किया। इस बात को प्रत्येक भारतवासी जानते होंगे। आज वर्तमान आधुनिक और वैज्ञानिक युग में योग के ऊपर जो शोध कार्य हुए उसके आधार पर विज्ञान कहता है योग दुखी के लिये है, योग रोगी और निर्बल व्यक्ति के लिये है, योग आचारहीन व्यक्ति के लिए है, संन्यासी के लिये तो योग है ही नहीं। क्योंकि संन्यास अपने आप में योग है।

बिहार योग विद्यालय के संस्थापक श्री स्वामी सत्यानन्द जी का कहना है कि — “सांसारिक मनुष्य का जीवन एक अनवरत यज्ञ है। घर के चूल्हों को जलता रखने, अपने सामाजिक, राष्ट्रीय और अन्तरराष्ट्रीय दायित्वों को पूरा करने के निमित्त किये गये कार्य उस यज्ञ की आहुतियाँ हैं। एक बार यह सत्य समझ में आ जाय तो अपने जीवन की स्थिति के अनुसार अहर्निश कठिन श्रम के मध्य भी व्यक्ति के जीवन में आत्म-साक्षात्कार की ज्योति जलायी जा सकती है।” और आत्म-ज्योति योग साधना के अभ्यास द्वारा प्रगट होती है। इसमें किसी प्रकार के सन्देह की गुंजाइश है ही नहीं।

उम्र योग साधना में बाधक नहीं है। चाहे व्यक्ति जीवन में प्रवेश कर रहा हो, अपनी युवावस्था में हो या जीवन के आखिरी मुकाम की ओर अग्रसर हो, वह योग अभ्यास सीख सकता है, कर सकता है। योगाभ्यास में उम्र की सीमा नहीं है।

योग असम्भव सदगुणों को उत्पन्न करने में रूचि नहीं लेता। अच्छा हो उन्हें नैतिक लोगों के लिए ही छोड़ दें। योग एक विवेकपूर्ण विज्ञान है, जिसमें उधमी मन को शान्त करने, शारीरिक एवम् मानसिक ऊर्जाओं का उपयोग करने और उनमें लचीलापन बनाये रखने की विधियाँ हैं।

आसन और प्राणायाम योग में सर्व परिचित विषय है। मानव की शारीरिक और मानसिक प्रकृति को सुधारने के लिये जो नयी चिकित्सा पद्धतियाँ अपनायी जा रही हैं उनका मूल तत्व आसन और प्राणायाम है। नई पद्धतियाँ हैं — बायोफीडबैक और अन्य चिकित्सा पद्धतियाँ। ये सभी शिथिलीकरण, आसन तथा प्राणायाम जैसी मूलभूत क्रियाओं पर आधारित हैं तथा उनका उद्देश्य है जीवन में परिवर्तन लाना और मानव जीवन को सुधारना।

बायोफीडबैक एक आधुनिकतम पद्धति है जो अभी तक असाध्य माने जाने वाले रोगों की चिकित्सा में हमारी मदद करती है। इसे हम यांत्रिक योग कह सकते हैं। शायद यह आज के विज्ञान का पहला प्रयोग होगा कि जब टेक्नोलॉजिकल समाज ने मनुष्य को अंतर्ज्ञान शक्ति प्रदान करने के लिये यंत्र से मदद ली है।

वैज्ञानिकों ने देखा है कि इन नयी पद्धतियों से हम माइग्रेन, हाइपरटेंशन और खुजली जैसे साइकोसोमेटिक रोगों को दूर कर सकते हैं। नवीनतम शोधों में प्रमाणित किया जाता है कि आसन और प्राणायाम सम्पूर्ण शरीर के नियंत्रण के लिये अधिक प्रभावशाली है। सिर्फ एक अंग को संतुलित करने के लिए नहीं अपितु सम्पूर्ण मन के नियंत्रण के लिये योगाभ्यास ही अधिक लाभकारी सिद्ध हो सकते हैं। इस नियंत्रण और संतुलन द्वारा हम जीवन के प्रत्येक क्षेत्र का मार्गदर्शन स्वयं कर सकेंगे।

योग हमारी चेतना का विकास करता है। इसके द्वारा हम अपने मन की गहराई को नापने में समर्थ होते हैं। यह चेतना हमें उच्चतर चेतना के द्वार तक ले जाती है। हम प्रतिदिन 21600 बार श्वास लेते हैं। योगाभ्यास के समय आध्यात्मिक लाभ हेतु श्वास के प्रति सजगता विकसित करने का निर्देश दिया जाता है। अतः अपने जीवन को योग की शरण में ले जाइए।

॥ योगं शरणं गच्छामि ॥

— स्वामी पूर्ण प्रज्ञानन्द सरस्वती

साम्भार : योगविद्या से उद्धृत

अनमोल वचन

यदि हम प्रेमयुक्त होने के साथ-साथ नियमयुक्त होकर नहीं रह सकते तो आपमें अवश्य किसी शक्ति की कमी है। अपनी जाँच करें व उस कमी को पूरा करें।

प्रेरणात्मक विचार

उत्कृष्टता वो कला है जो प्रशिक्षण और आदत से आती है। हम इसलिए सही कार्य नहीं करते कि हमारे अन्दर अच्छाई या उत्कृष्टता है, बल्कि वो हमारे अन्दर इसलिए है क्योंकि हमने सही कार्य किया है। हम वो हैं जो हम बार बार करते हैं। इसलिए उत्कृष्टता कोई कार्य नहीं बल्कि एक आदत है।

— अरस्तू

कोई काम शुरू करने से पहले, स्वयं से तीन प्रश्न कीजिये — मैं ये क्यों कर रहा हूँ, इसके परिणाम क्या हो सकते हैं और क्या मैं सफल होऊंगा। और जब गहराई से सोचने पर इन प्रश्नों के संतोषजनक उत्तर मिल जायें, तभी आगे बढ़ें।

— चाणक्य

मैं सुनता हूँ और भूल जाता हूँ, मैं देखता हूँ और याद रखता हूँ, मैं करता हूँ और समझ जाता हूँ।

— कन्फ्यूशियस

आत्मविश्वास के साथ आप गगन चूम सकते हैं, और आत्मविश्वास के बिना मामूली सी उपलब्धियाँ भी आपकी पकड़ से परे हैं।

जीवन के सात सच्चे मंत्र

१. दर्पण - झूठ नहीं बोलने देगा
२. ज्ञान - भयभीत नहीं होने देगा
३. अध्यात्मक - मोह नहीं करने देगा
४. सत्य - कमजोर नहीं करने देगा
५. प्रेम - ईर्ष्या नहीं करने देगा
६. विश्वास - दुःखी नहीं करने देगा
७. कर्म - असफल नहीं होने देगा

FINANCE

BANKING

Conundrums of Bank Loan

In earlier times, people used to avoid taking a loan at all costs. Seeking loan from any individual was considered outright embarrassing and approaching even a Bank too was frowned upon by elders, particularly when the loan was not meant for business purposes.

Times have changed dramatically. People are no longer averse to loans, especially from Banks. Banks too have shed their conservative approach towards retail lending. As a matter of fact, Bank loan has become the preferred mode of finance for certain purposes; such as business, housing, education, vehicle, consumer durables etc. With the burgeoning middle class and expansion of banking network, the market of Bank finance has grown exponentially. Banks, too, are competing among themselves to garner the lucrative retail loans business (housing, vehicle, consumer durables, personal loans, education loans, gold loans etc.) and are aggressively chasing high net worth individuals.

While the ease of getting loans from Banks has increased greatly since liberalization of economy two decades ago, there is still apprehension and anxiety in the minds of the common man when he approaches a Bank for a loan. However, the anxiety and apprehension can be minimized, if not altogether eliminated by advance preparation. If one knows the relevant guidelines, and also understands the psyche of the Banker, one can equip himself well to meet all the requirements.

The first and foremost thing to understand is that the Banker does not know you as well as you know yourself. The Banker has thousands of customers in his fold and would possibly be meeting close to fifty customers on a busy day. You may be a person of utmost integrity, sincerity and honesty; and you may be one hundred percent sure of your own creditworthiness; but the Banker would not know unless you help him know everything about yourself. So, the first thing you must understand is that you need to furnish *proactively* all the information, document, references etc. which would convince the Banker about your credibility and creditworthiness. The Banker may ask searching, even intrusive, questions - *it is his job and responsibility* - and you must allow him to do so without feeling unduly offended.

It does help if you are already a customer of a Bank. But it is *wrong* to presume that the Bank will extend a loan merely because you are maintaining deposit accounts. One sometimes takes the attitude that since he is maintaining an account with a particular Bank, that Bank is duty bound to give him a loan. Such an attitude is certain to put off the Banker. He will perhaps tell you that while your deposits are very welcome, keeping your deposit is also a service

being extended to you by the Bank and that the loan is a separate transaction altogether and the two cannot be automatically linked. If you take umbrage, the Banker may very politely ask you to shift your deposit to some other Bank if you so wished. It is wise not to *over play* the card of you already maintaining a deposit account in the Bank.

It may appear different from a customer's perspective, but the fact is that any Bank's loan department is perennially short of manpower. This is one of the major factors behind the delays that so often take place in processing of your loan proposal. You need not only to have patience, but you also need to keep some cushion. You must approach Banks sufficiently in advance to cover for unexpected delays (loan clerk/officer may proceed on leave).

It is always a good idea to approach more than one Bank simultaneously, even if it leads to some extra cost. Anything can happen to derail/delay the loan process and it is not a good idea to put all your eggs in one basket.

Lastly, save for exceptional cases of loans against deposits or loans under Govt. sponsored schemes, no one can *demand* loan from a Bank *as a matter of right*. Discretion of the Banker plays a great role and it is difficult even for senior executives of a Bank to force the hand of subordinate officers in these matters. A Bank Manager cannot be persuaded or coerced to sanction a loan against his best judgement. Unfortunately, this discretion sometimes leads to unnecessary delay and unjustified denial, not to speak of corruption in some cases.

Let us now turn our attention to the basic/fundamental requirements.

1. KYC documents

RBI requires all Banks to follow the "Know Your Customer" (KYC) norms rigorously and no Banker is going to make any compromise on KYC documents. It is your duty to provide the KYC documents (mainly relating to your identity and your address, and additionally relating to your business/profession if asked).

For the purpose of proof of identity, Banks accept Permanent Account Number (PAN), Passport, Identity Card issued by Central/State Govt., Pension Payment Order, Aadhar Card, Voter ID Card etc. These documents should be showing your photograph conspicuously.

For the purpose of address, Banks accept electricity bill, holding tax receipt, telephone bill, driving licence, certificate issued by employer being Central/State Govt., Bank passbook etc.

It should be understood that the same document

cannot suffice both as proof of identity and proof of residence. These must be two separate documents.

The bank may make independent enquiries about genuineness of the documents produced by you. The bank will most certainly send a letter by post to verify your correspondence address. Satisfying Banks about present and permanent address certainly remains a major headache for many as they may not have a house of their own, may be residing in rented premises and may also not have any telephone/electricity connection in their own name.

Sometimes, the name and address mentioned in Identity Proof document do not match identically with those mentioned in Address Proof document. These lead to complications; and doubts in the mind of Bankers.

2. **Credit Information Reports**

The first thing a Banker will do, on receiving a loan application, is to draw Credit Information Report. Of course, the charges will have to be borne by the applicant.

RBI has made it mandatory for Banks to extract Credit Information Reports (CIRs) before sanctioning a loan. One cannot hope to obtain a loan from Banks if the Credit Information Report is not satisfactory. In India, RBI has approved various Credit Rating Agencies which provide the CIRs on Individuals (Consumer) and Firms/Companies (Corporate). Some of these are CIBIL (Credit Information Bureau of India Limited), Equifax, Dunn & Bradstreet, Experian etc. CIRs show your credit history, including how many times you have approached for loan, for what purpose, which loans were sanctioned, which loan accounts are closed and which are running, what is the position of your loan accounts, what is the amount overdue, whether any of your accounts is NPA etc. If the amount of loan required is above a certain threshold, Banks may take CIR from more than one agency. One can visit the website of these agencies and may draw CIR on one's own by registering and paying a small/nominal fee. It is a good idea to know your Credit Score.

If any of your accounts is NPA anywhere, be certain that no Bank will sanction any loan to you. Also, if any loan account is overdue in any Bank, or even Credit Card dues are pending, The bank will ask you to regularize the account first and produce a certificate to that effect from the concerned lender. CIRs keep track of your credit history. It is possible that currently your accounts are running well, but might have been overdue in the past. In such a case, the banker may make enquiries about the circumstances why any loans were NPA/overdue in the past and you will need to satisfy him. •

DID YOU KNOW ?

- The word zoo was first used in the late 19th century as a popular abbreviation for the zoological gardens in Greece.
- Children grow faster in the springtime.
- You blink about 84,000,000 times per year.
- Fish that live more than 800 meters below the ocean surface don't have eyes.
- Human teeth are as hard as rock.
- Fingernails grow nearly 4 times faster than toenails.
- Hummingbirds are the only animal that can also fly backwards.
- It is impossible to lick your elbow.
- The names of the continents all end with the same letter with which they start.
- A snail can sleep for three years.
- All the planets in our solar system rotate anti clockwise except Venus. It is the only planet that rotates clockwise.
- The only two animals that can see behind itself without turning its head are the rabbit and the parrot.
- Everyone's tongue print is different, like fingerprints.
- Our eyes are always the same size from birth, but our nose and ears never stop growing.
- Plants watered with warm water grow larger and more quickly than plants watered with cold water.
- No word in the English language rhymes with month, orange, silver and purple.
- In most watch advertisements the time displayed on the watch is 10:10 because that position of the arms make the brand of the watch visible and it looks like it is smiling.
- Leonardo da Vinci could write with one hand and draw with the other simultaneously.

HUMOUR Laugh

A man who makes coffins was on his way to deliver one of his coffins when his car broke down. Trying not to be late he put the coffin on his head and began heading to his destination. Some policemen saw him and wanted to make some money off him (bribe) so they challenged him.

"Hey, what are you carrying and where are you going?"
The man said "I do not like where I was buried so I am relocating."

"Madam" said the doctor, "your husband needs perfect calm to recover quickly. Here are the sleeping pills."

"Thank you doctor, when should I give them to him?" asked the wife of the patient.

"Don't give them to him but take them yourself" replied the doctor.

A dentist charged a mother 500 rupees for pulling her small son's tooth. "I thought you only charged hundred rupees for pulling a tooth" she complained.

"That's right", the dentist said "but your boy screamed and cried so loudly that he frightened four new patients who left the clinic."

Chemistry teacher : "What is water?"

Dirty looking child : "A colourless liquid that turns black as soon as I put my hands in it"

Customer : "How much for this dog?"

Dog Dealer : "Five thousand rupees"

Customer : "Isn't that too much?"

Dog Dealer : "Isn't the dog too wonderful?"

Customer : "Yes, the dog may be too wonderful but is he faithful also?"

Dog Dealer : "Yes sir, he has been faithful; I have sold him seven times and he has always been back within 12 hours."

"Suresh, what is the opposite of minimum?" teacher asked.

"Minidad, M'am" Suresh replied.

Judge : You have been up before this bench seven times. I fine you Rs. 10000/-

Prisoner : Can I have a discount for being a regular customer?

"How old is your father?" a man asked a boy.

"He is as old as I"

"How can that be?"

"He became a father only when I was born".

Wife : "How would you describe me?"

Husband : "ABCDEFGHGIJK."

Wife : "What does that mean?"

Husband : "Adorable, beautiful, cute, delightful, elegant, fashionable, gorgeous, and hot."

Wife : "Aw, thank you, but what about IJK?"

Husband : "I'm just kidding!"

Santa : What is the name of your car?

Lady : I forgot the name, but it starts with 'T'.

Santa : Oh, what a strange car, starts with Tea. All cars that I know start with petrol.

FUN WITH PROVERB*

Easy Come, Easy Go



When you lose something as easily as you got it then we say easy come, easy go. "I found a good Cross pen a few days back," I told my friend. "Let me have a look at it," he said. "Well yesterday I dropped it somewhere and couldn't find it." I replied. "Tough luck but I guess it was easy come and easy go," said my friend.

*Fun and Laughter with Proverb : W. Sequeira

*Source : Books, Newspapers, Magazines, Periodicals
Compiler : Plagiarist !*

OUR COUNTRY

The National Insignia

National Emblem: It is an adaptation from Sarnath's Lion Capital of Ashoka. It was originally placed atop the Ashoka Pillar at Sarnath. There are four Asiatic lions standing back to back mounted on an abacus with a frieze carrying sculpture in high relief of an elephant, a galloping horse, a bull and a lion separated by intervening wheels (Chakras) which is known as the Dharma Chakra, carved out of a single block of polished sandstone.



The emblem was adopted by the government on 26 January 1950, the day India became a Republic. In the emblem only three lions are visible as the fourth lion is behind, hidden from view.

The words *Satyameva Jayate* from the Upanishada meaning **Truth Always Triumphs** are inscribed below the abacus in Devnagari script.

The National Flag: The national flag is tri-color and horizontal in shape. The top is saffron representing renunciation and sacrifice. The middle is white representing peace and truth and the bottom is dark green representing the earth, fertility and prosperity. There is a navy blue wheel (Ashoka Chakra) in the middle with 24 spokes representing the wheel of law of Dharma. The ratio between the width and length is 2:3. The design of the national flag was adopted by the Constituent Assembly on 22 July 1947.



National Anthem: Rabindranath Tagore's song *Jana Gana Mana* was adopted by the Constituent Assembly as the National Anthem on 24 January 1950. The first stanza out of 5 stanzas of the song form the National Anthem. Playing time of the anthem is approximately 52 seconds.

National Song: The song *Vande Mataram* was composed by Bankim Chandra Chatterjee. It was first sung at the 1896 session of the INC. The tune was given by Rabindranath Tagore. After the National anthem was adopted, *Vande Mataram* was given the status of National Song with equal honour.

National Calendar: The government accepted the recommendation of the Calendar Reform Committee and adopted the Saka era which has normal 365 days and begins with Chaitra as the first month. Chaitra falling on March 22 on a normal year and on March 21 on a leap year.

Indian National Calendar		
Month	Length	Start date (Gregorian)
1 Chaitra	30/31	March 22
2 Vaisakha	31	April 21
3 Jyeshtha	31	May 22
4 Ashadha	31	June 22
5 Shraavana	31	July 23
6 Bhadrapad	31	August 23
7 Ashwin	30	September 23
8 Kartik	30	October 23
9 Margashirsha (Agrayana)	30	November 22
10 Poush	30	December 22
11 Magh	30	January 21
12 Phalgun	30	February 20



National Flower: Lotus is the national flower of India. It is a sacred flower and it occupies a unique position in the art and mythology of ancient India and has been an auspicious and sacred symbol of Indian culture since time immemorial.



National Animal: The tiger is our National Animal for its grace, strength, agility and enormous power.



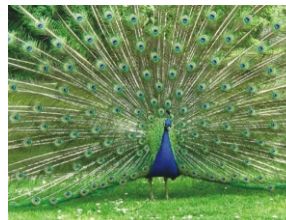
National River: The Ganga (or *The Ganges*) is the longest and the most revered river in India. It travels almost 2510 km from the mountain to the valleys and finally to the plains and meets the Bay of Bengal. It originates in the Gangotri Glacier in the Himalayan snow region.



National Tree: The Banyan tree is our National Tree because of its characteristic and its longevity. This tree is considered immortal and an integral part of the myths and legends of India.



National Fruit: The Mango tree is one of the most important and widely cultivated fruit trees of tropical world. Mangoes have been cultivated in India from time immemorial. There are over 100 varieties of mangoes available in India.



National bird: The Indian peacock is the National Bird of India. It is a colourful bird with beautiful velvet feathers and a slender neck. The male of the species is more colourful than the female species. The dance of the male fanning out the tail and preening his feathers is a gorgeous and a spectacular sight.



National sport: Hockey is India's National Game. •

BOOK REVIEW

VIVEKANANDA : A SOCIO-ECONOMIC THINKER

Timeless Teachings of a Complete Leader

Swami Vivekananda was a multi-dimensional personality who had influenced religious, philosophical, political and nationalistic principles in pre-independent India. He was a patriot and a great lover of humanity. Scholars all over the world have been doing research on his teachings which have a bearing on the socio-economic issues that the world is faced with. His teachings and sermons though old by over 100 years yet they are relevant till now.



Swami-ji was an iconoclast who attacked established customs and values. His timeless teachings have addressed the burning issues of our society and have given directions to a better society with economic uplift of the poor.

Dr. Ranjit Choudhury a well known academician and the president of Swami Vivekananda Seva Trust has brought Swami's timeless teachings closer to the present generation through his Book **Vivekananda : A socio Economic Thinker**. In his book Dr. Choudhury has analysed how fundamentally a monk under the influence of Indian spiritualism and western education realized that socio economic freedom is the basic through which political and spiritual freedom can be achieved. The writer has very ably researched into the circumstances that shaped Vivekananda's economic theory. Innumerable quotes by Swami-ji made the book valuable to the readers. In the list of umpteen works on Swami Vivekananda this book will stand apart for its chapter-wise narration on social philosophy and economic philosophy with simple and easy to understand language.

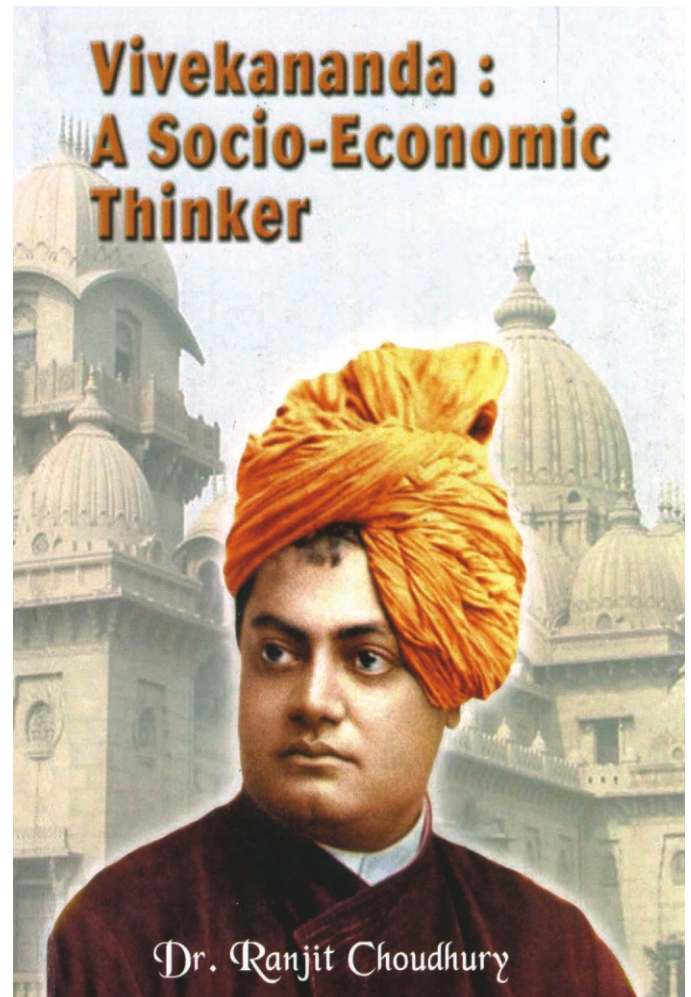
Vivekananda once said "Always remember this that whenever a religious system gains ground with the people at large it has a strong economic side to it. It is the economic side of a religion that finds lodgment with the people at large, and never its spiritual or philosophic side. If you should preach the grandest philosophy in the streets for a year you would not have a handful of followers. But you could preach the most arrant nonsense and if it had the economic element, you would have the whole people with you". Here Vivekananda outlined that total spiritual and political freedom for the people are possible only when they are socio-economically sound and free.

Vivekananda believed that the reverse of creation of

wealth is distribution of wealth which in present day's jargon called inclusive growth. According to the Sanyasi proper distribution of wealth and income was necessary not only for poverty alleviation but also for development of a country. He said these words more than hundred years ago and how relevant these are even today!

Vivekananda was in favour of industrialization and a chapter on his view of industrialization and a mention of his interaction with J.N. Tata make the book more interesting and special for the people of Jamshedpur.

We have no doubt that the book will find a special place among the ardent Vivekananda followers and scholars in India and abroad. A mention of the price of the



book in foreign currency would have been useful for the international buyers.

Scholastik World wishes Dr. Choudhury great success for his book. We look forward to many such well researched publications from him in future. •

अपने खाने को जाने

पपीता

पपीते का मूल स्थान मैक्सिको और वेस्ट इंडीज द्वीप माना जाता है। कहते हैं सत्रहवीं सदी के आरंभिक वर्षों में इसका प्रसार भारत, अफ्रीका, आस्ट्रेलिया तथा विश्व के अन्य देशों में हुआ।

पपीते में 'पॅपेइन' नामक तत्व होता है, जो आहार को पचाने में मददगार साबित होता है। पॅपेइन के अतिरिक्त पपीते में आर्जिनाइन (पुरुषों की नपुंसकता दूर करनेवाला तत्व), कार्पेइन (हृदय के लिए उपयोगी तत्व) तथा फाइब्रिन (रक्त के जमाव में उपयोगी तत्व) आदि एंजाइम भी पाए जाते हैं।

विशेषताएँ : पका हुआ पपीता मधुर, भारी, उष्ण, तैलीय, मृदु-रेचक तथा पित्तनाशक होता है। यह वीर्यवर्धक होता है। पपीता हृदय के लिए हितकारी है। यह पागलपन को रोकने में बड़ा सहायक है। यकृत के लिए भी यह बड़ा हितकारी है। प्लीहा वृद्धि को रोकने में यह महत्वपूर्ण भूमिका निभाता है। कब्ज एवं मूत्र रोग में पपीता अच्छी-खासी औषधि का काम करता है।

पपीते में कुल शर्करा का आधा भाग ग्लूकोज के रूप में तथा आधा भाग फल शर्करा (फ्रूक्टोज) के रूप में होता है। फलों में विटामिन-ए के स्रोत के रूप में आम के बाद पपीते का ही नम्बर आता है। ज्यों-ज्यों पपीता पकता जाता है त्यों-त्यों उसमें विटामिन-सी की मात्रा में वृद्धि होती जाती है।

हवाई द्वीप में किये गए एक प्रयोग के अनुसार एकदम कच्चे पपीते में प्रजीवक-सी की मात्रा 32 मिलीग्राम, हरे पपीते में 40 से 72 मिलीग्राम, अधपके पपीते में 53 से 95 मिलीग्राम तथा पके हुए पपीते में 98 से 136 मिलीग्राम होती है। यह मात्रा प्रति सौ ग्राम के हिसाब से है।

मई से अक्टूबर तक के महीनों में शर्करा एवं विटामिन-सी की मात्रा सबसे ज्यादा होती है। पपीते में विटामिन बी₁, विटामिन बी₂ तथा नियेसिन भी पाया जाता है।

कच्चे पपीते के सफेद (दूधिया) रस में पर्याप्त मात्रा में पॅपेइन नाम का पाचक रस पाया जाता है। पॅपेइन प्रोटीन के पाचन में सहायता करता है।

उपयोग : कच्चे पपीते का रस निकालकर भी उसका सेवन किया जा सकता है। पके हुए पपीते को चबा कर भी खाया जा सकता है। यदि पके हुए पपीते का रस बनाना हो तो मिक्सर में थोड़ा दूध अथवा पानी मिला कर इसका रस भी बनाया जा सकता है। पपीते का रस मजेदार और ताजगी प्रदान करनेवाला होता है।

लाभ :

- कच्चे पपीते का रस आमाशय से कृमि को बाहर निकालने में बहुत ही उपयोगी है।
- यकृत की बीमारियों में भी बहुत लाभदायक है।
- यह महिलाओं के मासिक-स्राव को नियमित कर देता है।

पपीता में पाये जानेवाले तत्व

जल	—	89.6 प्रतिशत
प्रोटीन	—	0.5
चरबी	—	0.1
कार्बोदित पदार्थ	—	9.5
क्षार	—	0.4
कैल्सियम	—	0.01
फास्फोरस	—	0.01
लौह	—	0.4 मिलीग्राम / 100 ग्राम
प्रजीवक 'ए'	—	2020 आं.रा.इ. / 100 ग्राम
प्रजीवक 'सी'	—	46 से 136 मिग्रा / 100 ग्राम

- पेचिश, अति-अम्लता, अजीर्ण तथा कोष्ठबद्धता में यह उपयोगी औषधि का काम करता है।
- पांडुरोग तथा प्लीहा वृद्धि में भी पपीता बहुत उपयोगी साबित हुआ है।

- इसका सेवन से शरीर का रंग साफ होता है। शरीर का रंग साफ करने के लिए प्रतिदिन लगभग 200 मिलीलीटर पपीते के रस का सेवन करना चाहिए। यदि रस-उपवास रखा जाए और 200 मिलीलीटर पपीते के रस के साथ 200 मि.ली. ककड़ी के रस का एक-एक घंटे के अंतराल पर सेवन किया जाए तो और भी जल्दी लाभ होता है।

- पपीते में विविध एंजाइम होने के कारण कैंसर के उपचार में भी इसके सेवन की सिफारिश की जाती है।

- अत्यधिक मात्रा में विषैली दवाइयों का सेवन करने से आँतों में स्थित उपयोगी कीटाणु नष्ट हो जाते हैं। ऐसी स्थिति में आँतों में इन जीवाणुओं की पुनर्वृद्धि के लिए पपीते का रस बहुत ही उपयोगी साबित हुआ है।

- पपीते में मूत्रल गुण होता है। इसलिए यह मूत्रपिंड के रोगों में भी लाभकारी है।
- पका हुआ पपीता कब्ज को दूर करने की अचूक औषधि है। पपीता दमा में भी राहत पहुँचाता है।
- कच्चे पपीते में सफेद गूदे को चेहरे पर रगड़ने से मुँहासे दूर हो जाते हैं और चेहरे की झुर्रियाँ खत्म हो जाती हैं।
- पपीते के बीजों का उपयोग प्यास बुझाने एवं आँतों के कीड़ों को नष्ट करने के लिए किया जाता है। •

साभार : रसाहार के द्वारा तन्दुरुस्ती और रोगमुक्ति डॉ० धीरेन गाला

YOGA

BENEFITS OF SURYA NAMASKAR

Yoga and meditation have been an intrinsic part of the ancient Indian culture. Regular pranayam and yogic postures offer a large number of medical benefits and followed by a large number of people across the globe. While Yoga has diversified into various forms and branches one exercise or yogic posture that remains the centrifugal force is the Surya Namaskar Asana. Surya Namaskar is an accumulation of twelve different postures that are performed in a sequence. There are immense medical and spiritual benefits of regularly practicing Surya Namaskar. Some of the most well known benefits of Surya Namaskar are discussed below.

Enhances Flexibility: The twelve intrinsic postures or asana performed in one full cycle of Surya Namaskar offer a complete physical workout for the body. The asana of Surya Namaskar add flexibility in the limbs by offering a complete workout for all major muscles groups of the body. From the arms, legs to the core back and spine, Surya Namaskar Asana is the only yogic posture that offers a quick workout for all muscle groups leading to enhanced agility and flexibility.

Offers Natural Detoxification:

Surya Namaskar puts equal emphasis on breathing techniques while performing the yogic posture. The sequential deep breathing along with recommended exhalation of breath as per the asana rules offers a natural detoxification to the body. Surya Namaskar offers natural detoxification of the lungs leading to inflow of fresh breath in the air stream and blood. Just by performing regular Surya Namaskar and leading a healthy life with a well balanced diet, one can get rid of most toxins present in the human body.

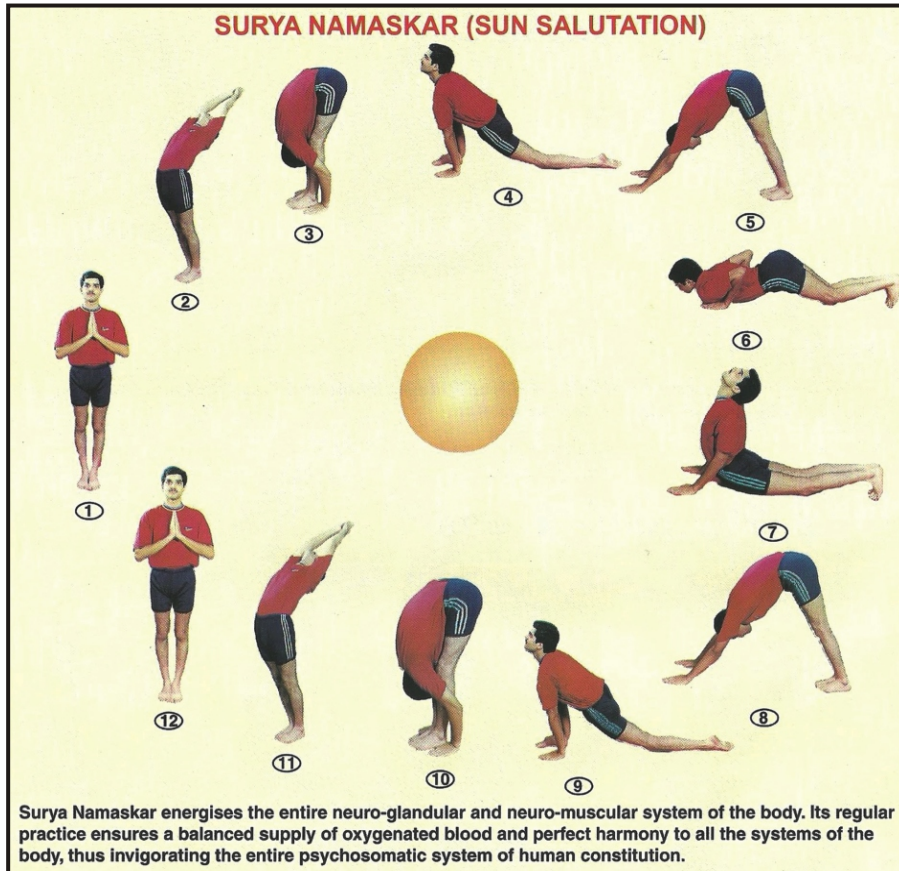
Boosts Health: Surya Namaskar boosts the overall health of the individual offering various multifold benefits. Surya Namaskar is considered to be one of the best exercises to overcome digestion related problems. Women with irregular menstrual cycles can get relief by performing Surya Namaskar regularly. It is also helpful in eliminating any fears or mental cobwebs for women regarding pregnancy and childbirth. Surya Namaskar adds glow and radiance to the skin as well as helps in hair growth apart from boosting the overall immune system of the body.

Improves Digestion: If you are suffering from digestion related problems, Surya Namaskar is the best solution to get rid of all stomach related diseases permanently. The twelve asana of Surya Namaskar put great emphasis on strengthening the core muscle group leading to better efficiency of abdominal organs. People suffering from constipation or bloated stomach and dyspepsia have gained positive results by practicing Surya Namaskar each day in the morning on an empty stomach.

Strengthens the Spine: The spine is the most essential bone of the human body which is largely responsible for a number of bodily functions. Surya

Namaskar offers a wonderful support structure to the spine by strengthening the core muscle groups of the abdomen leading to a strong spine without any undue pressure.

Helps in Weight Loss: If weight loss is your prime goal, look no further than the Surya Namaskar. Performing Surya Namaskar each day in the morning on an empty stomach can help aid weight loss much better than any fad diet. •



TRUE LIFE

HOME AWAY FROM HOME

A personal experience of a teenage boy

A quirk of fate landed me as a boarder in the hostel of the same school where I had studied as a day scholar for the last four years. My father got a much awaited promotion and with it came a transfer order to Barrackpore in West Bengal. He had to leave in January to join at his new place of posting. My mother and sister also followed him in April after my sister cleared her class fifth in March 2011. Since I was studying in class IX and was promoted to class X, it was not possible for me to follow them as my registration for Class X was already over and a break at this stage would have cost me a year. As a result I had to shift to the hostel of the same school- Bishop Westcott Boy's School. Though it was assuring that I had the same set of friends and the same school environment to adjust to, the thought of shifting for the first time from the cozy environs of home to a hostel nevertheless made me apprehensive. More so since the hostel warden Ms. Kensworth was known to be a strict disciplinarian and a strict task master. My friends had faced her wrath at one time or the other during their stay in hostel either for their lazy attitude (of getting up late in the morning) or for keeping their belongings in a disheveled manner or for playing pranks without caring for the hour of the day. Ms. Kensworth was a stout lady in her sixties who spoke Queen's English with fluency but maintained a strict exterior and did not hesitate to cane even senior students for their folly. Students dreaded her and called her 'canny nanny', as she carried a cane with her everywhere. Her personality was so overbearing that even the naughtiest of student did not dare open his mouth before her. Hence I was a bit apprehensive since when one is in company of school mates even a disciplined student takes the liberty to play pranks and enjoy the output of such mischief. I was a bit apprehensive also because as a day scholar I was considered a disciplined boy and teachers in school had great expectations from me. Till now I had been able to keep that image intact during the limited hours in school as day scholar but to keep it that way throughout the day and night as boarder was quite a tasking job in hand.

On 4th April 2011, when my school re-opened after session break I went to school on the first day with a deep thought about planning my stay at hostel for the

next one year. In fact the thought of staying in hostel was much more overbearing than that of cracking the Class X ICSE Board examination the next year. My friends were eager to know when I was shifting to hostel. I told them that I would be able to join then in a day or two. Hence when one of my friends approached me to inform that he had seen my parents in school campus after the school was over I was taken by surprise. Instead of boarding my school bus I went back to the auditorium which was still crowded by students after the assembly. I saw my parents there. My mummy informed me that they have come prepared with all my belongings and that I should be shifting to the hostel that day itself since the quarters have already been vacated by them, their household goods have already been loaded onto a truck ready to be ferried to Barrackpore and that they themselves have shifted to the institute's guest house. This was indeed news for me. All my plan of doing this or that before shifting to hostel went haywire and I followed them to the hostel.

We reached the dormitory on the third floor with my luggage which consisted of a huge aluminum trunk, a hold-all with bedding and a bag containing other miscellaneous items. We met the staff warden Mr. Solanki, who was given the nickname '*kaju*', for the reason not known to me. He showed me my trunk-cum-bed which was to be my resting place in the dormitory. My mummy hurriedly arranged my bed, kept all my books in the locker below the bed and also arranged my clothes in another locker beneath the bed on the other side. She went around inspecting the bath, the toilet and the dining hall and then after assuring herself they left for the institute, leaving me behind. My father gave me a lot of earthy advices of how to tackle and carry myself in hostel. By this time my friends who had been in the dining hall for evening snack and tea were back. They were very pleased to see me. I was invited by one of them to his birthday party in the school canteen 'The Witches Brew' scheduled for evening 8 o'clock, for which they had taken permission from the senior staff Mr. Robert Walsh. But before that we all went to the Basket Ball Court for the evening roll call. I was informed that this is a daily exercise to ensure that any boarder has not slipped out of the hostel. Thereafter we went to the

study hall where I spent the next two hours in studying mathematics and also helping my friends with their problems in the subject. From there we all went straight to the “Witches Brew” to enjoy the birthday party. The party was over by 9.00 o'clock and I returned with my friends to the dormitory.

All the hectic activities of the last six-seven hours had kept me engaged and I was surprised that I had not missed my parents in these hours. However, as I retired to my bed for sleep, reading a novel, switching on the night lamp attached to my cot, I could not but remember the love and affection of my mother who took all care for my food and other requirement. As I lay in my bed remembering the cozy environs of sweet home, I could not stop tears from rolling down my cheeks. I was unable to concentrate on novel and my mind raced to my home with all the fond memories of years spent with my parents and my little sister. I slumped into sleep without my knowing. My sleep was broken by touch of soft hands on my forehead which was gently playing with my curls in the same manner as my mother used to pat me at home. I was surprised to see Ms. Kensworth at my bedside stroking my hair and gently patting my forehead. I was enjoying every moment of this love and affection and did not open my eyes lest she may once again become the 'canny nanny' which she was notorious for in the hostel. After a couple of minutes, she switched off the night-lamp and went away.

When I went home during the summer holiday my mother asked me whether I was still frightened of Ms. Kensworth. I replied in negativity. 'Rather she has a heart of gold which pours the love of a mother. She takes a round at night, every night without fail, to see that each and every 'child' of hers is in sound sleep and takes care of a student who she finds in a disturbed state of mind'- I informed my mother. It was then my mother informed me that, on the day she had seen me off in hostel, she had broken down into tears while climbing down the stairs. Ms. Kensworth happened to meet my mother on the stairs. She consoled my mother and assured her that she would take all care of her son, as a mother. I realized that Ms. Kensworth was like a mother to all the boarders, still in their formative years, who lived in hostel away from the love and affection of their mothers. I concluded that her cane was only a ploy of her 'carrot and stick policy' which every parent employ to keep their offspring on the right track. •

- Raj Krishna

MANAGEMENT

10 ETIQUETTES FOR MANAGERS

Do you know “What distracts and annoys your colleagues?”

- Answering phone during meeting while your colleagues keep waiting.
- Leaving meeting place early because you have another meeting somewhere else.
- Shouting at colleagues across the office.
- Borrowing other people's equipment or stationery and not returning it.
- Failing to provide prompt answers to simple queries.
- Talking loudly in front of others.
- Jamming the photocopier and leaving it for someone else to repair it.
- Not introducing people who have never met.
- Hijacking meetings by straying from the agenda to discuss your own concerns.
- Not returning phone calls.

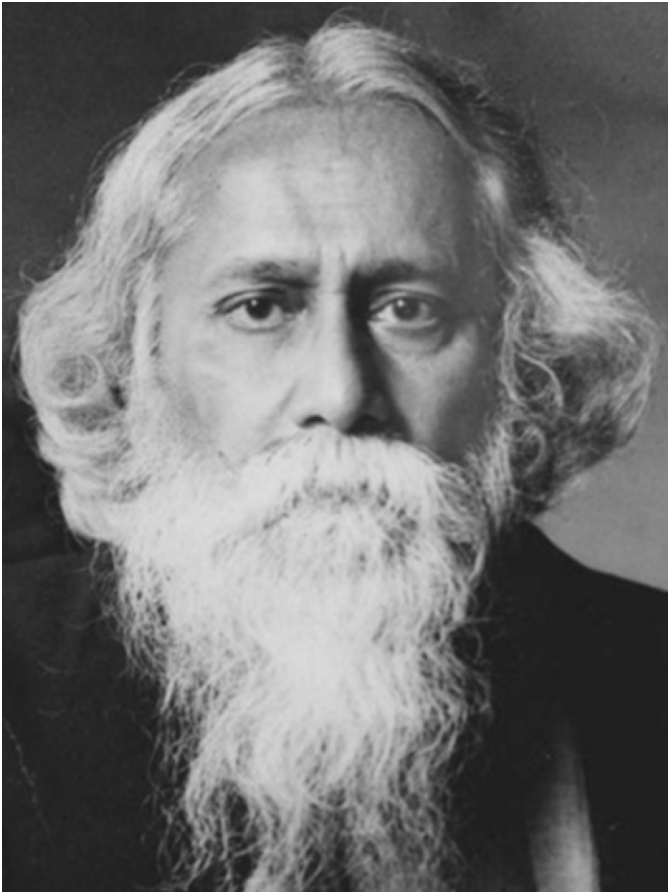
Answer to Quiz

1. Khuswant Singh 2. Qatar 3. Rabindranath Tagore 4. 1952 5. India 6. Mayavati 7. Samachar Darpan 8. Benazir Bhutto 9. Kathmandu 10. Jehangir 11. Vishnugupta 12. Socrates 13. Mahatma Gandhi 14. Radcliff 15. Sasaram 16. Phosporus 17. Bal Gangadhar Tilak 18. Agni God 19. Manikarnika 20. John Harvey Kellogg 21. Douglas Engelbart 22. Ishwar Chandra Vidyasagar 23. Lakshadweep 24. Numismatics 25. Buddhism

CLASSIC

TASHER DESH - THE KINGDOM OF CARDS

A Short Story by Rabindranath Tagore



Rabindranath Tagore was born in Calcutta and his formal education remained incomplete. However, he was taught different subjects by different tutors at home. He showed talents in writing poems when he was young.

In his lifetime he wrote fifty volumes of poetry comprising over 5000 poems, twenty volumes of songs numbering over 2500 which set to music by himself known as Rabindra Sangeet. He directed twenty nine prose dramas. He wrote five volumes of short stories comprising 151 stories, fifteen novels, fifty nine volumes of essays. He made hundreds of paintings. He wrote one full length screenplay including several stories for cinema. He started one University Vishwa Bharati at Shantiniketan in Bolpur, West Bengal. He undertook 23 voyages to 33 countries across the world the last of which was to Iran by air.

His collection of poems Geetanjali (Song Offerings) won him the Nobel Prize in 1913.

He was awarded Knighthood by the British Monarch which he later renounced in protest against Jallianwalla

Bagh massacre by the British authorities.

He was a genius with unfathomable greatness. We feel proud and honoured to reproduce one of his famous short stories in Scholastik World.

Chapter I

Once upon a time there was a lonely island in a distant sea where lived the Kings and Queens, the Aces and the Knaves, in the Kingdom of Cards. The Tens and Nines, with the Twos and Threes, and all the other members, had long ago settled there also. But these were not twice-born people, like the famous Court Cards.

The Ace, the King, and the Knave were the three highest castes. The fourth Caste was made up of a mixture of the lower Cards. The Twos and Threes were lowest of all. These inferior Cards were never allowed to sit in the same row with the great Court Cards.

Wonderful indeed were the regulations and rules of that island kingdom. The particular rank of each individual had been settled from time immemorial. Every one had his own appointed work, and never did anything else. An unseen hand appeared to be directing them wherever they went, --according to the Rules.

No one in the Kingdom of Cards had any occasion to think: no one had any need to come to any decision: no one was ever required to debate any new subject. The citizens all moved along in a listless groove without speech. When they fell, they made no noise. They lay down on their backs, and gazed upward at the sky with each prim feature firmly fixed for ever.

There was a remarkable stillness in the Kingdom of Cards. Satisfaction and contentment were complete in all their rounded wholeness. There was never any uproar or violence. There was never any excitement or enthusiasm.

The great ocean, crooning its lullaby with one unceasing melody, lapped the island to sleep with a thousand soft touches of its wave's white hands. The vast sky, like the outspread azure wings of the brooding mother-bird, nestled the island round with its downy plume. For on the distant horizon a deep blue line betokened another shore. But no sound of quarrel or strife could reach the Island of Cards, to break its calm repose.

Chapter II

In that far-off foreign land. across the sea, there lived a young Prince whose mother was a sorrowing queen. This queen had fallen from favour, and was living with her only son on the seashore. The Prince passed his childhood alone and forlorn, sitting by his forlorn mother, weaving the net

of his big desires. He longed to go in search of the Flying Horse, the Jewel in the Cobra's hood, the Rose of Heaven, the Magic Roads, or to find where the Princess Beauty was sleeping in the Ogre's castle over the thirteen rivers and across the seven seas.

From the Son of the Merchant at school the young Prince learnt the stories of foreign kingdoms. From the Son of the Kotwal he learnt the adventures of the Two Genii of the Lamp. And when the rain came beating down, and the clouds covered the sky, he would sit on the threshold, facing the sea, and say to his sorrowing mother: "Tell me, mother, a story of some very far-off land."

And his mother would tell him an endless tale she had heard in her childhood of a wonderful country beyond the sea where dwelt the Princess Beauty. And the heart of the young Prince would become sick with longing, as he sat on the threshold, looking out on the ocean, listening to his mother's wonderful story, while the rain outside came beating down and the grey clouds covered the sky.

One day the Son of the Merchant came to the Prince, and said boldly: "Comrade, my studies are over. I am now setting out on my travels to seek my fortunes on the sea. I have come to bid you good-bye."

The Prince said; "I will go with you."

And the Son of Kotwal said also: "Comrades, trusty and true, you will not leave me behind. I also will be your companion."

Then the young Prince said to his sorrowing mother; "Mother, I am now setting out on my travels to seek my fortune. When I come back once more, I shall surely have found some way to remove all your sorrow."

So the Three Companions set out on their travels together. In the harbour were anchored the twelve ships of the merchant, and the Three Companions got on board. The south wind was blowing, and the twelve ships sailed away, as fast as the desires which rose in the Prince's breast.

At the Conch Shell Island they filled one ship with conchs. At the Sandal Wood Island they filled a second ship with sandal-wood, and at the Coral Island they filled a third ship with coral.

Four years passed away, and they filled four more ships, one with ivory, one with musk, one with cloves, and one with nutmegs.

But when these ships were all loaded a terrible tempest arose. The ships were all of them sunk, with their cloves and nutmeg, and musk and ivory, and coral and sandal-wood and conchs. But the ship with the Three Companions struck on an island reef, buried them safe ashore, and itself broke in pieces.

This was the famous Island of Cards, where lived the Ace and King and Queen and Knave, with the Nines and Tens and all the other Members-- according to the Rules.

Chapter III

Up till now there had been nothing to disturb that island stillness. No new thing had ever happened. No discussion had ever been held.

And then, of a sudden, the Three Companions appeared, thrown up by the sea,--and the Great Debate began. There were three main points of dispute.

First, to what caste should these unclassed strangers belong? Should they rank with the Court Cards? Or were they merely lower-caste people, to be ranked with the Nines and Tens? No precedent could be quoted to decide this weighty question.

Secondly, what was their clan? Had they the fairer hue and bright complexion of the Hearts, or was theirs the darker complexion of the Clubs? Over this question there were interminable disputes. The whole marriage system of the island, with its intricate regulations, would depend on its nice adjustment.

Thirdly, what food should they take? With whom should they live and sleep? And should their heads be placed south-west, north-west, or only north-east? In all the Kingdom of Cards a series of problems so vital and critical had never been debated before.

But the Three Companions grew desperately hungry. They had to get food in some way or other. So while this debate went on, with its interminable silence and pauses, and while the Aces called their own meeting, and formed themselves into a Committee, to find some obsolete dealing with the question, the Three Companions themselves were eating all they could find, and drinking out of every vessel, and breaking all regulations.

Even the Twos and Threes were shocked at this outrageous behaviour. The Threes said; "Brother Twos, these people are openly shameless!" And the Twos said: "Brother Threes, they are evidently of lower caste than ourselves! "After their meal was over, the Three Companions went for a stroll in the city.

When they saw the ponderous people moving in their dismal processions with prim and solemn faces, then the Prince turned to the Son of the Merchant and the Son of the Kotwal, and threw back his head, and gave one stupendous laugh.

Down Royal Street and across Ace Square and along the Knave Embankment ran the quiver of this strange, unheard-of laughter, the laughter that, amazed at itself, expired in the vast vacuum of silence.

The Son of the Kotwal and the Son of the Merchant were chilled through to the bone by the ghost-like stillness around them. They turned to the Prince, and said: "Comrade, let us away. Let us not stop for a moment in this awful land of ghosts."

But the Prince said: "Comrades, these people resemble men, so I am going to find out, by shaking them upside down and outside in, whether they have a single drop of

warm living blood left in their veins.

Chapter IV

The days passed one by one, and the placid existence of the Island went on almost without a ripple. The Three Companions obeyed no rules nor regulations. They never did anything correctly either in sitting or standing or turning themselves round or lying on their back. On the contrary, wherever they saw these things going on precisely and exactly according to the Rules, they gave way to inordinate laughter. They remained unimpressed altogether by the eternal gravity of those eternal regulations.

One day the great Court Cards came to the Son of the Kotwal and the Son of the Merchant and the Prince.

"Why," they asked slowly, "are you not moving according to the Rules?"

The Three Companions answered: "Because that is our Ichcha (wish)."

The great Court Cards with hollow, cavernous voices, as if slowly awakening from an age-long dream, said together: "Ich-cha! And pray who is Ich-cha?"

They could not understand who Ichcha was then, but the whole island was to understand it by-and-by. The first glimmer of light passed the threshold of their minds when they found out, through watching the actions of the Prince, that they might move in a straight line in an opposite direction from the one in which they had always gone before. Then they made another startling discovery, that there was another side to the Cards which they had never yet noticed with attention. This was the beginning of the change.

Now that the change had begun, the Three Companions were able to initiate them more and more deeply into the mysteries of Ichcha. The Cards gradually became aware that life was not bound by regulations. They began to feel a secret satisfaction in the kingly power of choosing for themselves.

But with this first impact of Ichcha the whole pack of cards began to totter slowly, and then tumble down to the ground. The scene was like that of some huge python awaking from a long sleep, as it slowly unfolds its numberless coils with a quiver that runs through its whole frame.

Chapter V

Hitherto the Queens of Spades and Clubs and Diamonds and Hearts had remained behind curtains with eyes that gazed vacantly into space, or else remained fixed upon the ground.

And now, all of a sudden, on an afternoon in spring the Queen of Hearts from the balcony raised her dark eyebrows for a moment, and cast a single glance upon the Prince from the corner of her eye.

"Great God," cried the Prince, "I thought they were all painted images. But I am wrong. They are women after all."

Then the young Prince called to his side his two Companions, and said in a meditative voice; "My comrades ! There is a charm about these ladies that I never noticed before. When I saw that glance of the Queen's dark, luminous eyes, brightening with new emotion, it seemed to me like the first faint streak of dawn in a newly created world."

The two Companions smiled a knowing smile, and said: "Is that really so, Prince?"

And the poor Queen of Hearts from that day went from bad to worse. She began to forget all rules in a truly scandalous manner. If, for instance, her place in the row was beside the Knave, she suddenly found herself quite accidentally standing beside the Prince instead. At this, the Knave, with motionless face and solemn voice, would say: "Queen, you have made a mistake."

And the poor Queen of Hearts' red cheeks would get redder than ever. But the Prince would come gallantly to her rescue and say: "No! There is no mistake. From to-day I am going to be Knave!"

Now it came to pass that, while every one was trying to correct the improprieties of the guilty Queen of Hearts, they began to make mistakes themselves. The Aces found themselves elbowed out by the Kings. The Kings got muddled up with the Knaves. The Nines and Tens assumed airs as though they belonged to the Great Court Cards. The Twos and Threes were found secretly taking the places specially resented for the Fours and Fives. Confusion had never been so confounded before.

Many spring seasons had come and gone in that Island of Cards. The Kokil, the bird of Spring, had sung its song year after year. But it had never stirred the blood as it stirred it now. In days gone by the sea had sung its tireless melody. But, then, it had proclaimed only the inflexible monotony of the Rule. And suddenly its waves were telling, through all their flashing light and luminous shade and myriad voices, the deepest yearnings of the heart of love!

Chapter VI

Where are vanished now their prim, round, regular, complacent features? Here is a face full of love-sick longing. Here is a heart heating wild with regrets. Here is a mind racked sore with doubts. Music and sighing, and smiles and tears, are filling the air. Life is throbbing; hearts are breaking; passions are kindling.

Every one is now thinking of his own appearance, and comparing himself with others. The Ace of Clubs is musing to himself, that the King of Spades may be just passably good-looking. "But," says he, "when I walk down

the street you have only to see how people's eyes turn towards me." The King of Spades is saying; "Why on earth is that Ace of Clubs always straining his neck and strutting about like a peacock? He imagines all the Queens are dying of love for him, while the real fact is --"Here he pauses, and examines his face in the glass.

But the Queens were the worst of all. They began to spend all their time in dressing themselves up to the Nines. And the Nines would become their hopeless and abject slaves. But their cutting remarks about one another were more shocking still.

So the young men would sit listless on the leaves under the trees, lolling with outstretched limbs in the forest shade. And the young maidens, dressed in pale-blue robes, would come walking accidentally to the same shade of the same forest by the same trees, and turn their eyes as though they saw no one there, and look as though they came out to see nothing at all. And then one young man more forward than the rest in a fit of madness would dare to go near to a maiden in blue. But, as he drew near, speech would forsake him. He would stand there tongue-tied and foolish, and the favourable moment would pass.

The Kokil birds were singing in the boughs overhead. The mischievous South wind was blowing; it disarrayed the hair, it whispered in the ear, and stirred the music in the blood. The leaves of the trees were murmuring with rustling delight. And the ceaseless sound of the ocean made all the mute longings of the heart of man and maid surge backwards and forwards on the full springtide of love.

The Three Companions had brought into the dried-up channels of the Kingdom of Cards the full flood-tide of a new life.

Chapter VII

And, though the tide was full, there -was a pause as though the rising waters would not break into foam but remain suspended for ever. There were no outspoken words, only a cautious going forward one step and receding two. All seemed busy heaping up their unfulfilled desires like castles in the air, or fortresses of sand. They were pale and speechless, their eyes were burning, their lips trembling with unspoken secrets.

The Prince saw what was wrong. He summoned every one on the Island and said: "Bring hither the flutes and the cymbals, the pipes and drums. Let all be played together, and raise loud shouts of rejoicing. For the Queen of Hearts this very night is going to choose her Mate!"

So the Tens and Nines began to blow on their flutes and

pipes; the Eights and Sevens played on their sackbuts and viols; and even the Twos and Threes began to beat madly on their drums.

When this tumultuous gust of music came, it swept away at one blast all those sighings and mopings. And then what a torrent of laughter and words poured forth! There were daring proposals and locking refusals, and gossip and chatter, and jests and merriment. It was like the swaying and shaking, and rustling and souging, in a summer gale, of a million leaves and branches in the depth of the primeval forest.

But the Queen of Hearts, in a rose-red robe, sat silent in the shadow of her secret bower, and listened to the great uproarious sound of music and mirth, that came floating towards her. She shut her eyes, and dreamt her dream of lore. And when she opened them she found the Prince seated on the ground before her gazing up at her face. And she covered her eyes with both hands, and shrank back quivering with an inward tumult of joy.

And the Prince passed the whole day alone, walking by the side of the surging sea. He carried in his mind that startled look, that shrinking gesture of the Queen, and his heart beat high with hope.

That night the serried, gaily-dressed ranks of young men and maidens waited with smiling faces at the Palace Gates. The Palace Hall was lighted with fairy lamps and festooned with the flowers of spring. Slowly the Queen of Hearts entered, and the whole assembly rose to greet her. With a jasmine garland in her hand, she stood before the Prince with downcast eyes. In her lowly bashfulness she could hardly raise the garland to the neck of the Mate she had chosen. But the Prince bowed his head, and the garland slipped to its place. The assembly of youths and maidens had waited her choice with eager, expectant hush. And when the choice was made, the whole vast concourse rocked and swayed with a tumult of wild delight. And the sound of their shouts was heard in every part of the island, and by ships far out at sea. Never had such a shout been raised in the Kingdom of Cards before.

And they carried the Prince and his Bride, and seated them on the throne, and crowned them then and there in the Ancient Island of Cards.

And the sorrowing Mother Queen, on the 'far-off island shore on the other side of the sea, came sailing to her son's new kingdom in a ship adorned with gold.

And the citizens are no longer regulated according to the Rules, but are good or bad, or both, according to their Ichha. •

धरोहर

तिरुपति - तिरुमला माहात्म्य

— अनन्त अखिलानन्द खलखो, (आयकर आयुक्त, हजारीबाग)

समुद्र तल से 2820 फीट की ऊँचाई पर स्थित तिरुमला पहाड़ी की सात चोटियाँ इस तरह सुशोभित हैं, जैसे शेषनाग के सात फन आसमान की ओर देख रहे हों। श्री बालाजी अर्थात् भगवान श्री विष्णु का पवित्र मंदिर सातवीं चोटी पर अवस्थित है। इसके पास ही तिरुमला की सबसे ऊँची चोटी 3600 फीट पर है, जिसे नारायणगिरि कहते हैं।

तिरुमला पहाड़ी को वेंकटचल भी कहा जाता है। जिसके माहात्म्य का वर्णन वराह पुराण (भाग-1, अध्याय-4, अ. 35.37) में इस प्रकार किया गया है —

“वैसे तो यह साधारण पहाड़ी प्रतीत होता है, लेकिन यह हर व्यक्ति की इच्छा को उसकी भक्ति की तीव्रता के अनुपात में पूरा करता है। भक्त की मनोकामना धर्म, अर्थ काम मोक्ष किसी भी तरह की हों, वेंकटचल से उत्तम कोई दूसरा शरण-स्थल इस धरती पर निस्संदेह और कहीं नहीं है।”

तिरुमला में अनेकों अन्य तीर्थ स्थल भी हैं, जिनका वर्णन पुराणों में, विशेषकर वराह पुराण, वामन पुराण, भविष्योत्तर पुराण और ब्रह्म पुराण में किया गया है। पुराणों में वर्णित कुछ महत्वपूर्ण तीर्थस्थल इस प्रकार हैं —

1. कपिल तीर्थ :— तिरुमला पर्वतमाला के ठीक नीचे यह अवस्थित है। यहाँ एक सरोवर है, जिसके बगल में एक गुफा है। कहा जाता है कि इस गुफा में कपिल मुनि ने तपस्या की थी। कपिल सरोवर में आज भी पर्याप्त जल है, जिसे पवित्र माना जाता है। पुराणों के अनुसार इस सरोवर के दर्शन मात्र से मन को शांति और पाप-मुक्ति का लाभ प्राप्त होता है।
2. वज्रशुक्र तीर्थ :— कपिल तीर्थ के रास्ते ऊपर जाने पर शुक्र तीर्थ का दर्शन होता है। यह एक जल कुण्ड है, जिसमें स्नान करने के पश्चात् अहल्या कथा-संदर्भ में, इन्द्र गौतम ऋषि के श्राप से मुक्त हुए थे।
3. विस्वकेसन तीर्थ :— यह वज्र तीर्थ के ऊपर स्थित है। यहाँ वरुण के पुत्र विस्वकेसन ने तपस्या की थी।
4. पन्चयुधा तीर्थ :— विस्वकेसन तीर्थ के ऊपर यह तीर्थ स्थित है, जहाँ पाँच पवित्र जलकुण्ड हैं, जिनका नाम शंख, चक्र, गदा, धनुष और खड्क है।
5. अग्निकुण्ड तीर्थकुण्ड तीर्थ :— यह पन्चयुधा तीर्थ के ऊपर है लेकिन पुराणों के अनुसार यह अगम्य है।
6. ब्रह्मतीर्थ और सप्तर्षि तीर्थ :— ब्रह्मतीर्थ पहाड़ी पर सबसे ऊपर स्थित है और इसके पास ही सप्तर्षि तीर्थ है जिससे सात जलकुण्ड हैं — काश्यप, अत्रि, भारद्वाज, विश्वामित्र, गौतम, वशिष्ठ और जतदाग्नि।

पुराणों में वर्णित परंपरा के अनुसार प्राचीन काल में श्री बालाजी का दर्शन करने के लिए तीर्थयात्री अपनी पहाड़ी यात्रा कपिलतीर्थ सरोवर में स्नान करने के बाद शुरू करते थे। फिर ऊपर की चढ़ाई चढ़ते हुए तीर्थयात्री उपर्युक्त तीर्थों के क्रमशः दर्शन करते हुए आगे बढ़ते थे।

वेंकटचल पर्वतमाला में और भी अनेक तीर्थ हैं, जिनका वर्णन पुराणों में इस प्रकार किया गया है :—

1. पाण्डवतीर्थ — यह श्री वेंकटेश्वर मंदिर के उत्तर-पूर्व में लगभग 5 कि.मी. की दूरी पर स्थित है। इस तीर्थ का माहात्म्य यह है कि यहाँ श्री कृष्ण भगवान की सलाह पर पाण्डवों ने एक साल तक निवास किया था।
2. आकाशगंगा तीर्थ — यह मंदिर के उत्तर-पूर्व 3 कि.मी. की दूरी पर स्थित है। त्रेतायुग में यहाँ अंजनादेवी ने 12 साल तक तपस्या की थी जिसके फलस्वरूप आज्जनेय अर्थात् हनुमानजी का जन्म हुआ था।
3. पापविनाश तीर्थ — यह एक छोटा जलप्रपात है जो मन्दिर से करीब 4-5 कि.मी. की दूरी पर स्थित है।
4. बैकुण्ठ तीर्थ — यह मन्दिर के पूर्व 3 कि.मी. की दूरी पर स्थित है। यहाँ जल की धारा एक गुफा से निकलती है। इस गुफा को बैकुण्ठ-गुफा कहते हैं। वराह-पुराण के अनुसार, जब रामजी अपनी वानर सेना के साथ लंका की ओर जा रहे थे, उस समय अंजनादेवी और उनके पुत्र आज्जनेय के निवेदन पर वे इस तीर्थ पर ठहरे थे। पुराण के अनुसार बैकुण्ठ-गुफा में प्रवेश करने पर बैकुण्ठ-गुफा में प्रवेश करने पर बैकुण्ठ अर्थात् विष्णु लोग के दर्शन होते हैं।
5. जावाली तीर्थ — यह मन्दिर के उत्तर में 3 कि.मी. की दूरी पर स्थित है। प्राचीन काल में यहाँ जावाली ऋषि रहा करते थे। उनके बाद अगस्त्य मुनि ने यहाँ कई वर्षों तक निवास किया था। अपने शिष्यों के साथ अगस्त्य मुनि ने कई वर्षों तक यहाँ भगवान श्री वेंकटेश्वर की पूजा की थी।
6. कुमारधारा तीर्थ — यह मन्दिर के उत्तर-पश्चिम में करीब 9 कि.मी. की दूरी पर स्थित है। यहाँ शिव पार्वती पुत्र कुमार स्वामी अर्थात् कार्तिकेय ने निवास किया था। यहाँ पर कुमारस्वामी ने तारकासुर वध करने के बाद ब्रह्म हत्या में पाप से मुक्ति के लिए तपस्या की थी।
7. कायारसायन तीर्थ — पुराणों के अनुसार यह तीर्थ साधारण मनुष्य के लिए अगम्य है। इस तीर्थ के महत्व की चर्चा पुराण में इस प्रकार की गयी है कि यहाँ के जल में इतनी शक्ति है कि इसमें गिरकर सूखे पत्ते तत्क्षण हरे हो जाते हैं।

उपर्युक्त तीर्थों के बारे में पढ़कर आपके मन में क्या ये प्रश्न नहीं उठता कि कब और कैसे इतने सारे तीर्थ स्थलों की खोज की गयी होगी ? उस समय आवागमन के साधन उतने विकसित नहीं थे, जितने आज हैं, न रास्ते थे, न वाहन, न रेलगाड़ी और न ही मानचित्र। आश्चर्य होता है, सोचकर कि ऋषि मुनियों ने सदियों पहले भारतवर्ष के कोने-कोने में स्थित अतिसुन्दर प्राकृतिक स्थलों को तीर्थों के रूप में कैसे विकसित किया ? उत्तर में बद्रीनाथ, केदारनाथ, गंगोत्री हो या दक्षिण में तिरुपति, रामेश्वरम। पूर्व में वैद्यनाथ धाम हो या पश्चिम में द्वारका। कृष्ण की नगरी मथुरा हो या

शेष पृष्ठ 57 पर

दर्शन
सभ्यता का परिवर्तन
एक तुलनात्मक अध्ययन

अंग्रेज दार्शनिक जिन्होंने पहली बार मानव समाज को इतिहास का दर्शनशास्त्र दिया उनके बारे में कुछ कहूँगा उनका नाम है टायनबी (Toynbee) जो 1961 में शरीर छोड़ 81 वर्ष की उम्र में अपनी पुस्तक फिलॉस्फी ऑफ हिस्ट्री की रचना की वे विश्व प्रसिद्ध हुईं। यह 6 खण्डों में वृहत् रचना है। पश्चिम जगत में टायनबी का एक महत्वपूर्ण स्थान है। इन्होंने इतिहास के दर्शन का सृजन कर इस तथ्य को प्रतिस्थापित किया कि राजनैतिक सत्ता परिवर्तन में एक सूक्ष्म और क्षुद्र संरचना कार्यरत होती है। वह कार्यप्रणाली टायनबी के अनुसार निम्नलिखित पद्धति का अनुसरण करती है :-

कोई सभ्यता का विकास एक स्तर तक होता है तो उसके सत्ता के गलियारे में दो तरह की प्रतिस्पर्धात्मक समीकरण शुरू होता है। एक वह जो आधिपत्य में है और वे जो आधिपत्य के बाहर हैं पर आधिपत्य को ललकारने की स्थिति में होते हैं वे जो सत्ता के बाहर अपना दल बना कर सत्ता को ललकारते हैं, उनको काफी कष्ट सहना पड़ता है क्योंकि सत्ताधारी निरंकुश हुआ रहता है। सत्ताधारी और बाह्य शक्तियों (जो समाज की नैतिक मूल्यों और सहयोग हो) एक दुर्वाश संघर्षशील होते हैं और धीरे उस पूर्ववर्ती सभ्यता का अति होता है तोयनबी ने 21 सभ्यताओं का अध्ययन किया था जिसमें हिन्दू सभ्यता भी एक है। हाँलाकि टायोनबी की आलोचना यूरोप के विद्वानों ने किया जो उनके समकालीन थे, किन्तु टायनबी ने इतिहास के अध्ययन के दिशा को बदल दिया।

मोटा-मोटी रूप से कहा जाए तो यह बात स्पष्ट होता है कि सभ्यता के प्रतिष्ठित होने पर उसके विरुद्ध संघर्ष, षडयंत्र और नाना प्रकार के विरोधी कार्यकलाप शुरू होता है टायोनबी कहते हैं परवर्ती काल में चर्चा (बुद्धिवादी अंचालिक) लोप सभ्यता के शीर्ष में अपना वर्चस्व कायम करते हैं।

भारतीय दार्शनिक सोच के अनुसार टायोनबी पर मुख्य आलोचना इस प्रकार हुई है :-

- 1) टायोनबी के सिद्धान्त में ऐसे समाज का निर्माण जिसे कि प्रीमिटेड सोसाईटी कहते हैं क्यों कैसे और किन कारणों से हुई उसपर चर्चा नहीं है।
- 2) सत्ता परिवर्तन या सभ्यता की पराकाष्ठा का अवसान के पीछे मानसिकता क्या होती है।
- 3) 21 सभ्यताओं के अध्ययन में वह नहीं मिलता है कि उन्हीं सभ्यताओं का ही मूल्यांकन क्यों हुआ।

टायोनबी में मनुष्य की भावनात्मक मानसिक सुझाव, उनकी सामर्थता, उनके मानसिक वर्गीकरण पर अपने विचार नहीं दिए। ऐसा जैसे विरोधी समुदायों की इर्ष्या, द्वेष में खड़े हो गए।

श्री सरकार का दर्शन —

श्री पी० आर० सरकार (1921 से 1990) अपने मानव समाज में इस बिन्दू पर चर्चा की : भारतीय मनिषियों ने वेद से लेकर गीता तक उस बात की प्रतिस्थापना की है। मनोवैज्ञानिक रूप से कार्यप्रणाली के तहत चार वर्ग में समाज के लोगों को बाँटा है — युद्ध प्रेरित, बुद्धिवादी, धनवादी तथा सर्वहारा श्रमिक वर्ग। सारा मनुष्य समाज

इन चार तरह की मानसिकता से बाँटा है — लेकिन ये चारो मानसिकता गतिमान हैं यानी सर्वहारा धनपति हो सका है और बुद्धिवादी युद्धप्रेरित भी हो सकता है। भारत का जातिवाद से इस वर्गीकरण की कोई समानता नहीं है।

समाज के उषाकाल में लोगों को प्रतिवेशी समाज मनुष्यों, आसपास के खूँखार जानवरों, भयानक प्राकृतिक आपदाओं से बचने का उपाय चाहिए होता था। उस समय वह जो अपने सोच, बुद्धि तथा नेतृत्व के गुणों से समाज या उस समूह को सुरक्षित करने का प्रयास किया उस काल का वह मुखिया बना। उसके आन्तरिक गुण, वीरता और क्षत्रियधर्मी थे। क्षत्रियधर्मी लोग समूह की सारी सामाजिक शक्ति को अपने में आत्मकेन्द्रित कर लेते हैं और अपने चिन्हित लोगों को छोड़कर शोषण प्रवीण होते जाते हैं। उनकी निरंकुशता बढ़ती जाती है और उनको शारीरिक शक्ति से पराजित करना असंभव सा हो जाता है तब ऐसे लोग जो बुद्धि को अपना अस्त्र समझते हैं वे उन शोषणकर्ता क्षत्रिय लोगों के विरुद्ध षडयंत्रकारी बनते हैं। प्रथम चरण में वे सत्ताधारी को उसके क्रिया कलापों में सहायता करते हैं। धीरे धीरे उसके विरुद्ध षडयंत्र तथा भिन्न भिन्न तरीकों से उसके विरोध करते हैं। अपना बलवती समूह का निर्माण करते हैं और क्षत्रित्व को अपदस्थ करते हैं। तथा सत्ता या सभ्यता बुद्धिवादियों के हाथ में आ जाती है। किन्तु ये बुद्धिवादी की कालान्तर में निरंकुश और शोषक हो उठते हैं ऐसी दशा में एक ऐसे समूह जो उन्हें नचा सकता है यानी धनवादी लोग धन और सम्पत्ति की लालच में उन्हें भोग-विलास में निमग्न करते हैं और भीतर ही भीतर षडयंत्र कर उनकी सारी क्रियाकलापों में अपना वर्चस्व कायम कर लेते हैं तथा समसज को धनवादों के मूल्यों पर आश्रित कर देते हैं सभ्यता और सत्ता फिसल कर उनके हाथ आ जाती है। वर्तमान भारत अभी धनवादी के मूल्यों के आधार पर गतिमान है। बुद्धिवादी और क्षत्रित्व उनका दास बन चुका है वे जो कहेंगे इनको करना पड़ता है। धन का ही सम्मान है चाहे वह धन कोई भी कमाए हों। मुल्यबोध धन पर टिक जाता है। महिलाओं का स्थान निम्नस्तर पर आता है। क्षत्रिय युग में वीर भोग्या वसन्धरा का नारा होता है। बुद्धिवादी युग कलम तलवार ही बड़ी है का नारा होता है तो धनवादी का नारा धन ही सम्मान है पर आ जाता है, नारी अपने सर्वश्रेष्ठ काल क्षत्रिय काल क्षत्रिय युग में पाती है विप्रयुग उन्हें भोग की वस्तु समझता है। वेश्यायुग उन्हें क्रय-विक्रय का समान समझता है।

इन दयनीय स्थिति में जब सारे लोग धनपति के गुलाम होते हैं सभी सर्वहारा शुद्र मानसिकता में फंसते जाते हैं और फिर शुद्र गुणी होते हैं और वे सारे मूल्यों का अवसान होता है किन्तु सर्वहारा वर्ग की मानसिकता ऐसी होती है कि वे नेतृत्व नहीं ले सकती है। अतः उनके इस विप्लव में संघर्षरत होते हुए फिर क्षत्रिय मानसिकता नेतृत्व लेती है और समाज और सत्ता क्षत्रियगुणधर्मी लोगों के हाथ में आ जाती है।

श्री सरकार का कहना है कि इस तरह समाजिक चक्र घूमता
शेष पृष्ठ 57 पर

आयुर्वेद एवं रत्न

आयुर्वेद में रत्नों की औषधीय उपयोगिता

मानव सभ्यता का आदिकाल एक लंबे समय तक 'पाषाण युग' के नाम से जाना जाता है। आदिकाल का मानव जंगलों में गुफाएं बनाकर रहता था। उस समय वह जानवरों से अपनी रक्षा से लेकर, रहने की जगह, बर्तन, औजार और आग जलाने तक का काम पत्थरों से लिया करता था। समयानुसार इस परिवर्तनशील युग में अनेकों चीजों का महत्व खत्म हो गया तो कई नई चीजें मानव जीवन में महत्वपूर्ण बनती चली गईं और कई चीजें ऐसी हैं जिनके महत्व ही बदल गए। लेकिन 'पत्थर' के प्रति मनुष्य का आकर्षण आज भी किसी न किसी रूप में बना हुआ है। आदिकालों में ही मनुष्य की नजर में जब रंग-बिरंगे पत्थर आए तो वह उन्हें आभूषणों के रूप में प्रयोग करने लगा। जैसे-जैसे समय बदलता गया इन रंग-बिरंगे पत्थरों को विशिष्ट श्रेणी का मानकर 'रत्नों' के नाम से कहा जाने लगा।

प्राचीन काल से ही रत्नों ने हमारे समाज में महत्वपूर्ण स्थान प्राप्त किया है। रत्न सुन्दर, आकर्षक, उज्ज्वल, चमकदार, अत्यंत कठिन, मूल्यवान तथा उत्तम कोटि के खनिज पाषाण खण्ड होते हैं लेकिन मुक्ता (मोती) और प्रवाल (मूंगा) समुद्र से प्राप्त होने वाले जान्तव (प्राणिज) द्रव्य हैं और तृणकान्त (अम्बर) तथा संगोमूषा वानस्पतिक द्रव्य हैं। रस तरंगिणी के अनुसार, जो आयुर्वेदीय रसशास्त्र की पुस्तक है, रत्न इसलिए कहा जाता है क्योंकि यह अन्य खनिज द्रव्यों की अपेक्षा अधिक सुन्दर होते हैं अथवा ये द्रव्य मनुष्यों को अत्यधिक प्यारे लगते हैं। जो अपने-अपने वर्ग या जाति में उत्तम गुणों से युक्त होते हैं उन्हें रत्न संज्ञा से विभूषित किया जाता है इसी प्रकार जो खनिज द्रव्य या पाषाण खण्ड उत्तम गुणों से युक्त होते हैं उन्हें भी रत्न नाम से कहा जाता है।

रत्न कहे जाने वाला अभी तक 84 रत्न अस्तित्व में माने गए हैं। लेकिन इनमें से कई रत्न या तो दुर्लभ हैं या उपलब्ध ही नहीं हैं। प्राचीन ग्रंथों में रत्नों के दो वर्ग किए गए हैं - (1) रत्न तथा (2) उपरत्न। रत्नों की संख्या नौ है - (1) माणिक्य (Ruby) (2) मुक्ता या मोती (Pearl) (3) मूंगा (Coral) (4) पन्ना (Emerald) (5) पुखराज (Topaz) (6) हीरा (Diamond) (7) नीलम (Sapphire) (8) गोमेद (Zircon) (9) लहसुनिया (Cat'seye)। उपरत्न वर्ग के खनिज पाषाण गुणवत्ता में रत्नों से कम होते हैं। और अपेक्षाकृत इनका मूल्य भी कम होता है। इसलिए भी इन्हें उपरत्न के नाम से संबोधित किया जाता है। वैक्रान्त, सूर्यकान्त, चन्द्रकान्त, राजावर्त, पैरोजक, स्फटिक, व्योमाश्म, तृणकान्त ये आठ उपरत्न के नाम से कहे जाते हैं।

ज्योतिष के अनुसार रत्नों का उपयोग

नवग्रहों में से किसी ग्रह के दुष्प्रभाव से उत्पन्न होने वाली पीड़ा की शांति के लिए उस ग्रह को सन्तुष्ट करने के लिए रत्न को अंगूठी या माला आदि में जड़कर धारण किया जाता है। प्रत्येक रत्न का अपना एक विशेष रंग होता है तथा उससे एक विशेष प्रकार की प्रकाश किरणों का प्रक्षेप होता रहता है। ये किरणें ग्रहों को अपनी ओर आकर्षित करती हैं। इस आकर्षण के कारण ग्रहों की क्रूरता मंद पड़ जाती है, जिससे ग्रह का दुष्प्रभाव न होकर वही ग्रह

लाभकारक हो जाता है।

सभी नवग्रहों के अपने-अपने प्रतिनिधि रत्न होते हैं। सूर्यग्रह के लिए माणिक्य, चन्द्र के लिए मोती, मंगल के लिए मूंगा, बुध के लिए पन्ना, गुरु (बृहस्पति) के लिए पुखराज, शुक के लिए हीरा, शनि के लिए नीलम, राहु के लिए गोमेद तथा केतु के लिए लहसुनिया प्रतिनिधि रत्न होता है। ग्रहों के दुष्प्रभाव को नष्ट करने के लिए अतिरिक्त रत्न दीर्घायुष्य, वैभव, सौभाग्य, उत्साह एवं धैर्य प्रदान करता है तथा दरिद्रता, कष्ट, भूत बाधा तथा अमंगल का नाश करता है।

आयुर्वेद में रत्नों का उपयोग

आयुर्वेद में रत्नों का उपयोग विभिन्न रोगों की चिकित्सा में किया जाता है। जिस प्रकार ज्योतिष में ग्रह दोष निवारण के लिए रत्नों का प्रयोग किया जाता है ठीक उसी तरह से प्राचीन काल से ही आयुर्वेद चिकित्सा पद्धति में रत्नों के माध्यम से विभिन्न रोगों की चिकित्सा की जाती रही है। साधारण रोग से लेकर असाध्य रोगों तक में रत्नों का उपयोग भस्म, पिष्टी, जल अथवा तेलरूप में किया जाता है। विभिन्न औषधीय योगों में रत्नों का प्रयोग कर चिकित्सा की जाती है।

औषधीय गुण

सभी रत्न प्रायः मधुर और कषाय रस युक्त एवं शीत वीर्य और सर गुण वाले, दीपन, अग्निवर्द्धक, कान्तिवर्द्धक, लेखन करने वाले, विषहर एवं नेत्र रोग हर होते हैं। दोष प्रभाव की दृष्टि से रत्न पित्त शामक होते हैं। यदि रत्नों का प्रयोग अशुद्ध रूप से किया जाता है तो कफ और वायु को बढ़ाते हैं। अतः रत्नों का शोधन करके ही भस्म व पिष्टी का निर्माण किया जाता है फिर औषध के रूप में प्रयोग किया जाता है।

रत्नों की औषधीय उपयोगिता

माणिक्य (Ruby) सूर्य रत्न माणिक्य को रत्नों का राजा कहा जाता है। माणिक्य का प्रयोग भस्म व पिष्टी के रूप में तथा अन्य औषधीय योग के रूप में किया जाता है। जवाहर मोहरा वटी, नवरत्न राज मृगाङ्क रस, ब्राह्मी वटी आदि योगों में माणिक्य होता है। माणिक्य भस्म या पिष्टी मेधावर्धक, मधुर रस, शीतल, सिन्ध, दीपन, आयुवर्धक, उत्पादन अंगों के लिए बलदायक तथा उत्तम कफ वात नाशक है। इसके सेवन से कफ का प्रकोप शान्त होता है। क्षय रोग को नष्ट करती है। इसके सेवन से उत्पादक अंगों की शिथिलता दूर होकर उनमें उत्तेजना आती है और नपुंसकता नष्ट हो जाती है। अतः धातु दौर्बल्य में लाभकारी है।

मोती (Pearl) यह रस में मधुर, वीर्य में शीत व गुण में लघु होता है। आयुवर्धक तथा वृष्य है। मोती पिष्टी या भस्म के सेवन से अग्नि की दीप्ति होती है, पाचन-संस्थानगत व्याधियों को शीघ्र नष्ट करता है। हाथ, पैरों तथा सर्वांगीण भीतरी दाह को शान्त करता है। नेत्रों की ज्योति बढ़ती है, त्वचा का वर्ण सुन्दर हो जाता है। मोती सेवन से पुराना (जीर्ण) ज्वर नष्ट हो जाता है। बच्चों में अस्थियों का पोषण तथा दांत शीघ्र निकलने लगते हैं। हृदय को बल प्रदान करता है। मेधा शक्ति को बढ़ाता है, प्रमेह व

श्वासनाशक है। इसके सेवन से अस्थिशोष नष्ट होता है। शरीरगत बाह्य विषों के प्रभाव को नष्ट करता है। रासायनिक दृष्टि से मोती में कैल्शियम, कार्बन और आक्सीजन तत्व होता है। कैल्शियम क्षारीय होने के कारण आमाशय में उत्पन्न होने वाले अनेक प्रकार के अम्लों को जो कि शूल और अम्लपित्त के कारण बनते हैं उदासीन कर देती हैं। इसी प्रकार शरीर के किसी भी भाग से होने वाले स्राव, रक्तस्राव, मलस्राव, मूत्रस्राव को यह सुखा देता है। गर्भावस्था में माता को शरीर में 'कैल्शियम' की कमी को मोती पूरा कर देती है। क्षय रोग में मोती का प्रयोग वसन्त मालती रस नामक औषधि के रूप में किया जाता है। मोती का प्रयोग वसन्त मालती रस नामक औषधि के रूप में किया जाता है। मोती का प्रयोग यदि पिष्टी के रूप में किया जाता है तो योग अधिक गुणकारी होती है। मोती पिष्टी मानसिक दुर्बलता जैसे साधारण कारण से क्रोध करना, विचारहीनता, ऊंचा शब्द सुनना, भीड़ में होने से जी घबराना आदि में विशेष रूप से लाभकारी होती है। तीव्र मानसिक आघात, शराब, गांजा, धतूरा आदि के ज्यादा सेवन सक मस्तिष्क में उत्पन्न विकृति में मुक्ता पिष्टी उत्तम लाभदायक होती है। रक्तपित्त, रक्तातिसार, रक्तप्रदर में भी मुक्तापिष्टी उत्तम लाभ पहुंचाती है। कस्तूरी भैरव रस, पुटपक्व विषम—ज्वरान्तक लौह, मकरध्वज वटी, मुक्तापंचामृत रस, वसन्त मालती रस आदि ऐसे औषधीय योग हैं जिनमें मोती भस्म श मोती पिष्टी होती है। इनका प्रयोग विभिन्न रोगों के अनुसार किया जाता है।

मूंगा या प्रवाल (Coral) मूंगा इसमें मधुर, गुण में लघु तथा वीर्य में शीत होता है। क्षारीय स्वाद वाला, दीपन, पाचन, नेत्र के लिए लाभकारी, त्रिदोष प्रकोप शामक, विशेष रूप से कफवात, प्रकोपशामक, बलवर्धक, शरीर गत विष प्रभाव नाशक, जीवाणुनाशक, क्षय, कास, रक्तपित्त शामक होता है। इसके सेवन से अधिक पसीने का निकलना तथा राजयक्ष्मा या क्षयरोग में रात में पसीना निकलना बंद हो जाता है। यदि स्वस्थ शरीर में मूंगा का प्रयोग किया जाए तो वीर्य, शक्ति तथा त्वचा के वर्ण की उत्कृष्टता बढ़ जाती है। प्रवाल भस्म से ज्यादा प्रवालपिष्टी विशेष रूप से गुणकारक होती है। मन्दज्वर के साथ सूखी खांसी आदि लक्षणों से क्षय की आशंका होने पर या ज्वर आदि कोई चिन्ह न होते हुए भी यदि शरीर दिन प्रतिदिन क्षीण या कमजोर होता जा रहा है और वजन में कमी हो रही है तो प्रवालपिष्टी के प्रयोग से शीघ्र लाभ होता है। गर्भावस्था में होने वाले पाण्डु तथा अन्य रोगों में प्रवालपिष्टी बहुत लाभदायक होती है। स्तनपान कराने के कारण जिन स्त्रियों में दुर्बलता अधिक बढ़ जाती है उनके लिए प्रवाल उत्तम औषधि है। जिन बच्चों में Tonsils बढ़ जाते हैं और सदा प्रतिश्याय या जुकाम बना रहता है उनमें प्रवाल का प्रयोग लाभदायक होता है। जिन औषधि योगों में प्रवाल भस्म या प्रवालपिष्टी होती है वो निम्न प्रकार है — अपूर्वमालिनीवसन्त रस, कस्तूरी भैरव रस, पुट पक्वविषमज्वरान्तक लौह, प्रवाल पंचामृत रस, मुक्तापंचामृत रस, सर्वांगसुन्दर रस आदि।

पन्ना (Emerald) पन्नाभस्म बलवर्धक, शरीरगत विष नाशक पाचकाग्निवर्धक, ओज को बढ़ाने वाली, उत्पादक अंगों के लिए बलवर्धक, पाण्डुरोग, शोष रोग को दूर करने वाली होती है। यदि इसका सेवन श्वासरोग, वमन, बवासीर रोग में किया जाता है तो

अच्छा लाभ होता है। ज्वर की तीव्र अवस्था में जब हृदय दुर्बल हो गया हो, ज्ञान शक्ति क्षीण हो गई हो तो पन्ना भस्म का प्रयोग अति लाभदायक होता है। यह रुचिकारक एवं पुष्टिकारक होती है। पन्ना का प्रयोग भस्म व पिष्टी दोनों के रूप में किया जाता है। जवाहरमोहर वटी, माणि पर्पटी रस, नवरत्नराज मृगांक रस आदि पन्ना से निर्मित औषधि योग है।

पुखराज (Topaz) पुखराज दीपन, पाचन, लघु, शीत वीर्य, रसायन तथा विषहर होता है। कफवात नाशक, रक्तपित्त नाशक, दाह, कुष्ठ, वमन को नष्ट करती है। बवासीर में लाभ पहुंचाती है। स्वस्थ शरीर में प्रयोग किए जाने पर मेधा वृद्धि, शरीर में मांस वृद्धि, और आयु वृद्धि होती है। नवरत्नराजमृगाङ्क रस, मणि पर्पटी, रत्न भागोत्तर रस आदि प्रमुख योग है जिनमें पुखराज भस्म या पिष्टी के रूप में होता है।

हीरक (Diamond) हीरे की सिर्फ भस्म का सेवन ही उपयोगी होती है। पिष्टी का सेवन वर्जित माना जाता है। हीरे की भस्म हृदय के लिए बलदायक और षड्रसयुक्त द्रव्य के समान गुणकारी होती है। अर्थात् इसमें छहों रस (मधुर, अम्ल, लवण, कटु, तिक्त, कषाय) होते हैं। सर्वोत्तम रसायन होती है। राजयक्ष्मा (क्षय रोग) प्रमेह तथा मेदोविकारों को नष्ट करती है। हीरक भस्म नपुंसकता की श्रेष्ठ औषधि है। उत्पादक अंगों को बल देने वाला, आयुवर्धक, नेत्रज्योति वर्धक, बलवर्धक, त्रिदोष प्रकोपनाशक, मेधा वर्धक होती है इसके अलावा हीरे की भस्म अनेक रोगों को नष्ट करने के कारण अमृत के समान गुणकारी होती है। कैंसर जैसी बीमारी को मिटाने वाली प्रभावी औषधि है हीरक भस्म। कैंसर में धातुघटक तीव्र गति से नष्ट होने लगते हैं। ऐसी अवस्था में धातु घटकों को दीर्घकाल तक उत्तम स्थिति में टिकाए रखने के लिए हीरक भस्म का उपयोग उत्तम होता है। पंचामृत रस, महामृगांक रस, महालक्ष्मी विलास रस, वसन्तकुसुमाकर रस, नवरत्नराज मृगांक रस आदि हीरक भस्म युक्त औषधि योग है।

नीलम (Sapphire) नीलम का प्रयोग भस्म व पिष्टी दोनों रूपों में किया जाता है। नीलम तिक्त रसयुक्त होता है। यह वात—पित्तव व कफ दोष—नाशक है। नीलम भस्म वृष्य, बलवर्धक दीपन, त्वचा के लिए वर्च्य तथा बवासीर रोग नाशक होती है। यदि इसका सेवन किया जाता है तो कुष्ठ आदि विकृतियां दूर होकर त्वचा का सुन्दर वर्ण निखर आता है। इसके सेवन से श्वास व कास रोग में लाभ होता है। नीलम भस्म विषनाशक, हृदय के लिए लाभकारी और रसायन का काम करने वाली होती है। राजमृगांक रस, मणिपर्पटी रस, रत्नभागोत्तर रस आदि नीलम युक्त औषधि योग है। मलेरिया में नीलम भस्म अच्छा कार्य करती है। वृष्य होने के कारण यह शुक्र दोष को नष्ट कर शरीर को पुष्ट बनाती है।

गोमेद (Zircon) गोमेद कफ—पित्तज व्याधियों को नष्ट करता है। गोमेद भस्म भोजन में रुचिकारक, पाचक अग्नि की शक्ति को बढ़ाने वाली तथा आमरस का पाचन करती है। यदि इसका कुछ दिनों तक सेवन किया जाए तो त्वचा के रोग (फोड़ा फुन्सी आदि) दूर हो जाते हैं। शरीर में बल बढ़ता है, पाण्डुरोग तथा क्षय रोग को नष्ट करता है। इसके सेवन से वातिक संस्थान तथा मस्तिष्क का पोषण होने से बुद्धि, विचार, ध्यान अन्वेषण आदि शक्ति की वृद्धि होती है। गोमेद का पिष्टी के रूप में भी प्रयोग किया

जाता है। नवरत्न राजमृगांक रस रतनभागोत्तर रस आदि गोमेदयुक्त औषधियां हैं।

वैदूर्य (Cat's eye) वैदूर्य को लहसुनिया के नाम से भी जाना जाता है। पीत-हरित वर्ण का अत्यंत कठिन बिल्ली की आंख की तरह दीखने वाला पाषाण रत्न है। इसलिए इसे Cat's eye कहा जाता है। उत्तम वैदूर्य भस्म पिष्टी मधुरस और शीत गुण युक्त होती है। यह पाचक अग्नि को उत्तेजित करती है और धारण शक्ति को बढ़ाती है। इसके सेवन से मल पतला होकर निकलता है। यह भस्म रक्तपित्त शामक, नेत्रों के लिए लाभदायक और शरीर को मोटा करने वाली होती है। स्वस्थ शरीर में यदि इसका सेवन किया जाता है तो आयु की वृद्धि होती है और शरीर में बल बढ़ता है। क्योंकि यह शीत वीर्य व मधुर रस वाली होती है इसलिए विशेष रूप से पित्तज या पित्त प्रधान रोगों को दूर करने में इसका उपयोग होता है। चूर्णाजन, नवरत्न राजमृगाङ्क रस, रत्नभागोत्तर रस आदि वैदूर्य युक्त औषधियां हैं।

उपरोक्त नवरत्नों का औषधि के रूप में प्रयोग केवल कुशल आयुर्वेदिक चिकित्सक की सलाह पर ही किया जाना चाहिए क्योंकि चिकित्सक रोगी की आयु, दोषविचार, काल, बल आदि का विचार करके रोगी को सेवन करने की सलाह देते हैं। क्योंकि इनकी मात्रा बहुत ही कम 30 mg से 125 या 250 mg तक होती है। हीरक भस्म की मात्रा तो और भी कम 4 mg से 8 mg तक होती है इसलिए इनका प्रयोग ज्यादातर अन्य औषधियों के साथ किया जाता है।

यदि रोगानुसार पथ्य-अपथ्य का पालन करते हुए रत्नों की भस्म या पिष्टी युक्त औषधि का सेवन किया जाता है तो आश्चर्यजनक लाभ प्राप्त होता है। वैसे भी कोई भी औषधि हो यदि उचित रूप से उसका सेवन किया जाता है तो संतोषजनक परिणाम अवश्य की प्राप्त होते हैं। •

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पृष्ठ 53 का शेष

शिव की नगरी काशी। कथाओं के माध्यम से देश के विभिन्न क्षेत्रों को जोड़ने का सारा श्रेय पुराण साहित्य को जाता है। वेद और उपनिषद् के निराकार सत्य को रूप और आकार प्रदान कर तथा भारत के मनोरम स्थलों से जोड़कर कथाओं के माध्यम से पुराणों ने भारतीय जनमानस को सर्वाधिक प्रभावित किया है। इसी प्रभाव का परिणाम है कि तिरुपति-तिरुमला देवस्थान में प्रतिदिन औसतन 60 से 80 हजार तक तीर्थयात्री श्री बालाजी का दर्शन करने आते हैं। सुबह तीन बजे रात से बारह बजे तक भक्तों के समूह को देखकर मेरे मन में प्रश्न उठता है कि क्या कारण है कि भारत की हजारों साल पुरानी संस्कृति अभी तक जीवित है, जबकि विश्व की कई बड़ी सभ्यताएँ एवं संस्कृतियाँ (जैसे मिश्र, रोम, युनान, मेसोपोटामिया, माया, इंका, आदि) आज प्रायः लुप्त हो चुकी हैं। •

पृष्ठ 54 का शेष

रहता है किन्तु क्षत्रिय से विप्र और विप्र से वैश्य के धरातल पर समाज को परिवर्तित होने में कभी कभी बहुत काल लग जाते हैं और उसे अन्तराल में सामाजिक समूहों को बहुत शोषण, कष्ट तथा दुश्चक्र झेलना पड़ता है इसलिए उन्होंने ऐसे पांचवे प्रकार के वर्ग की स्थापना करने की बात की जिसे वे सदविप्र वर्ग कहते हैं। ये सदविप्र किसी वर्ग के अनुयायी नहीं होते। उनके सारे वर्गों की मानसिक गुण हांगे और वे जब समाज शोषण की अवस्था में आए तो समाज की चक्र धूरी को त्वरित गति उसे घुमा देंगे जिसे परिवर्तन की प्रसव पीड़ा से समाज यथा सम्भव कम कष्ट झेलेगा और इस तरह सदविप्र वर्ग यद्यति वे किसी तरह खुद सत्ता में नहीं आयेंगे पर सत्ता को शोषण धर्मी नहीं होने देंगे। वे नैतिकवान सहृदय तथा नेतृत्व लेने की क्षमता रखेंगे ऐसा सदविप्रों का निर्माण भी उन्होंने व्यवहारिक रूप से कर लिया है जो सामाजिक क्रियाकलापों में भागीदारी ले रहे हैं।

समाज के लोगों के वर्गीकरण में कार्लमार्क का भी स्थान है उन्होंने वुर्जूवा तथा यकीहेका इस वर्ग की बातें की हैं।

कार्ल गोष्टाव युग (मनोवैज्ञानिक) ने भी समाज के लोगों की वर्गीकृत क्रिया है जिसको – Introverted (अन्तरमुखी) तथा Extroverted (बहिमुखी) कहा है किन्तु इस वर्गीकरण पर चर्चा विस्तृत तरह से होनी चाहिए। •

GOLDEN RULES FOR AGEING GRACEFULLY

- Live in your own place to enjoy independence and privacy.
- Hold on to your bank deposits and assets with yourself or your spouse.
- Don't depend only on your children's promise to care for you when you grow old as their priorities change with time.
- Expand your circle of friends to include those who will outlive you.
- Do not compare; expect nothing from others.
- Do not meddle in the life of your children. Let them live THEIR life not YOURS.
- Do not use old age as your shield and justification to demand care, respect and attention.
- Listen to what others say but think and act independently.
- Pray but do not beg even from God. Seek his grace.
- And finally DO NOT RETIRE FROM LIFE.

LAW

CITIZENSHIP

An Easy Guide To Citizenship in India

Chapter - II

Citizenship as defined in the last issue : A citizen is the legal person free to act according to the law of the land and is having the right to claim the laws of protection.

A native is registered or naturalized in a state or nation, but citizenship is simply the protection of rights and advantage of a citizen conferred by the constitution of the nation.

Citizenship by incorporation of territory (Sec. 7) :

If any new territory becomes a part of India, the Government of India shall specify the persons of the territory to be citizens of India.

Overseas Citizenship :

1. Registration of overseas citizenship (Sec. 7-A)

When an application for registration for citizenship is made the Central Govt. may subject to conditions and restrictions including the conditions of reciprocity as may be prescribed, register any person as an overseas citizen of India if-

- (a) that the person is of the Indian origin of full age and capacity who is a citizen of a specified country or
- (b) that person is of full age and capacity who has obtained the citizenship of a specified country on or after the commencement of the citizenship act and who was a citizen of India immediately before such commencement, or
- (c) that person is a minor person as mentioned in clause a & b.

The person registered as an overseas citizen of India under sub sec. (1) shall be an overseas citizen of India as from the date on which he was registered.

No person who has been deprived of his citizenship under this Act shall be registered as an overseas citizen of India under sub-sec. (1) except by an order of the central government.

Person of Indian origin in this context :

Person of Indian origin means - a citizen of another country who

- (i) was eligible to become a citizen of India at the commencement of the constitution of India.
- (ii) belonged to a territory that become a part of India after 15 August 1947 and
- (iii) but does not include a person who is or had been at a time a citizen of Pakistan, Bangladesh or such other country as the Central Government may by notification in the official Gazzette specify.

Conferment of right on overseas citizens of India

(Sec. 7-B) : An overseas citizen of India shall not be entitled to the rights conferred on a citizen of India (a) under article 16 with regard to equality of opportunity in matters of public employment (b) under article 58 for election as President (c) under article 66 for election of Vice-president, (d) & e) under article 124 and article 217 for appointment of Judges of the High Court and Supreme Courts (f) under sec. 16 of the Representation of People Act 1950 regarding the registration as a voter, (g) under sec. 3 & 4 of representation of People act 1951 for being members of the house of people or the council of states (h) under sec. 5, 5-A and 6 of the representation of people act 1951 to be eligible for being member of legislative assembly or a legislative council of states, they can be eligible for appointment to public services and posts under union or states except for appointment for such services and posts as the central govt. may specify by order.

Renunciation of overseas citizenship (Sec. 7-C) :

If any overseas citizen of India of full age and capacity makes in the prescribed manner a declaration renouncing his overseas citizenship of India, the declaration shall be registered by the central government and upon such registration that person shall cease to be an overseas citizen of India where such person ceases to be an overseas citizen of India every minor children of that person shall thereupon ceases to be an overseas citizen of India.

Cancellation of registration as overseas citizen of India (Sec. 7-D) :

The Central Govt. may be order cancel the registration if it is satisfied that (a) the registration as an overseas citizenship of India was obtained by means of fraud, false representation or the concealment of any material fact, or (b) the overseas citizen of India has shown disaffection towards the constitution of India or (c) the overseas citizen of India during any war in which India may be engaged unlawfully traded or communicated with an enemy or been engaged in or associated with any business or commercial activity that was to his knowledge carried on in such manner as to assist an enemy in that war or (d) he was within 5 years after his registration been sentenced to imprisonment for a term not less than two years or (e) it is necessary so to do in the interest of sovereignty and integrity of India, the security of India, friendly relationship of India with any foreign country or in the interest of general public.

Issue of National Identity Cards (New Sec. 14-A) :

This section provides that the Central Govt. may

compulsorily register every citizen of India and issue a national identity card to the concern.

Termination of Citizenship :

The Citizenship Act 1999 also lays down how the citizenship of India may be lost whether it was acquired under the citizenship Act 1955 or prior to it under the provision of the constitution. It may happen in any of the three ways.

(1) Renunciation (2) Termination (3) Deprivation

1. Renunciation of citizenship :

An Indian citizen of full age and capacity can renounce his Indian citizenship by making a declaration to that effect and having it registered. When a male person renounces his citizenship every minor child of his ceases to be an Indian citizen. Such a child may however resume Indian citizenship if he makes a declaration to that effect within a year of his attaining full age that is 18 years.

2. Termination of citizenship :

If a citizen of India voluntarily acquires the citizenship of another country he shall cease to be a citizen of India. This provision however, does not apply to citizen who during a war in which India may be engaged voluntarily acquires the citizenship of another country.

3. Deprivation of citizenship :

A citizen of India by naturalization, registration, domicile and residence may be deprived of his citizenship by an order of the Central Govt. if it is satisfied that (a) registration or naturalization was obtained by means of fraud, false representation, or concealment of any material fact (b) he has shown himself by act or speech to be disloyal or dis-affactionate towards the Indian constitution or (c) during a war in which India may be engaged he has unlawfully traded or communicated with the enemy or (d) within 5 years of his registration or naturalization he has been sentenced to imprisonment for not less than two years or (e) he has been ordinarily residing out of the India for 7 years continuously.

Commonwealth Citizenship : Sec. 11 of the citizenship act provides for commonwealth citizenship. Every person who is the citizen of commonwealth country, shall be virtue fo that citizenship have the states of commonwealth citizenship in India.

One citizenship in India : Our constitution though federal, recognises one citizenship only that is the citizenship of India. There is no separate state citizenship. Every citizen has the same rights, privileges and immunities of citizenship no matter in what state he resides. A person born or resident in any state can acquire only one citizenship that is the citizenship of India.

- **Dilip Kr. Mahato**
Advocate,
Civil Court, Jamshedpur

PICTURE QUIZ OF THE QUARTER

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The correct answers to Photo Quiz of our past two issues are [a] **Mahabalipuram Temple,** Tamil Nadu [b] **Chhatrapati Shivaji Terminus,** Mumbai, Maharashtra. The first received entries are from **Juhi Kumari,** a class - VII student of Tarapore School, Agrico, Jamshedpur, winning the prize.



Congrats, Juhi !

Playful Soul Mates

Photograph by Raj Krishna
New Delhi

This photo was taken at "Saubhagya Sarovar" in Kamakhya Temple Complex.



Readers are requested to contribute their travel photos, taken anywhere in India with a perfect heading and some details about it. You may send your entries by post / courier or by e-mail. Published snap will be awarded with a token gift from us - Ed.

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