

The Civil Engineer

NEWSLETTER

Volume -I, No. 11 August-September, 2010

OUR INTELLECTUAL PILLARS

- 1. Er. Sohan H. Lal Swamy**
Chairman
Institution of Civil Engineers (India)
New Delhi.
- 2. Prof. V.N. Rajasekharan Pillai**
Vice-Chancellor
Indira Gandhi National Open University
Maidan Garhi,
New Delhi-110 068.
- 3. Mr. Ashok K Mittal**
Chancellor
Lovely Professional University
Lovely Campus, Jalandhar-Ludhiana G.T.
Road, Near Chaheru Railway Bridge
Phagwara, Punjab 144402
- 4. Dr. D.P. Ghosh**
Professor , Civil Engineering
IIT, Kharagpur
West Bengal
- 5. Prof. K.G. Sharma**
Professor, Civil Engineering
IIT Delhi, Hauz Khas
New Delhi.
- 6. Prof. Ravi Sinha**
Professor, Civil Engineering
IIT, Mumbai, Powai
Mumbai.
- 7. Dr. G.L. Asawa**
Professor
Department of Civil Engineering
IIT , Roorkee- 247 667
Uttarakhand
- 8. Prof. Anjan Dutta**
H.O.D. Civil Engineering Department
IIT, Guwahati-781 039
Assam
- 9. Prof. K. Rajagopal**
Professor & Head of Department
Civil Engineering
IIT, Madras
Chennai-600 036
- 10. Prof. C.V.R. Murthy**
Professor
Department of Civil Engineering
IIT, Kanpur-208 016
Uttar Pradesh
- 11. Dr. P.P. Mujumdar**
Professor and Chairman
Department of Civil Engineering
Indian Institute of Science
Bangalore-560 012
Karnataka
- 12. Dr. Subhash Chandra Mishra (F.I.E)**
Retd. Dean
College of Engineering and Technology
Bhubaneswar.
Orissa
- 13. Prof. Satish Khanna**
Professor, Department of Architecture
School of Planning and Architecture
New Delhi
- 14. Prof. R.S. Sharma**
Retd. Professor Civil Engineering (and
Practicing Architect)
College of Technology, Pantnagar
Uttranchal
- 15. Dr. S.S. Kang**
Professor
Punjab Agricultural University
Ludhiana
Punjab
- 16. Dr. S.D. Sharma**
Former Dean
Post Graduate Faculty cum Director
Resident Instructions
Orissa University of Agriculture and
Technology
Bhubaneswar
Orissa



The Institution of Civil Engineers (India)

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Chairman of the Institution
Er. S. L. Swamy

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Website : www.ice.net.in
E-Mail : info@ice.net.in

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The Institution of Civil Engineers (India)



From the Editor-in-Chief's Desk

Like the needles of the clock, life moves on, minute after minute, hour after hour and day after day and so on. What was yesterday is not today and what is today may not be there tomorrow. We have to march ahead leaving our past. We may have to learn from the mistakes we have committed in the past, so that we do not repeat them. Every year of life should make us wiser with the experience of life gained. We have not to count the stairs but climb the stairs to reach our goal. Firstly we must set our goal, then only we shall be able to move on crushing or leaving behind the hurdles on the way. One has not to be content with what one has achieved. Then only the struggle will continue. Incomplete things will strive to be complete and a thing which is complete will have fear to get reduced or go down. We have to bring positive thinking and attitude to run the race for our existence in this competitive world.

This is a special issue of the newsletter which provides a good insight into the multifarious activities in which ICE (I) is involved in. In continuation of the series, there is an article on

“Geotechnical Engineering”. Our celebrations of Engineers’ Day and organizing National Seminar “Role of Civil Engineers in Human & Infrastructural Development” on 15th September, 2010 are focused besides Award Presentation for Outstanding Civil Engineering Award to Dr. E. Sreedharan, M.D. Delhi Metro Rail Corporation. Other features with their updates will keep your interests alive.

I take this opportunity to wish you a very Happy Dussera, Diwali and Guru Nanak Birthday. May the festive season add colors to your life.

Er. S.L. Swamy
Chairman, ICE(I)

We have the choice to live our life on purpose or without a purpose. Life doesn't make the distinction, It simply rewards our choice.



From the Editor's Pen

We have made this issue of the "Civil Engineer" a special one as it covers variety of events that have taken place during the months of August, September and October, 2010. Starting from August, I would say that there will be hardly any Indian who will not be proud of our independence which we achieved after centuries of bondage. 15th August is an auspicious day which reminds us of the long struggle which our freedom fighters went through before seeing our National flag flying high. We should take a pledge to keep our flag high even at the cost of our lives.

The month of August was important particularly for ICE (I) as it participated in ACECC Executive Committee Meeting in Sydney, Australia and also attended 5th CECAR held there from 7th to 11th August. It was there that our entry of "Delhi Metro" received the "Outstanding Civil Engineering Project Award" in an International competition.

September was another important month as we celebrated Engineers' Day on 15th September, 2010. It was on this occasion that the "Outstanding Civil Engineering Project Award" was handed over to Dr. E. Sreedharan, M.D., Delhi Metro Rail Corporation Ltd. A National Seminar on "Role of Civil Engineer in Human and Infrastructural Development" was also organized in which Experts from IITs, Delhi technological University and many

academicians and functionaries participated. The program was very well attended. The valedictory address was delivered by Prof. V.N.Rajashekharan Pillai, V.C. IGNOU.

After September we had October, 2010 a special month for India as we organized the XIX Common Wealth Games during this month. Right from the Inaugural Ceremony at the Jawahar Lal Nehru Stadium which was a dazzling show it attracted the invited and uninvited guests. It was once in a life time show which exhibited India's rich cultural heritage including yoga. The spectators were spell bound to see the different hues and colors in our culture and out patriotism and National integration binding us together to raise our voice that we are Indians and we are proud to be Indians. The whole period of Common Wealth Games was interesting in all the stadia of Delhi which was feast to the eyes which made India proud by bagging unprecedented gold, silver and bronze awards in many events and second rank in the medal tally. Kudos to our Sportsmen and women. All our initial fears of unpreparedness were shattered as we were flattened with every event being excellent well organized and a real show of our strength on all counts.

Prithipal Singh
Secretary, ICE(I)

Crystallized your goals. Make a plan for achieving them and set yourself a deadline. Then, with supreme confidence, determination and disregard for obstacles and other people's criticisms, carry out your plan.



REPORT ON ACECC & CECAR 5, 2010

(August 7-11, 2010 at Sydney, Australia)

Asian Civil Engineering Coordinating Council (ACECC) was formally established during September, 1999 at the initiative of five society's viz. Philippine Institute of Civil Engineers (PICE), American Society of Civil Engineers (ASCE), Japan Society of Civil Engineers (JSCE), Chinese Institute of Civil & Hydraulic Engineers (CICHE) and Korean Society of Civil Engineers (KSCE). Five more societies viz. Engineers Australia (EA), Indonesia Society of Civil and Structural Engineering (HAKI), Mongolian Association of Civil Engineers (MACE), Vietnam Federation of Civil Engineering Association (VFCEA) and The Institution of Civil Engineers (India) [ICE(I)] joined the ACECC later.

The purpose of the ACECC is to schedule Asian forums where worldwide members of the Civil Engineering profession may jointly develop programmes of coordination and mutual action in designated matters affecting the interests of Civil Engineers. The ACECC, through separate Technical Coordination Committee (TCC), Planning Committee (PC) and Executive Committee (EC) identifies and develops methods that facilitate the discussion of worldwide civil engineering technology needs, issues, and practices.

ACECC, apart from organizing many activities in the field of Civil Engineering, holds regularly at 3 years interval an International Conference for the benefit of Civil Engineers named as Civil Engineering Conference in Asian Region (CECAR). Engineers Australia hosted the CECAR 5 together with Australian Structural

Engineering Conference (ASEC 2010) in Sydney, Australia during 9-11th August, 2010. The theme of the International Conference was "Innovative Community Building".

The members work together to exchange information; establish partnerships; identify appropriate methods that shall meet the changing needs of the civil engineering profession; and seek ways to transfer the findings of the Conference into practice.

This year the ACECC meetings and CECAR 5 were held on 7- 11th August, 2010 at the Sydney Convention Centre, Darling Harbour, Sydney (Australia). The TCC, PC & EC meetings of ACECC were chaired by Mr. Paul Mitchell, Chair ACECC of EA. All participating countries including India made their contribution for resolving difficult and complex issues. One of the important decision taken in EC meeting was finalization of "Presidents' Communiqué" on issues of "Sustainable Water Use", "Sustainable Transport", "Energy Conservation in Communities" This Communiqué was signed by the following:

Mr. Blaine Leonard	President American Society of Civil Engineers
Prof. Ching-Lung Liao	President Chinese Institute of Civil and Hydraulic Engineers
Prof. Doug Hargreaves	President Engineers Australia
Mr. Davy Sukamta	President Indonesian Society of Civil and Structural Engineers



Er. Sohan Swamy	President Institution of Civil Engineers India	“Climate Change and Coastal Management”; “Water Management”; “Innovative Construction (Project Management & Methods)”; “Mining Infrastructure (Industry Needs and Issues)”; “Sustainable Infrastructure”; “Transportation and Road Safety”; “Disaster Reduction and Recovery”; “Leadership (Management & Ethics)”; “Geotechnical Engineering”; “Asset Management”; “Waste Management (Solid & Water Waste)”; “Analysis Methods”; “Bridge and Infrastructure Engineering”; “Building Applications”; “Concrete Structures”; “Soil/Structure Interaction”; “Steel and Composite Structures”; “Structural Control and Dynamics”; “Structural Failures”; “Structural Health Monitoring” & “Sustainability Issues in Structures”.
Prof. Kenji Sakata	President Japan Society of Civil Engineers	
Prof. Kyung Soo chon	President Korean Society of Civil Engineers	
Dr. Erdene Ganzorig	President Mongolia Association of Civil Engineers	
Dr. Jamie Pacanan	President Philippines Institute of Civil Engineers	
Prof. Pham Hong Giang	Vice President Vietnam Federation of Civil Engineering Associations	
Mr. Paul Mitchell	Chair Asian Civil Engineering Coordinating Council	

The CECAR 5 & ASEC 2010 conference was inaugurated on 9th August, 2010 by Her Excellency Professor Marie Bashir, AC CVO, Governor of New South Wales, Australia.

The Keynote Speakers of the conference included Dr. Jenn-Chuan Chern, Professor Civil Engineering, National Taiwan University (The Strategies and Post-Disaster Reconstruction of Typhoon Morakot in Taiwan); Mr. Ian Firth, Chief Operating Officer, Flint & Neill (Strengthening and upgrading the West Gate Bridge, Melbourne) and Professor Roger Plank, Vice President Institution of Structural Engineers, UK (Current Developments in Structural Engineering in Europe).

CECAR 5 addressed the entire gamut of Civil Engineering discipline with special reference to

About 700 delegates from different parts of the world attended the conference and presented their Research/Technical papers in different Technical Sessions.

The ICE(I) led by its Chairman Er. S.L. Swamy, participated in various meetings of the ACECC on 7-8th August, 2010 and the conference on 9-11th August, 2010. Er. S.L. Swamy, presented a technical paper on “India’s Water Resources and their Management” in the Technical Session on “Water Management”. He also chaired a Technical Session on “Geotechnical Engineering”. Delegation of ICE(I) included Er. S.L. Swamy, Chairman, Mr. Prithipal Singh, Secretary, Ms. Maya Thakur, Director Administration, Dr. S.D. Sharma Director Academic, Er. Sagar Singh Thakur, Joint Secretary & Mr. R. Gulati, P.R.O. Two Professors of IITs viz. Dr. Anjan Dutta, Professor Civil Engineering, IIT, Guwahati &

Dr. G.L. Asawa, Professor Civil Engineering, IIT Roorkee attended the conference being sponsored by the ICE(I). Dr. Dutta presented a paper on “Identification of Influence of Infill Walls on Lateral Stiffness of RC Framed Structure” & Dr. Asawa presented a paper on “Some Aspects Related to Water Resources Development” in their respective Technical Sessions.

Few of the technical papers were presented through Poster Presentation (E) which could be viewed by the participants of the conference on the computers kept in the Exhibition Area.

On this occasion an Exhibition was arranged along side of the venue of the conference. Different firms/companies exhibited their products for improving Civil Engineering practices.

ICE(I) also sponsored Delhi Metro Project for Civil Engineering Project Award of ACECC. It is a matter of great pride that entry from India won this prestigious award. The award was received by Er. S.L. Swamy, Chairman ICE(I) on behalf of the M.D. Delhi Metro Rail Corporation (DMRC) who could not be present on the occasion and had requested Mr. Swamy to receive the same on his behalf.

The other projects which won this award include Incheon Bridge (Republic of Korea), Bali Beach Conservation Project (Indonesia).

The outstanding Civil Engineering Project Award was bestowed upon Taiwan High Speed Rail Project (Taiwan R.O.C).

ACECC Civil Engineering Achievement Award (2010) was given to the following eminent Civil Engineers for their outstanding contribution to

the profession of Civil Engineering :

Dr. Jenn-Chuan Chern, (Public Construction Commission) – Endorsed by CICHE

Nakamura Hideo (Tokyo City University) – Endorsed by JSCE

Kuang-II Kim (Samjung Steel Company Ltd.) – Endorsed by KSCE

All these awards were presented by Mr. Paul Mitchell, Chair, CECAR 5 on 10th August, 2010 during Conference Dinner.

Closing ceremony of the conference was held on 11th August, 2010. In this Engineers Australia the host organization of CECAR 5 handed over the flag of ACECC to the HAKI who will be the host for CECAR 6 to be held in Jakarta, Indonesia. The theme for CECAR 6 will be “Embracing the Future through Sustainability”. Organizers of CECAR 5 thanked one and all who contributed for the success of the conference.

The organizers also arranged conference site tours on 12th August, 2010.

Some glimpses of ACECC meetings, CECAR 5 & ASEC 2010 conference can be seen in photo gallery.

GEOTECHNICAL ENGINEERING



Geotechnical engineering is the branch of civil engineering concerned with the engineering behavior of earth materials. Geotechnical engineering uses principles of soil mechanics and rock mechanics to investigate subsurface conditions and materials; determine the relevant physical/mechanical and chemical properties of these materials; evaluate stability of natural slopes and man-made soil deposits; assess risks posed by site conditions; design earthworks and structure foundations; and monitor site conditions, earthwork and foundation construction.

A typical geotechnical engineering project begins with a review of project needs to define the required material properties. Then follows a site investigation of soil, rock, fault distribution and bedrock properties on and below an area of interest to determine their engineering properties including how they will interact with, on or in a proposed construction. Site investigations are needed to gain an understanding of the area in or on which the engineering will take place. Investigations can include the assessment of the risk to humans, property and the environment from natural hazards such as earthquakes, landslides, sinkholes, soil liquefaction, debris flows and rock falls.

A geotechnical engineer then determines and designs the type of foundations, earthworks, and/or pavement sub grades required for the intended man-made structures to be built. Foundations are designed and constructed for structures of various sizes such as high-rise buildings, bridges, medium to large commercial buildings, and smaller structures where the soil conditions do not allow code-based design.

Foundations built for above-ground structures include shallow and deep foundations. Retaining structures include earth-filled dams and retaining walls. Earthworks include embankments, tunnels, dikes, levees, channels, reservoirs, deposition of hazardous waste and sanitary landfills.

Soil mechanics



A phase diagram of soil indicating the weights and volumes of air, soil, water, and voids.

In geotechnical engineering, soils are considered a three-phase material composed of: rock or mineral particles, water and air. The voids of a soil, the spaces in between mineral particles, contain the water and air.

The engineering properties of soils are affected by four main factors: the predominant size of the mineral particles, the type of mineral particles, the grain size distribution, and the relative quantities of mineral, water and air present in the soil matrix. Fine particles (fines) are defined as particles less than 0.075 mm in diameter.

Soil properties

Some of the important properties of soils that are used by geotechnical engineers to analyze site conditions and design earthworks, retaining structures, and foundations are:

Unit Weight

Total unit weight: Cumulative weight of the solid particles, water and air in the material per unit volume. Note that the air phase is often assumed to be weightless.

Porosity

Ratio of the volume of voids (containing air, water, or other fluids) in a soil to the total volume of the soil. A porosity of 0 implies that there are no voids in the soil.

Void ratio

The ratio of the volume of voids to the volume of solid particles in a soil. Void ratio is mathematically related to the porosity.

Permeability

A measure of the ability of water to flow through the soil, expressed in units of velocity.

Compressibility

The rate of change of volume with effective stress. If the pores are filled with water, then the water must be squeezed out of the pores to allow volumetric compression of the soil; this process is called consolidation.

Shear strength

The shear stress that will cause shear failure.

Atterberg Limits

Liquid limit, plastic limit, and shrinkage limit. These indices are used for estimation of other engineering properties and for soil classification.

Geotechnical Investigation

Geotechnical engineers perform geotechnical investigations to obtain information on the physical properties of soil and rock underlying (and sometimes adjacent to) a site to design earthworks and foundations for proposed structures, and for repair of distress to earthworks and structures caused by subsurface conditions. A geotechnical investigation will include surface exploration and subsurface exploration of a site. Sometimes, geophysical methods are used to obtain data about sites. Subsurface exploration usually involves in-situ testing (two common examples of in-situ tests are the standard penetration test and cone penetration test. In addition site investigation will often include subsurface sampling and laboratory testing of the soil samples retrieved. The digging of test pits and trenching (particularly for locating faults and slide planes may also be used to learn about soil conditions at depth. Large diameter borings are rarely used due to safety concerns and expense, but are sometimes used to allow a

geologist or engineer to be lowered into the borehole for direct visual and manual examination of the soil and rock stratigraphy.

A variety of soil samplers exist to meet the needs of different engineering projects. The standard penetration test (SPT), which uses a thick-walled split spoon sampler, is the most common way to collect disturbed samples. Piston samplers, employing a thin-walled tube, are most commonly used for the collection of less disturbed samples. More advanced methods, are superior, but even more expensive.

Atterberg limits tests, water content measurements, and grain size analysis, for example, may be performed on disturbed samples obtained from thick walled soil samples. Properties such as shear strength, stiffness hydraulic conductivity, and coefficient of consolidation may be significantly altered by sample disturbance. To measure these properties in the laboratory, high quality sampling would require. Common tests to measure the strength and stiffness include the triaxial shear, unconfined compression test.

Surface exploration can include geologic mapping, geophysical methods, and photogrammetry, or it can be as simple as an engineer walking around on the site to observe the physical conditions at the site. Geologic mapping and interpretation of geomorphology is typically completed in consultation with a geologist or engineering geologist.

Geophysical exploration is also sometimes used; geophysical techniques used for subsurface exploration include measurement of seismic waves (pressure, shear, and Rayleigh waves), using surface-wave methods or down hole methods, and electromagnetic surveys (magnetometer, resistivity, and ground-penetrating radar).

Foundations

A building's foundation transmits loads from buildings and other structures to the earth. Geotechnical engineers design foundations based on the load characteristics of the structure and the properties of the soils and/or bedrock at the site. In general, geotechnical engineers:

1. Estimate the magnitude and location of the loads to be supported.

2. Develop an investigation plan to explore the subsurface.
3. Determine necessary soil parameters through field and lab testing (e.g., consolidation test, triaxial shear test, vane shear test, standard penetration test);
4. Design the foundation in the safest and most economical manner.

The primary considerations for foundation support are bearing capacity, settlement, and ground movement beneath the foundations. Bearing capacity is the ability of the site soils to support the loads imposed by buildings or structures. Settlement occurs under all foundations in all soil conditions, though lightly loaded structures or rock sites may experience negligible settlements. For heavier structures or softer sites, both overall settlement relative to inbuilt areas or neighboring buildings, and differential settlement under a single structure, can be concerns. Of particular concern is settlement which occurs over time, as immediate settlement can usually be compensated for during construction. Ground movement beneath a structure's foundations can occur due to shrinkage or swell of expansive soils due to climatic changes, frost expansion of soil, melting of permafrost, slope instability, or other causes. All these factors must be considered during design of foundations.

Many building codes specify basic foundation design parameters for simple conditions, frequently varying by jurisdiction, but such design techniques are normally limited to certain types of construction and certain types of sites, and are frequently very conservative.

In areas of shallow bedrock, most foundations may bear directly on bedrock; in other areas, the soil may provide sufficient strength for the support of structures. In areas of deeper bedrock with soft overlying soils, deep foundations are used to support structures directly on the bedrock; in areas where bedrock is not economically available, stiff "bearing layers" are used to support deep foundations instead.

SHALLOW FOUNDATIONS



Shallow foundations are a type of foundation that transfers building load to the very near the surface, rather than to a subsurface layer. Shallow foundations typically have a depth to width ratio of less than 1.

Footings

Footings (often called "spread footings" because they spread the load) are structural elements which transfer structure loads to the ground by direct areal contact. Footings can be isolated footings for point or column loads, or strip footings for wall or other long (line) loads. Footings are normally constructed from reinforced concrete cast directly onto the soil, and are typically embedded into the ground to penetrate through the zone of frost movement and/or to obtain additional bearing capacity.

Slab foundations

A variant on spread footings is to have the entire structure bear on a single slab of concrete underlying the entire area of the structure. Slabs must be thick enough to provide sufficient rigidity to spread the bearing loads somewhat uniformly, and to minimize differential settlement across the foundation. In some cases, flexure is allowed and the building is constructed to tolerate small movements of the foundation instead. For small structures, like single-family houses, the slab may be less than 300 mm thick; for larger structures, the foundation slab may be several meters thick.

Slab foundations can be either slab-on-grade foundations or embedded foundations, typically in buildings with basements. Slab-on-grade foundations must be designed to allow for potential ground movement due to changing soil conditions.

DEEP FOUNDATIONS



Deep foundations are used for structures or heavy loads when shallow foundations cannot provide adequate capacity, due to size and structural limitations. They may also be used to transfer building loads past weak or compressible soil layers. While shallow foundations rely solely on the bearing capacity of the soil beneath them, deep foundations can rely on end bearing resistance, frictional resistance along their length, or both in developing the required capacity. Geotechnical engineers use specialized tools, such as the cone penetration test, to estimate the amount of skin and end bearing resistance available in the subsurface.

There are many types of deep foundations including piles, drilled shafts, caissons, piers, and earth stabilized columns. Large buildings such as skyscrapers typically require deep foundations. In buildings that are constructed and found to undergo settlement, underpinning piles can be used to stabilize the existing building.

Thus we can summarize "Geotechnical Engineering is the art of molding materials we do not wholly understand - into shapes we cannot precisely analyze - so as to withstand forces we cannot really assess - in such a way that the community-at-large has no reason to suspect the extent of our ignorance."

(Source : Internet)

Dr. E. Sreedharan, MD DMRC Speaks



Elattuvalapil Sreedharan is a sprightly 78 and could put people half his age to shame. The country knows him as the 'metro man'-he built Delhi's modern train network that many describe as world class. Before that, he built the Kolkata Metro and the Konkan Railway. But the man who achieved such technological marvels is no techie, telling Shobha John that he doesn't carry even a mobile phone excerpts as below:

You' re 78 and still work discernibly hard. What drives you on?

I have no choice. I have a huge responsibility to give Delhi a world class Metro and this requires constant monitoring.

Phase II of the Delhi Metro is 123 km long and was completed in four-and-a-half years. No other country has done it in such a short time. Ours is a small team—the operations and maintenance wing has 6,500 personnel and the project wing has 550. So we all have to work hard.

Do you know who will succeed you?

My term is till December. There after, the Delhi government will take a decision. But there are many senior directors in Delhi Metro Rail Corporation (DMRC) and any of them can step into my shoes. And I can vouch for their honesty. They all follow the core values I cherish —punctuality, integrity and professional competence. Every DMRC employee is given the Gita and taught yoga. I have zero tolerance

for corruption and anyone suspected of it, is given the sack.

Delhi knows you as the 'Metro Man'.

Are you proud to have built it?

Yes, I am very satisfied. We have a great sense of social accountability and a duty to the city and nation. We worked within the time frame and budget, which in Phase II was Rs 20,000 crore, and protected the environment at the same time.

What was your most difficult project?

The Delhi Metro, no doubt. Each project has distinct challenges. In the case of the Konkan Railway, it was the length, tough terrain and funds. We had to generate two-thirds of the funds. In Delhi, money was not a problem, but the highly technical nature of the project was a challenge. There was substantial computerization, dense population and we couldn't block too many roads.

What's the point of a metro railway if the Indian middle class doesn't have the metro 'mindset' and believes the public transport is only fin—the poor?

That mindset is changing as people realize the metro is safe, reliable and fast. In five years, I am sure upper middle class India will use the metro if it becomes available within half a kilometre of their house. We have covered just 40% of Delhi; 60% remains to be covered in Phase in and IV.

Which other Indian cities most need a metro?

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Which other Indian cities most need a metro?

According to the Planning Commission, any city with a population of over three million needs a metro. Some 13 to 14 cities fall in this category. We are the prime consultants for Chennai, Bangalore and Kolkata, while we will actually build it in

FOR THE RECORD E SREEDHARAN

Jaipur. Project reports for Pune, Ahmedabad and Ludhiana are on the anvil even as we wait for approval for Kochi.

On July 12,2009, you resigned from the DMRC because you took moral responsibility for the collapse of a pillar in Delhi. Wasn't that rather dramatic – but ultimately useless? After all, you could hardly oversee everything?

That was a very conscious decision. I was in Bangalore when I got the news at 6 am. I took a flight at 9.30 am and it was in the plane that I decided to quit. I called a press conference in Delhi to announce it. By the time I reached my office later, chief minister Sheila Dikshit had

called me. She persuaded me to stay. But I was keen to go. The top man should always take responsibility

So you are an emotional person?

No, this wasn't taken emotionally but was a calculated move, In hindsight, the CM's decision was right.

Did the accident change anything?

Yes. It opened our eyes to lapses on the part of the design consultant, whom we sacked later, the contractors and our side. We tightened up our contractors and strengthened 47 other piers.

You built the metro in a city teeming with politicians. Did you lay down rules to ensure there was no political interference?

If our work is transparent, meant for the common man and we don't accept or take favours, there will be no room for politicians to interfere. Recruitments and contracts in DMRC are equally transparent. Even I can't interfere. In the initial years, I used to get calls for jobs and contracts. I would politely say I would look into the matter and sometimes explain why I couldn't help. But when projects got completed on time, people left me alone. I was lucky to have people to support me, be it CMs, lieutenant governors or ministers. I don't get any extra bonus or increment for this job except appreciation. We have also advised Sri Lanka, Syria, Indonesia and Pakistan. But the workload in India is so much, I am not keen on going abroad.

You're considered something of a rarity — a man who completes projects on time, ensures quality without cost over-runs.

I imbibed many values from my father who was a landowner, especially telling the truth. I started an NGO, Foundation for Restoration of National Values, in 2008 with like-minded people such as Ratan Tata. We hope to bring about a change in society.

So what do you think when you hear of corruption allegations in preparations for the Commonwealth Games (CWG)?

I am not surprised. CWG is just a small area of corruption. Transparency International puts India 85th in the corruption index. We should be ashamed. It has pervaded every area — medicine, education and government offices, bringing India a bad name. Corruption seems to have become our national character. This should change.

You're known to have a distinct management style. What is it?

My role model was G P Warriar, former chairman of the Railway Board. He was a people's man and commanded great loyalty. At the same time, he was very strict. At DMRC too, recruitment rules are strict—we have never had to sack anyone for not performing well. Anyone can walk into my office with a problem. But easy access to me is not an encouragement for indiscipline.

What's a typical day like?

I get up at 4.30 am, meditate, do yoga and read spiritual books; including the Gita in Sanskrit. I am in office at 9 am and leave by 5.30 pm. I go for a 45-minute walk and by 9.30 pm, go to sleep. On Saturday, half the day is kept for inspections, while on Sunday, I connect with my guruji. Though I have gone to Sabarimala eight to ten times, I am not religious.

(Courtesy: Times of India, September 19, 2010)



Celebration of Engineers' Day By The Institution of Civil Engineers (India)

The Institution of Civil Engineers (India) celebrated Engineers' Day on 15th September, 2010 at PHD Chamber of Commerce & Industry, PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi. The Engineers' Day celebrations included Presentation of "Outstanding Civil Engineering Project Award" of "Asian Civil Engineering Coordinating Council (ACECC)" to "Dr. E. Sreedharan, M.D. Delhi Metro Rail Corporation" nominated by The Institution of Civil Engineers (India) and National Seminar on "Role of Civil Engineer in Human and Infrastructural Development". Paul L. Mitchell Chairman of the Asian Civil Engineering Coordinating Council (ACECC) from Australia was the Chief Guest and Chaudhary Lal Singh and Shri Bharat Ram Megwal Hon'ble Members of Parliament were the Guests of Honor on this Occasion.

The program began with the lighting of the lamp by the dignitaries on the dais and presentation of bouquets to them. This was followed by the welcome address to the Chief Guest and the Guests of Honor by Sh. Prithipal Singh, Secretary, ICE (I). Sh. Singh Stated that Engineers' Day is celebrated every year to commemorate the birthday of the Legendary Engineer of our country Shri Visvesvarayya who was bestowed the highest civilian award of the country, "Bharat Ratna" in recognition of his meritorious service to National Development and to the cause of Engineering.

As a brief introduction about The Institution of Civil Engineers (India), he submitted that The Institution of Civil Engineers (India) is a Government of India Recognized Degree level

Institution which conducts Degree & Diploma level Examinations in Civil Engineering and Architectural Engineering. The Mission of the Institution is to contribute to the strengthening of resources for Civil Engineering as well as Architectural Engineering and to interface with leading Institutions for knowledge sharing and engaging in research and dissemination of related knowledge for the development of the Society and also to make it available to the policy making organizations.

Sh. Singh added that The Institution of Civil Engineers (India) is the only Institution of its kind to support and promote civil & Architectural Engineering in the country.

With these words he introduced the Chief Guest and other dignitaries on the dais. He welcomed the Chief Guest Mr. Paul who had come all the way from Australia to grace the Occasion. To Dr. E. Sreedharan he stated that he is known as "Metro Man" and there could not have been any other Occasion than the Engineers' Day to honor the greatest Engineer of the times, Dr. E. Sreedharan Ch. Lal Singh, Honb'le Member of Parliament was referred to as the born leader and leader of the masses whereas Mr. Bharat Ram, Honb'le Member of Parliament was always supportive to ICE (I). He referred to Er. S.L. Swamy as the founder of the Institution who was philosopher and guide to take the Institution to new heights. He assured Sh. P.P. Singh Bindra , Managing Chairman, ICE (I) that the Institution will strive to fulfill his dream of making the Institution an excellent Institution in the country.

Er. S.L.Swamy, Chairman, ICE (I), in his opening remarks stated that The Institution of Civil Engineers (India) is not a very old organization but during a short span of its existence, it has made its mark at National and International levels.

The joining hands of The Institution of Civil Engineers (India) with ACECC (Asian Civil Engineering Coordinating Council) has been a wonderful experience. ACECC is a forum where worldwide members of the Civil Engineering profession jointly develop programs of coordination and mutual action in designated matters affecting the interests of Civil Engineering and also discuss worldwide Civil Engineering technology, needs, issues and practices.

Since it was Engineers' Day the Institution had also organized a National Seminar on "Role of Civil Engineer in Human and Infrastructural Development".

The theme of the National Seminar was "Role of Civil Engineer in Human and Infrastructural Development" was chosen purposely as ICE (I) strongly feels that an Engineer particularly Civil Engineer has a very important role to play as the lives of the people is dependent on the creation of the Engineer.

Er. Swamy concluded by saying that, Civil Engineering is the backbone of any civilization. It is the Civil Engineer who plan, design, and supervise the construction facilities in the modern life. Therefore, the Engineer must develop certain traits to add color to their personality and to the profession we had chosen.

This was followed by a video presentation by DMRC, highlighting the way the Metro was serving the people of Delhi and the hazardous tasks in the planning, construction and exercise of the Project.

The enthusiastic audience and guests were then addressed by the Guest of Honor, Chaudhary Lal Singh Ji, Hon'ble Member of Parliament. His strong and commanding words of wisdom thrilled the audience and he hammered the point of honesty dedication, nationalism and vision in the profession so well that the message was clearly understood.

Adding to this Shri Bharat Ram Megwal Hon'ble Member of Parliament, stated that the minds of the upcoming Engineers was always open to new ideas and so they should maintain honesty in the profession and their creation.

The "Outstanding Civil Engineering Project Award" of "Asian Civil Engineering Coordinating Council (ACECC)" was then presented to "Dr. E. Sreedharan, M.D. Delhi Metro Rail Corporation" by Mr. Paul L. Mitchell Chairman of the Asian Civil Engineering Coordinating Council (ACECC) from Australia who was the Chief Guest of the Engineers' Day celebrations.

As it was a very prestigious Award for The Institution of Civil Engineers (India) and Delhi Metro Rail Corporation, (DMRC) both. Dr. E. Sreedharan, M.D. DMRC enlightened the audience with his encouraging words of knowledge and wisdom. Dr. Seedharan said that the upcoming Engineers should uphold the values of punctuality, honesty, sincerity and commitment. He rightly stated that there was shortage of qualified Civil Engineers in the country to match the ever growing infrastructural development that are taking place all over the country.

He concluded saying that it was the Civil Engineering profession which should be respected and the Civil engineers are the backbone of the Infrastructural Development in the country. He also shared his experience of being associated with ICE (I) and how ICE(I) has given a facelift to the Civil & Architectural Engineering community.

Mr. Paul L. Mitchell Chairman of the Asian Civil Engineering Coordinating Council (ACECC), chief Guest, addressed the gathering. He shared his thoughts about Civil Engineering both in India and abroad with the audience. The audience got a good glimpse of ACECC and also the importance of the Engineering profession in their creation which is a dedicated task of a team work which Mr. Paul impressed upon.

Thereafter Mr. P.P.Singh Bindra, Managing Chairman, ICE(I) concluded the Award Presentation with a vote of thanks to all the dignitaries present for the Occasion followed by presentation of Mementos to the dignitaries on the dais. Following this began the National Seminar on “Role of Civil Engineer in Human and Infrastructural Development”.

The technical sessions of the Seminar was chaired by Er. Mahendra Raj, President of Indian Association of Structural Engineers and also the Vice Chairman of the Engineering Council of India.

The eminent Speakers present for the National Seminar were Er. J.S.Sharma (Project Manager, PWD, Delhi), Dr.S.K.Singh (Prof. & Head Dept. of Civil Engg, D.T.U), Dr. Rao for Dr. Geetam Tiwari (TRIPP Chairman, associate Professor Dept. of Civil Engg,IIT Delhi, Dr. H.S. Bhatia (Retd.Prof. & Head Delhi College of Engg), Dr. Z. Ahmad for Prof. G.L.Asawa (Prof. Dept. of Civil Engg. IIT Roorkee). The learned speakers presented their papers one after the other and shared their expertise and views in respect to different aspects of the “Role of Civil Engineer in Human and Infrastructural Development”.

The technical sessions of the National Seminar were in two phases i.e. pre-lunch and post-lunch. After the Technical Sessions came to an end Dr. S.D. Sharma, Director (Academics) summed up the Presentations.

In the Valedictory Session of the Seminar Prof. V. N. Rajasekharan Pillai, Vice Chancellor Indira Gandhi National Open University (IGNOU) was the Chief Guest. He was welcomed by Sh. Prithipal Singh, Secretary, ICE(I). The summary of the Seminar was presented during this session. Prof. Pillai applauded the relevance of the theme of the Seminar and congratulated the organizers for the action plan as an outcome of the Seminar. He also congratulated Dr. E. Sreedharan, M.D. Delhi Metro Rail Corporation (DMRC)”, for bagging the “Outstanding Civil Engineering Project Award” of “Asian Civil Engineering Coordinating Council (ACECC)”.

The celebration came to an end with a vote of thanks proposed by Sh. Sagar Singh, Secretary, ICE Society followed by presentation of mementos to the dignitaries on the dais.



The Institution of Civil Engineers (India)

Date Sheet for Winter-2010 Examination

Date & Day	Forenoon Session (10.00 AM to 1.00 PM)		Afternoon Session (2.00 PM to 5.00 PM)	
18-Dec-10 Saturday	TC 2.7	Construction Technology	TC 1.1	Basic Civil Engineering
	TA 2.1	History of Architecture	TA 1.1	Basic Architectural Engineering
	BCO 3.9	Traffic Engineering	TC 2.1	Surveying
	BAO 3.2	Rehabilitation of Structures	TA 2.7	Surveying and Levelling
	BCO 3.1	Advanced Design of Reinforced Concrete Structures	AC 1.1	Advanced Engineering Mathematics
		AA 1.1	Advanced Engineering Mathematics	
		BC 2.1	Applied Hydraulics and Fluid Machines	
		BA 2.1	Professional Practice and Architectural Engg.	
20-Dec-10 Monday	TC 2.8	Estimation, Costing and Specifications	TC 1.2	Technical Writing
	TA 2.8	Architectural Design and Graphics	TA 1.2	Technical Writing
	BCO 3.10	Highways and Railways Engineering	TC 2.2	Fluid Mechanics and Machinery
	BAO 3.3	Advanced Architectural Design	TA 2.2	Free Hand Drawing and Painting
	BCO 3.20	Irrigation Engineering	AC 1.2	Advanced Strength of Materials
	BCO 3.2	Advanced Design of Steel Structures	AA 1.2	Advanced Strength of Materials
		BC 2.2	Machine Foundations	
		BA 2.2	Finishes, Materials and Specifications	
21-Dec-10 Tuesday	TC 2.9	Civil Engineering Designs	TC 1.3	Engineering Physics and Applied Mechanics
	TA 2.9	Building Material and Science	TA 1.3	Engineering Physics and Applied Mechanics
	BCO 3.3	Prestressed Concrete Structures	TC 2.3	Soil Mechanics
	BCO 3.11	Airports, Docks and Harbours	TA 2.3	Building Construction
	BCO 3.21	Ground Water Hydrology	AC 1.3	Computer Programming and Numerical Methods
	BAO 3.4	Interior Design	AA 1.3	Computer Programming and Numerical Methods
		BC 2.3	Advanced Reinforced Concrete Design	
		BA 2.3	Building Services	
22-Dec-10 Wednesday	TA 2.6	Estimation and Costing	TC 1.4	Engineering Mathematics
	BCO 3.12	Bridge Engineering	TA 1.4	Engineering Mathematics
	BAO 3.5	Landscape Architecture	TC 2.4	Mechanics of Solids
			TA 2.4	Structural Mechanics
			AC 1.4	Foundation Engineering
		AA 1.4	Foundation Engineering	
		BC 2.4	Optimization in Structural Design	
		BA 2.4	Advanced Structural Design	



Date & Day	Forenoon Session (10.00 AM to 1.00 PM)	Afternoon Session (2.00 PM to 5.00 PM)
23-Dec-10 Thursday	BCO 3.14 Pollution and Control Engineering	TC 1.5 Engineering Drawing
	BAO 3.6 Disaster Management for Buildings	TA 1.5 Engineering Drawing
	BCO 3.24 Water Resource Management	TC 2.5 Basic Structural Design
		TA 2.5 Theory of Structures
		AC 1.5 Reinforced Concrete Structures and Advanced Concrete Technology
		AA 1.5 Reinforced Concrete Structures and Advanced Concrete Technology
		BC 2.5 Environmental Engineering
BA 2.5 Environmental Engineering		
24-Dec-10 Friday	BCO 3.16 Industrial Waste Treatment & Disposal	TC 1.6 Engineering Chemistry
	BAO 3.7 Advanced Comp. Application for Arch.	TA 1.6 Engineering Chemistry
	BAO 3.8 Climatology and Architecture	TC 2.6 Environmental Engineering
		TA 2.10 Environmental Engineering
		AC 1.6 Design of Steel Structures
		AA 1.6 Design of Steel Structures
		BCO 3.7 Building Science
BAO 3.1 Elements of Town Planning and Architecture		

Notes: -

- ICE (I) has the right to change the schedule of subject/s on account of unavoidable circumstances.
- Candidates must carry the Membership Card & Admit Card to seek entry to the Examination Hall.
- The Examination hall will be opened 15 minutes before the time specified for the commencement of the Examination. No candidate who is late by more than 30 minutes shall be admitted.
- Candidates using unfair means shall be dealt with as per rules of ICE(I) in this behalf.
- The result of the examination is likely to be declared after four weeks of the last examination held.
- Candidates to bring their own drawing board/instrument box for Engineering Graphics paper
- Only Non-Programmable Calculators / Standard, Design-Data Books, Log Tables are permitted in the Examination Hall.

TC : T. Engg. (Civil)	AC : AMICE(Civil) Section A	BC : AMICE(Civil) Section B	BCO : AMICE(Civil) Section B (Optional)
TA : T. Engg. (Arch.)	AA : AMICE(Arch.) Section A	BA : AMICE(Arch.) Section B	BAO : AMICE(Arch) Section B (Optional)

**OUR PARTNERS TO CONDUCT PRACTICALS & SUBMISSION OF PROJECT REPORTS****(AICTE approved Institutions In different States/Cities)**

✓ Andhra Pradesh	✓ Gujarat
Chaitanya Engineering College, Chaitanya Valley, Kommadi, Madhurawada, Visakhapatnam - 530041, Andhra Pradesh	L. D. College of Engineering, Government of Gujarat, Near Navranpura, Ahmedabad - 380015, Gujrat
Koneru Lakshmaiah College of Engineering, Green Fields, Vaddeswaram, Guntur Distt.- 522502 Andhra Pradesh	Government Engineering College, Shamlaji Road, Modasa - 383315, Gujarat
Kakatiya Institute of Technology & Science. Opp. Yerragattu Hillock, Vill-Bheemaram, Mandal-Hasanparthy, Warangal - 506015, Andhra Pradesh	Sree Tapi Brahmcharyashram Sabha College of Diploma Engineering Opp. Spinning Mill, Varachha Road, Surat - 395006, Gujarat
Sri Venkateswara College of Engineering & Technology, Chittor, Andhra Pradesh	✓ Haryana
Chaitnaya Bharathi Institute of Technology, Chaitanya Bharathi, P.O. Gandipet, Hyderabad - 500075, Andhra Pradesh	M.M. Engineering College, M.M. Group of Institutions, Mullana Distt. Ambala, Haryana
Govt. Polytechnic, Masabtank, Hyderabad-28, Andhra Pradesh	Lingaya's Institute of Management & Technology, Nauchauli, Old Faridabad, Jasana Road, Faridabad - 121002, Haryana
Govt. Polytechnic, Masabtank, Hyderabad-28, Andhra Pradesh	Haryana College of Technology & Management, P.O.Box No.44 Ambala Road, Kaithal - 136027, Haryana
Rajeev Gandhi Memorial College of Engg. & Tech. N.H.-18, Kurnool District, Nandyal-518501, Andhra Pradesh	Sat Kabir Institute of Technology & Management, Vill. Ladrawan, Teh. Bahadurgar Dist. Jhajjar, (Near Qutubgarh-Delhi Border), Haryana-124507
✓ Assam	✓ Himachal Pradesh
Assam Engineering College Jalukabari, Guawhati-781018, Assam	MIT College of Engineering & Management Bani (Barsar) Distt. Hamirpur Himachal Pradesh-174384
✓ Chattisgarh	✓ Jammu & Kashmir
Ashoka Institute of Technology & Management, Gram-Torankata, Post-Somni, G.E. Road, Rajnandgaon-491441, Chhattisgarh	National Institute of Technology & Science, Indira Nagar, P.O. Miran Sahib, Jammu - 181001, Jammu & Kashmir
	Institute of Engineering & Computer Sciences, Purkhoo Camp, Domana, Jammu- 181001, Jammu & Kashmir



Government College of Engineering & Technology, Old University Campus, Canal Road Jammu-180004, Jammu & Kashmir
Royal Polytechnic College 55-Gogji Bagh, Srinagar-190001 Jammu & Kashmir
✓ Jharkhand
Government Polytechnic P.O.- B. Polytechnic, Dhanbad-828130 Jharkhand
Cambridge Institute of Technology Tatisilwai, Ranchi-835103 Jharkhand
Government Polytechnic Ranchi-834001 Jharkhand
Cambridge Institute of Technology Tatisilwai Ranchi-835103 Jharkhand
Mining Institute, P.O. - B. Polytechnic, Dhanbad-828130 , Jharkhand
✓ Karnataka
Anjuman Engineering College Anjumanbad, P.O.Box No.24 Bhatkal - 581320 Karnataka
Bapuji Institute of Engineering & Technology, Post Box No. 325, Davangere-577004 Karnataka
✓ Kerala
Matha College of Technology, Manakkappadi, N. Paravur, Ernakulam-683511 Kerala
✓ Madhya Pradesh
Shri G.S. Institute of Technology & Science, 23, Park Road, Indore , Madhya Pradesh
Jawaharlal Institute of Technology, "Vidya Vihar" Borawan, Tehsil Kasrawad, Distt. Khargone - 451228, Madhya Pradesh

Lakshmi Narain College of Technology, Kalchuri Nagar, Raisen Road, P.O. Kolua, Bhopal - 462021, Madhya Pradesh
NRI Institute of Technology & Management, Near Railway Bridge, Jhansi Road, Gwalior, Madhya Pradesh
✓ Maharashtra
Pravara Rural Engineering College, Loni, A/P. Loni-413736, Tal. Rahata, Dist. Ahmednagar, Maharashtra
Mahatma Gandhi Missions, Jawaharlal Nehru Engineering College, N-6, CIDCO Aurangabad - 431003, Maharashtra
G.H. Rasoni College of Engineering, CRPF Gate No. 3, Hingna Road, Dighod Hills, Nagpur - 440016, Maharashtra
Kavikulguru Institute of Technology and Science, Ramtek - 441 106, Nagpur, Maharashtra
Bharati Vidyapeeth University College of Engineering, Pune-Satara Road, Dhankawadi Pune - 411043 , Maharashtra
✓ Orissa
Dhaneshwar Rath Institute of Engineering & Management Studies, (Diploma Wing), Kairapari, Kotsahi (Tangi), Cuttack - 754022, Orissa
Krupajal Engineering School Prasanti Vihar, Pubasason, Kausalya Ganga Bhubaneswar – 751002 Orissa
KIIT University, AT/PO. : KIIT, Bhubaneswar - 751024, Orissa
Sanjay Memorial Institute of Technology, Chandipadar, Via : Bhattakumarada, Berhampur, Dist.-Ganjam-761003 , Orissa



✓ Punjab
Lovely Institute of Technology (Architecture), Jalandhar-Ludhiana, G.T.Road, Near Chehru Railway Bridge, Phagwara, Kapurthala-144402, Punjab
Desh Bhagat Engineering College, Amlah Road, Mandi Gobingarh, Punjab
Guru Nanak Dev Engineering College, Gill Road, Ludhiana, Punjab
✓ Rajasthan
Sri Balaji College of Engineering & Technology, Benad Road (Dadi Ka Phatak), Jaipur - 302013, Rajasthan
College of Engineering and Technology, Bikaner, Kani Industrial Area, Pugal Road, Bikaner-334005, Rajasthan
✓ Uttrakhand
Dehradun Institute of Technology, Mussoorle-Diversion Road, P.O. - Bhagwantpur, Dehradun, Uttrakhand
✓ Uttar Pradesh
Bundelkhand Institute of Engineering & Technology, Kanpur Road, Jhansi - 284128, Uttar Pradesh
Radha Govind Engineering College, Anuyogipuram Near Medical College Garh Road, Meerut - 250004, Uttar Pradesh
Gandhi Polytechnic, Muzaffarnagar, Uttar Pradesh
Hewett Polytechnic, Lucknow, Mahanagar, Lucknow, Uttar Pradesh
Lucknow Polytechnic Lucknow, Abhyantrik Upnivesh, Krishna Nagar Kanpur Road, Lucknow Uttar Pradesh
Sevdie Institute of Management & Technology, (S.I.M.T), Chihat Deva Road, Lucknow, Uttar Pradesh

✓ West Bengal
North Calcutta Polytechnic, 15, G.M. Lane, Kolkata-700002, West Bengal
Camellia School of Engineering & Technology, Nadibhag, P.O.-Kajipara, Barasat, Kolkata-700124, West Bengal
JIS College of Engineering, Block "A" Phase-III, Kalyani, Nadia, West Bengal- 741235

Add to Your Vocabulary

- **Aiguille**
An instrument for drilling holes in rocks, stone or masonry
- **Air-Entrained Concrete**
Concrete that has been altered chemically, with an additive, to disperse air bubbles through the mix. A yard of air-entrained concrete may contain over three trillion bubbles. This mix is easier to work than standard concrete and stands up well in cold weather, resisting salts better than other concrete because the bubbles allow the concrete to expand and contract more readily, it is not as strong as regular concrete.
- **Batten Plate**
A formed piece of metal designed to cover the joint between two lengths of metal edge.
- **Bell and Spigot Piping**
Also called hub and spigot piping this gravity-rated vent and drain or pressure piping, has a bell-shaped section at one end with a straight section at the other. The straight part fits into the bell-shaped end as pipe is being installed.
- **Crocket**
A carved ornament, usually made to look like foliage, projecting upward at regular intervals along the sloping edges of a spire, pinnacle, gable, canopy, etc., especially in Gothic Revival architecture.
- **Bartizan**
Small turret hanging over a wall or tower.
- **Blind or Shutter**
A lightweight frame in the form of a door located on each side of a window. They are most commonly constructed of wood (solid or louvered panels) or plastic. Originally they were designed to close and secure over the windows of security and foul weather. Most shutters now are more likely decorative pieces that are secured to the house beside the windows.
- **Closed Spandrel Arch**
A stone or reinforced concrete arch span having spandrel walls to retain the spandrel fill or to support either entirely or in part the floor system of the structure when the spandrel is not filled.
- **Collar Tie**
A horizontal member used to provide intermediate support for opposite roof rafters, usually located at the upper third of the rafter to decrease its span
- **Double Brick Wall**
A type of brick wall where the exterior walls consist of two separate courses of brick that have been tied together by turning a course of bricks 90 degrees to the wall every so often. This type of wall often is load bearing, as opposed to Brick Veneer construction where the exterior brick is decorative and non-load bearing.



Professional Vistas

<ul style="list-style-type: none">• Recognition by Govt. of India, Ministry of Human Resource Development, Department of Higher Education vide Gazette Notification No. F.24/1/2007-TS.III Dated 06.11.2007.	<ul style="list-style-type: none">• Recognition by Government of National Capital Territory of Delhi vide letter No.1(1)/2008-DD/SB/1520/5609 Dated 29.10.2008.
<ul style="list-style-type: none">• Recognition by Association of Indian Universities (AIU) vide letter No. EV/III (366)/2008/71 Dated 11.04.2008.	<ul style="list-style-type: none">• Recognition by Shapoorji Pallonji & Co. Ltd. vide letter No. Nil Dated 30.10.2008.
<ul style="list-style-type: none">• Recognition by All India Council for Technical Education (AICTE) vide letter No. Eqvi./AB/Gen.Corr./2008-09 Dated 16.09.2008.	<ul style="list-style-type: none">• Recognition by Government of Andhra Pradesh vide letter No. 10232/EC.2/2008-02 Dated 05.11.2008.
<ul style="list-style-type: none">• Recognition by Union Public Service Commission (UPSC) vide letter No. F.2/1/2007-EIB Dated 30. 06.2009.	<ul style="list-style-type: none">• Recognition by Administration of Daman & Diu (UT) vide letter No. 10.2 (PART-IV) EST-GP/2008-09/797 Dated 11.11.2008.
<ul style="list-style-type: none">• Recognition for GATE by National Coordinating Board-Gate, Deptt. of Education, MHRD, Gol.	<ul style="list-style-type: none">• Recognition by CPWD- Central Public Works Department, Government of India vide letter No.A-12021/1/2006-EC VI/74-75 Dated 19.01.2009.
<ul style="list-style-type: none">• Recognition by Government of Goa vide letter No.12/11/87-PER/Vol.II Dated 06.03.2008.	<ul style="list-style-type: none">• Recognition by Visvesvaraya Technological University, Karnataka vide letter No. VTU/Aca/OS-GC/2009-10/2118 Dated 04.06.2009
<ul style="list-style-type: none">• Recognition by Directorate of Technical Education, Haryana vide letter No.351-53/Dev. Dated 13.06.2008.	<ul style="list-style-type: none">• Recognition by Government of Nagaland vide letter No. IT/10-1/04 Dated 30.07.2009
<ul style="list-style-type: none">• Recognition by Government of Kerala vide letter No.3946/GI/08/H. Edn Dated 08.07.2008	<ul style="list-style-type: none">• Recognition by Government of Uttarakhand, PWD, Pauri Garhwal vide letter No.1011/20(15) E.A.-Parv./09-10 Dated 06.09.2009.
<ul style="list-style-type: none">• Recognition by RITES Limited vide letter No. RITES/RI/RCED/Misc/2008 Dated 14.07.2008.	<ul style="list-style-type: none">• Recognition by Government of Chhattisgarh, Department of Technical Education, Manpower Planning, Science & Technology, Mantralaya, D.K.S Bhavan, Raipur vide letter No.F-14/07/42 Dated 11.05.2010.
<ul style="list-style-type: none">• Recognition by Delhi Development Authority (DDA) vide letter No.F.7(98)2008/PBI/2399 Dated. 20.08.2008.	<ul style="list-style-type: none">• Recognition by Government of Punjab, Technical Education and Industrial Training, Punjab Chandigarh. vide letter No.1362 Dated 24.06.2010.
<ul style="list-style-type: none">• Recognition by Government of Meghalaya vide letter No. FDN.156/2001/249-A Dated 21.08.2008.	<ul style="list-style-type: none">• Rural Electrification Corporation Limited (A Government of India Enterprises) vide letter No. REC/ED(HR)/Trg./2010-11/ Dated 10.08.2010
<ul style="list-style-type: none">• Recognition by IRCON INTERNATIONAL LIMITED vide letter No. IRCON/HRM/31/28/728 Dated 01.09.2008.	<ul style="list-style-type: none">• Cement Corporation of India Ltd. (A Government of India Enterprises) vide letter No. PD/HRD/6/6/2010/6119 Dated 12.08.2010
<ul style="list-style-type: none">• Recognition by Directorate General Border Roads vide letter No. 13616/Gen/Rect /DGBR/97/E1A Dated 21.10.2008.	



- **Recognition by Delhi Metro Rail Corporation Ltd.**

vide letter No DMRC/O&M/HR/2010
Dated 20.08.2010

- **Recognition by Oil and Natural Gas Corporation Ltd. Rectt. Section, Tel Bhawan, Dehradun**

vide letter No. 7(2)/PR-Rectt./2010 Dated
26.08.2010

Professional Vistas


[TO BE PUBLISHED IN PART-1 SECTION -I OF GAZETTE OF INDIA]

Government of India
Ministry of Human Resource Development
Department of Higher Education

Shastri Bhawan, New Delhi,
the 6th November, 2007

NOTIFICATION

No.F.24 - 1 / 2007 - TS.III. On the recommendations of the High Level Committee for recognition of Educational Qualifications in its meeting held on 22nd May 2007, the Government of India has decided to give recognition to the Section A & B of Associate Membership course, equivalent to Degree and Part - I & II of Technician Engineers (T) equivalent to Diploma in Civil Engineering and Architecture Engineering Courses conducted by the Institution of Civil Engineers (India), Ludhiana (Punjab) as per syllabus approved by All India Council for Technical Education (AICTE) w.e.f. the academic session 2007 - 2008 for the purpose of employment to the posts and services under Central Government in the appropriate field. It is subject to the conditions that the total number of candidates who can be admitted for the said examination would not exceed the authorized strength of the concerned Institutions with which Institution of Civil Engineers (India), Ludhiana (Punjab) has entered into Memorandum of Understanding (MOUs). A review in respect of recognition of educational qualifications shall be made by Ministry of Human Resource Development after one year through All India Council for Technical Education (AICTE).


(RAVI MATHUR)
Joint Secretary to the Government of India
Tel: 2338 1097

To

(भारत के राजपत्र के भाग-1, खण्ड-1 में प्रकाशन के लिए)


भारत सरकार
मानव संसाधन विकास मंत्रालय
उच्चतर शिक्षा विभाग

शास्त्री भवन, नई दिल्ली

6 नवम्बर, 2007

अधिसूचना

सं.सं. 24-1/2007-टी.एस.111। शैक्षणिक योग्यताओं को मान्यता प्रदान करने के लिए उक्त राष्ट्रीय समिति की दिनांक 22 मई, 2007 की बैठक में की गई सिफारिशों के आधार पर भारत सरकार ने उपर्युक्त क्षेत्र में केन्द्रीय सरकार की सेवाओं तथा परी पर तेजगार देने के उद्देश्य से शैक्षणिक तंत्र, 2007-08 से विहित इंजीनियरी संस्थान (भारत), लुधियाना (पंजाब) को अखिल भारतीय तकनीकी शिक्षा परिषद द्वारा अनुमोदित पाठ्यक्रम अनुसार संगठित विहित इंजीनियरी और वास्तुशास्त्र इंजीनियरी पाठ्यक्रमों में एसेसिएट सदस्यता पाठ्यक्रम की धारा (क) और (ख) को डिग्री के समकक्ष और तकनीकी इंजीनियरिंग (ग) के भाग 1 और 11 को डिप्लोमा के समकक्ष मान्यता प्रदान करने का निर्णय लिया है। यह मान्यता इस शर्त के अधीन होगा कि अभ्यर्थियों की कुल संख्या उक्त परीक्षा के लिए सम्बन्धित संस्थान की अपेक्षित दक्षिण क्षमता से अधिक नहीं हो जिसके साथ विहित इंजीनियरी संस्थान (भारत), लुधियाना (पंजाब) ने संगठन ज्ञापन किया है। मानव संसाधन विकास मंत्रालय एक वर्ष के बाद अखिल भारतीय तकनीकी शिक्षा परिषद के माध्यम से शैक्षणिक योग्यताओं की मान्यता की पुनरीक्षा करेगा।


(रवि माथुर)
संयुक्त सचिव, भारत सरकार
दूरभाष: 23381097

सेवा में,
प्रदेश

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