

## [English Section]

### || A Brief Profile ||

**Prof. B.N. Waphare,**  
Pune university.

#### **Early Education and Career :-**

Professor Thakare is a first generation learner from a peasant family. His mother did not know how to count beyond twenty. Born in a small village of Maharashtra on 22<sup>nd</sup> April 1938, he had his early education in his village having population of less than nine hundred then. Later he joined J.R. City High School at Dhule. He used to walk daily the distance of eight kilometers from his home to the school and further eight kms. back home. He was a brilliant student of his school, and after matriculation he joined Fergusson College at Pune for his graduation. He did his M.Sc. (Maths.) from Bombay University and stood first in Pure Mathematics. He taught postgraduate courses at Goa campus of Bombay University. He joined Shivaji University in 1969. He later shifted to Marathwada University in 1977 and finally was selected as the Lokmanya Tilak Professor of Mathematics in Pune University in 1985.

Prof. Thakare has successfully guided 17 Ph.D. students and 12 M.Phil students. He has published around 200 research articles in reputed national and international journals. He also edited the Proceedings of Ramanujan Birth Centenary International Symposium on Analysis that was published by McMillan.

Dr. Thakare is also a writer of repute in the vernacular Marathi language. His collection of short stories "Nimbol" (1984), his collection of poems titled "Shoonya aani Infinity" (1996) are quite well received and much discussed in literary circles. He was the recipient of prestigious Reo Pratisthan Award for his story "Jyula" in 1984. He has penned a three act play titled "Court Marshal". His poems, in particular, reflect a fine blend of rural, urban and scientific tempore and are considered surprisingly fresh.

Professor Thakare was the President, Section of Mathematics at the 79<sup>th</sup> Annual Conference of the Indian Science Congress Association held at Baroda in January 1992. He was President of the Indian Mathematical Society for 1995-96 and presided over the deliberations of the 61<sup>st</sup> Annual Conference of the Indian Mathematical Society held at Aligarh Muslim University in December 1995. He was Academic Secretary of the Indian Mathematical Society for nine years from 1998 to 2007. He was the Editor of the Journal of Indian Mathematical Society from 1<sup>st</sup> April 2007 to 31<sup>st</sup> March 2013. He was the General Secretary of the Indian Mathematical Society since 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2019.

Professor Thakare is elected Fellow of the National Academy of Sciences, Fellow of the Maharashtra Academy of Sciences. He delivered Ramanujan Memorial Award Lecture at the 62<sup>nd</sup> Annual Conference of the Indian Mathematical Society held at Indian Institute of Technology, Kanpur in December 1996. He is also member of several



literary and cultural associations besides being a member of I.M.S., I.S.C.A, American Mathematical Society and such professional bodies.

Dr. Thakare has travelled widely and has visited several leading institutions / universities in more than 20 countries. He visited Hungary as a Visiting Professor (March-September 1979) under cultural exchange programme. He was nominated by the U.G.C. as Visiting Professor to the erstwhile U.S.S.R. (May-July 1989) and was with Steklov Institute of Mathematics, Moscow, LOMI, St. Pittsburgh. He was invited to deliver Key Note Address at the International Conference on "Geometry of Banach Spaces" held at Varna, Bulgaria in 1989. He also gave a Key Note Address at the 4<sup>th</sup> International Symposium on Operator Theory held at Timisoara, Rumania in 1979. He was also invited to Japan under the programme of Japanese Society for Promotion of Science by Professor Izuru Fujiwara of University of Osaka Prefecture, Japan. He was invited as Visiting Professor at the Department of Mathematics and Statistics, McGill University, Montreal, Canada (Jan-March-1989). He also organised several International and National Conferences / Symposia and delivered more than hundred talks in various conferences held in India and abroad.

### **His Researches :-**

The main research areas of Professor Thakare are Lattice Theory, Combinatorics on finite sets, Baer \*-rings, Functional Analysis, Special Function Theory, Complex Analysis etc. Professor Maeda Suichiro (Japan) who has coauthored several research papers with Professor Thakare wrote to Pune University in 1984, "Thakare gave me some interesting ideas on lattice theory". The collaboration of Thakare's group with Professor S. Maeda revolved around symmetricity in partially ordered sets and semilattices. Professor Thakare and his group settled through series of papers, almost in totality, the following two open problems first posed by G. Birkhoff.

- (A) How should one define "Modular pairs" (i.e. a relation  $(a,b)M$ ) in a general poset ?
- (B) Define natural extentions of the notions of neutral elements and standard elements to posets?

Professor Thakare and his group through a series of papers have answered partially the open problem of G. Birkhoff concerning the number of nonisomorphic (i) lattices, (ii) semilattices, (iii) posets on  $n$  elements. By adopting lattice theoretic techniques, Thakare's group settled many problems posed by I. Kaplansky and S.K. Berberian in the theory of Baer \*- rings. An abstract spectral theory by an ingeneous use of character theory on multiplicative lattices has been built by Thakare's group that unifies the study of spectra for lattices / semilattices and commutative rings. Some more open problems posed by G. Birkhoff and G. Gratzer in Lattice Theory were settled by Thakare's group.

Schur property in conjugate Banach spaces was characterized by Thakare and Pethe, and they also answered in the affirmative an open problem in "Geometry of Banach Spaces" posed by J. Diestel. The study of non-normal operators on Hilbert spaces carried out by his group has received recognition and a few open problems posed by him have been solved by other mathematicians.

Professor Thakare's most conspicuous finding along with H.C. Madheker is in constructing pairs of biorthogonal polynomials with respect to Jacobi weight function, Hermite weight function and Szego-Hermite weight function. This area has a deep potential in calculation of penetration of gamma rays through matter. A conjecture of Richard Askey concerning solution of dual series equations involving Jacobi polynomials of different orders was settled by Thakare. The study of classical orthogonal polynomials was unified by him and the method is called Fujiwara- Thakare approach.

The Krein-Milman theorem of Functional Analysis was exploited by his group to determine convex hulls of extreme points of some classes of univalent and multivalent functions. Kalmbach, J. Diestel, Uhl, Srivastava- Karlson, Srivastava-Manocha, M. Stern and several authors refer to the work of Professor Thakare and his students in their research treatises. The mathematical citation index of the research work of Thakare and his students is quite high. While evaluating Professor Thakare's research, *Professor V. Pta'k* of the then Czechoslovakia wrote in 1987 that " *N.K. Thakare can be classed with the most important of Indian Mathematicians of his generation*". In 1978 Professor I. Fujiwara wrote to the Central University of Hyderabad, " *Compared with a number of candidates we have now at hand from all over Japan, I may be allowed to confess, Dr. N.K. Thakare must be more powerful and promising than any one of them belonging to the same generation.*"

#### **As Founder Vice-Chancellor :-**

The North Maharashtra University was carved out of the erstwhile jurisdiction of the University of Pune in August 1990 and Professor N.K. Thakare was reigned in as the *First Vice-Chancellor of N.M.U. from 15<sup>th</sup> August 1990 by the Government of Maharashtra.*

To begin with the University did not have even an inch of land and no money. During the tenure of six years of his vice-chancellorship, the University had its own more than 40 buildings, out of which 20 to 25 major buildings were almost completed on a sprawling land of 550 acres. The total construction cost incurred during his tenure was to the tune of Rs. 20 crores. More than Rs. 3 crores were spent on scientific equipments, furniture, communication facilities and necessary infrastructure. On 8<sup>th</sup> August 1996, the last Thursday of the six year tenure of Professor Thakare, the liquid funds in various bank accounts of the University were more than Rs. 13.8 crores. The Government of Maharashtra provided only Rs. 7.5 crores altogether in the course of six years for both recurring and non-recurring expenditure. The sound financial position of the University was solely on account of very efficient and intelligent management of the University finances using computerized facilities.

In the history of higher education in the country, the N.M.U. is the only state university that was granted recognition under section 12(B) of the UGC Act, 1956 during its existence of four years only. The North Maharashtra University is the only state university in the country that has a "Kendriya Vidhyalaya" on its beautiful campus and was started during professor Thakare's tenure as vice-chancellor.

The postgraduate departments of the university were established in 1991 and were organized into schools which led to the interdisciplinary interaction and optimum utilization of scarce resources such as building space, equipment and human resources. Dr. Thakare paid special attention to modernization of syllabi at both undergraduate and postgraduate levels with special emphasis on applied component even in faculties such as Arts, Commerce, Social Sciences etc. He got more than 148 textbooks written as per the revised syllabi. He induced faculty from affiliated colleges to prepare textbooks and got them published through Oxford University Press, Maharashtra Universities Book Production Board and other well known publishers.

New courses such as M.Sc. in Pesticides and Agrochemicals , Bachelor of Business Studies leading to a professional opening for students of commerce stream, B. Tech in Paints, Plastics, Food Technology, Oils and Waxes, Chemical Engineering, M.Sc. in Polymer Chemistry are some of the novel academic programmes amongst twenty five such

courses started by the N.M.U. on its own campus under the stewardship of Professor Thakare. Some of these courses are considered unique in the country.

Professor Thakare succeeded in increasing the number of actual teaching days as well as working days of the university by reducing the number of holidays without infringing upon the rights of non-teaching employees. The university office remained closed only on the Republic Day, the Maharashtra Day, the Independence Day and a break of 2 to 3 days for the local farming festival of POLA, and a break of 3 days in winter. The work culture through his personal illustration was a unique feature in that for three months (i.e. April, May, June) the male staff used to report for duty from 8 p.m. to 11 p.m. in the night with a view to cope up with the heavy examination work without any lure of remuneration etc. and that too after full day's usual duties from 9.30 a.m. to 5.00 p.m. The quality of administration and the efficiency was a unique feature of N.M.U. then (university had only one fifth of the total required staff strength.)

The cancerous ills prevalent in higher education such as (i) adoption of unfair means (i.e. copying) in examinations at the individual as well as institutional level, (ii) extraction of money through capitation fees from students seeking admissions to professional colleges, postgraduate courses, (iii) recruitment of staff on monetary or similar considerations were eliminated in totality by concerted efforts of Dr. Thakare. The N.M.U. was one of the first state universities in the country to have initiated centralized admissions to professional and prestigious courses since 1992 itself.

While the aesthetic beauty of the campus was the prime consideration, the cost of civil construction of the buildings was unbelievably low, say ranging from Rs. 250 to Rs. 300 per sq.ft. The university ordinances in this respect were framed in such a way that entire construction activities were carried out by the university staff under the direct supervision of the vice-chancellor. The attempts to recreate cultural heritage, and beautification of the campus through (i) paintings, (ii) greenery, (iii) woodenry and (iv) rockery are considered unique features of N.M.U. campus. During 1990-96 about more than 5 lakh saplings were planted on N.M.U. campus. This paid rich dividends later, and N.M.U. was adjudged the best institutional green campus in the country and was decorated with "Vanashree and Indira Priyadarshani awards" for its green campus in the year 2000 by the Government of India.

#### **Main activity as Sr. Citizen :**

Presently Professor Thakare, along with his wife Pushpal is experimenting in primary and secondary education in rural and tribal belt of North Maharashtra. From the proceeds of the sale of their houses at Pune and Dhule and with their life long savings, they have built primary and secondary school buildings at their native village. The students from nearby villages and shanties are fetched daily to the schools by buses. The schools are being run without any financial support from the government and no capitation fees are collected from poor and illiterate families of farmers and farm labourers. The elderly couple hopes to be successful in their endeavours ultimately.

#### **Latest Awards etc.**

- Professor Thakare was conferred “ *The Distinguished Service Award* ” for the year 2007 for outstanding contribution to the cause of Mathematics Education & Research by The Mathematical Association of India at Delhi on 14<sup>th</sup> April 2007.
- An international conference was organized from 21<sup>st</sup> to 24<sup>th</sup> April 2013 on the occasion of his 75<sup>th</sup> birthday alongwith 75<sup>th</sup> birthday of Prof.T.T.Raghunathan at the Department of Mathematics,S.P.P.University,Pune. During this event he was presented a cheque of **Rs. Twenty five lakhs** which he returned to the **Professor**

**N.K . Thakare Gaurav Samiti** with a request to institute an International award to be named as **Ganit-Ratna Award**.

- He was awarded “ **Ramchandra Puraskar**” with a citation and Rs. Twenty Five thousands prize money.
- He was conferred with “**Life Time Achievement Award**” by the Society for “Special Functions and its Applications” at **Bikaner ,Rajasthan** on 3<sup>rd</sup> November 2017 at the auspicious hands of **Professor Tom Koornwinder of the Netherlands**.
- **The Indian Mathematical Society** honoured Professor N.K. Thakare by bestowing on him “**The life Time Achievement Award for Research and Service to IMS**” on 22<sup>nd</sup> November 2019 at **Indian Institute of Technology, Kharagpur** . This is for the **FIRST** time such an award has been given by I.M.S. in its history of **112 years**.
- The prestigious **Yashwantrao Chavan Pratisthan**, Mumbai awarded to him the First “**Yashwantrao Chavan Gaurav Purskar**” for Jalgaon region on Saturday, the 30<sup>th</sup> November 2019. It also carried a cheque which he thankfully returned for better utilization.
- A book of rhymes titled “**Rhymes with Indian Touch**” penned by Dr. N.K.Thakare has been published by Atharva Publications in June 2019.
- The second collection of short stories “**Khindit**” (खिण्डीत) is being published by Hermish Publications, Pune in 2020.



उत्तर महाराष्ट्र विद्यापीठाच्या नव्या इमारतीत कार्यरत कुलगुरु. मा.डॉ. एन.के.ठाकरे.  
(नव्या इमारतीत वास्तू प्रवेश) १२ मार्च १९९६



शेवंती कृष्ण ट्रस्ट चे अध्यक्ष मा. डॉ. एन. के. ठाकरे आणि त्यांचे कार्यालय

