The Civil Engineer

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OUR INTELLECTUAL PILLARS

The Institution of Civil Engineers (India)

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Chairman of the Institution
Er. S. L. Swamy

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Editorial Board

In This Issue...

The Institution of Civil Engineers (India)

From the Editor-in-Chief's Desk

We have crossed another milestone of our journey and are entering 2012 with full zeal and confidence. Every New Year brings new hope and we all are able to achieve a lot as per our planning. This is how we move on. Just like water, one must be flowing as stoppage leads to stagnation. Our resolve should be to march ahead with new hopes and aspirations to achieve our goal.

The last issue of 2011 of our Newsletter is in your hands. Apart from the usual features it carries articles of interest on subjects like "Noise Pollution" the greatest menance in the society. At times music, for some ,can be noise for others. When unwanted sound hits our ears & disturbs the environment, noise pollution is created. Often neglected noise induces a severe impact on human & living organism. "Artificial Intelligence and Aam Admi" is another article which deals with the hazards of disaster which are causing loss to life & property. India being most disaster prone country of the world, the technical advancement in the form of artificial intelligence can predict the natural disasters & emergency relief geared up before hand. There is so much controversy over use of plastic in country but the last article shows how plastic helps save water.

You have just finished your examination and are eagerly waiting for your result. You have already assessed your performance based on your preparedness for the examination. Those who have worked hard, have been able to do well and are confident for their success in the examination with good percentage. Those who have given just a passing buck to this examination also know it that there cannot be any miracle and they will have to face the result as it comes. For the later categories the only advice is that never compromise with the situation. If you have been complacent, leave the habit and face the challenge of any examination in life with preparedness and confidence then only success will wait for you with flying colours. Let us not repent over the past, past is dead. Let us live in present and think of future which is ours and we have to make it as joyful as possible.

With my best wishes for a Happy New Year.

Er. S.L. Swamy
Chairman

Talk less about the years to come, Live, love and labor more today

From the Editor's Pen

This is the last issue of the newsletter "Civil Engineer" year 2011. We shall soon be entering a new season of 2012. New season brings new hopes and we all pray that the time that has yet to come should be full of joy and pleasure and be a useful and fruitful addition in our lives. We always look forward to brighter days ahead. Although we know that the journey of life in not full of roses. There are thorns also. But the human tendency is to look to the brighter side which gives us positive energy. We all move in our lives that way and in our journey speed breakers do crop in, but we only pause for a while and then move ahead.

This is true with any individual or any institution. If we look to our institution we know how we started and how we have grown over the few years of our existences.

We are happy the way we have grown and the way we have made our place at national and international level. But this is not the end but only a phase of life. We have to march forward so far off. At the same time, we have also to have some introspection. We must know what we have achieved and where we have faltered and why should we not learn from our mistakes so that we do better and better to achieve the best. Our mission is to raise the Institution to make it an Institution of excellence in the country for the promotion and strengthing of civil engineering and architecture engineering. This is a collective effort and we have all to move ahead together hand to hand and shoulder to shoulder for the growth and prosperity of this institution. Let us resolve that we shall not leave any effort in this New Year to achieve our goal and mission.

Wishing you all a happy and prosperous new year. May you succeed in all you do to settle yourself and for the growth and prosperity of this Institution and the Nation.

Prithipal Singh
Secretary General

Planning is a powerful action that will bring you many rewards throughout the years to come.

NOISE POLLUTION : The greatest menance

The word noise comes from the Latin word nauseas meaning seasickness. Noise is defined as unwanted sound. Sound, which pleases the listeners, is music and that which causes pain and annoyance is noise. At times, what is music for some can be noise for others. Noise pollution is a type of energy pollution in which distracting, irritating, or damaging sounds are freely audible. As with other forms of energy pollution (such as heat and light pollution), noise pollution contaminants are not physical particles, but rather waves that interfere with naturally-occurring waves of a similar type in the same environment. When unwanted sound created by human beings hits our ears and disturbs the environment, noise pollution is created.

Measurement of noise: Noise pollution is measured in decibels. When noise is at 45 decibels, no human being can sleep, and at 120 decibels the ear is in pain and hearing begins to be damaged at 85 decibels.

Types and Intensity Levels of different sounds

SOUND LEVEL	INTENSITY (dB)
Audible	0 - 10
Very Quiet	11 - 30
Moderately Loud	51 - 75
Very Loud	75 - 100
Uncomfortably Loud	100 - 125
Painful	126 and above

Sources of noise pollution: Chiefly, noise pollution comes from barking dogs, loud music, vehicles, aircraft and rail transport, air-conditioners, factories, amplified music and construction work. Broadly they are classified as

1. Road Traffic Noise: In the city, the main sources of traffic noise are the motors and exhaust system of autos, smaller trucks, buses, and motorcycles.

2. Air Craft Noise: Now-a-days, the problem of low flying military aircraft has added a new dimension to community annoyance.

3. Noise from railroads: The noise from locomotive engines, horns and whistles, and switching and shunting operation in rail yards can impact neighboring communities and railroad workers.

4. Construction Noise: The noise from the construction activities is a major contributor to the urban scene. Construction noise sources include pneumatic hammers, air compressors, bulldozers, loaders, dump trucks and pavement breakers.

5. Noise in Industry: Although industrial noise is one of the less prevalent community noise problems, neighbors of noisy manufacturing plants can be disturbed by sources such as fans, motors, and compressors mounted on the outside of buildings Interior noise can also be transmitted to the community through open windows and doors, and even through building walls. These interior noise sources have significant impacts on industrial workers, among whom noise- induced hearing loss is unfortunately common.

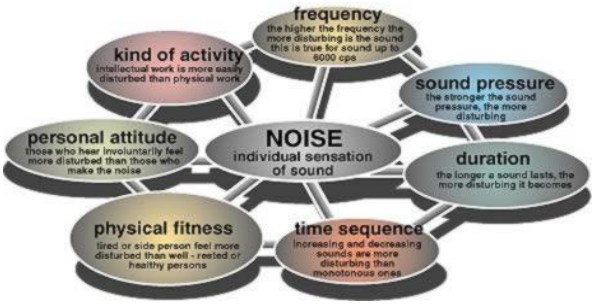
6. Noise in building: Apartment dwellers are often annoyed by noise in their homes, especially when the building is not well designed and constructed. In this case, internal building noise from plumbing, boilers, generators, air conditioners, and fans, can be audible and annoying. Improperly insulated walls and ceilings can reveal the sound of-amplified music, voices, footfalls and noisy activities from neighboring units. External noise from emergency vehicles, traffic, refuse collection, and other city noises can be a problem for urban residents, especially when windows are open or insufficiently glazed.

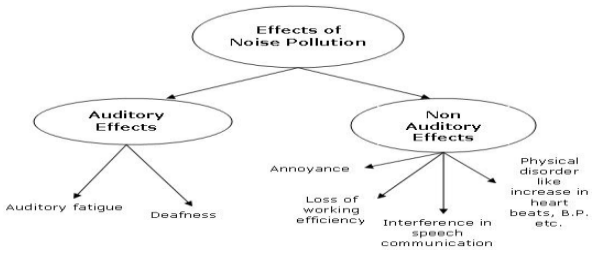
7. Noise from Consumer products: Certain household equipment, such as vacuum cleaners and some kitchen appliances have been and continue to be noisemakers, although their contribution to the daily noise dose is usually not very large.

Area	Limit in dB (A) Leq	
	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40
Note: A 'decibel 'is a unit in which noise is measured. 'A' in dB (A) Leq, denotes the frequency measurement of noise and corresponds to frequency response characteristics of the human ear. Whereas, 'Leq' is energy mean of the noise level, over a specified period.		

Effects of noise pollution

Why bother about noise? Often neglected, noise induces a severe impact on humans and on living organisms. The effect of noise on individual depends upon the frequency, sound pressure, duration, time sequence, physical fitness, personal attitude and kind of activity.





1. **Human health:** Noise pollution disturbs our health and behavior in a number of ways including deafness causing lack of sleep, irritability, indigestion, heartburn, high blood pressure, ulcers, and heart disease.
2. **Annoyance:** Sometimes, even low levels of noise are irritating and can be frustrating, and high volumes can be annoying. Natural sounds are less irritating than those we find uncontrollable but intermittent sounds such as a tap dripping water can be more irritating than the sound of falling rain.
3. **Speech interference:** Noise more than 50dB can be very difficult to hear and interpret and cause problems such as partial deafness.
4. **Sleep interference:** Very high levels of noise can wake people from their sleep with a jerk and keep them awake or disturb their sleep pattern. This could make them irritable and tired the next day.
5. **Decreased work performance:** Increased noise levels gives rise to a lack of concentration and accuracy at work, and reduce one's productivity and performance. Difficult tasks can be impaired, and instructions or warnings difficult to be heard and interpreted, causing accidents.

Control of Noise Pollution

Noise generation is associated with most of our daily activities. A healthy human ear responds to a very wide range of Sound Pressure Level (SPL) from - the threshold of hearing at zero dB, uncomfortable at 100-120 dB and painful at 130-140 dB. Due to the various adverse impacts of noise on humans and environment noise should be controlled. The technique or the combination of techniques to be employed for noise control depend upon the extent of the noise reduction required, nature of the equipment used and the economy aspects of the available techniques. The techniques employed for noise control can be broadly classified as

A. Control at source
B. Control in the transmission path
C. Using protective equipment.

A. Noise Control at Source: The noise pollution can be controlled at the source of generation itself by employing techniques like-

1. **Reducing the noise levels from domestic sectors:** The domestic noise coming from radio, tape recorders, television sets, mixers, washing machines, cooking operations can be minimized by their selective and judicious operation. By usage of carpets or any absorbing material, the noise generated from felling of items in house can be minimized.
2. **Maintenance of automobiles:** Regular servicing and tuning of vehicles will reduce the noise levels. Fixing of silencers to automobiles, two wheelers etc., will reduce the noise levels.
3. **Control over vibrations:** The vibrations of materials may be controlled using proper foundations, rubber padding etc.
4. **Low voice speaking:** Speaking at low voices enough for communication reduces the excess noise levels.
5. **Prohibition on usage of loud speakers:** By not permitting the usage of loudspeakers in the habitant zones except for important meetings / functions. Now-a-days, the urban Administration of the metro cities in India, is becoming stringent on usage of loudspeakers.
6. **Selection of machinery:** Optimum selection of machinery tools or equipment reduces excess noise levels. For example selection of chairs, or selection of certain machinery/equipment which generate less noise (Sound) due to its superior technology etc. is also an important factor in noise minimization strategy.
7. **Maintenance of machines:** Proper lubrication and maintenance of machines, vehicles etc. will reduce noise levels.

Control in the transmission path: The change in the transmission path will increase the length of travel for the wave and the wave will get absorbed/refracted/radiated in the surrounding environment. The available techniques are briefly discussed below.

1. **Installation of barriers:** Installation of barriers between noise source and receiver can attenuate the noise levels. The presence of the barrier itself can reflect sound back towards the source. At very large distances, the barrier becomes less effective because of the possibility of refractive atmospheric effects.
2. **Design of building:** The design of the building incorporating the use of suitable noise absorbing material for wall/door/window/ceiling will reduce the noise levels.
3. **Installation of panels or enclosures:** A sound source may be enclosed within a paneled structure such as room as a means of reducing the noise levels at the receiver.
4. **Green belt development:** Green belt development can attenuate the sound levels. The degree of attenuation varies with species of greenbelt.

Using protection equipment: Protective equipment usage is the ultimate step in noise control technology, i.e. after noise reduction at source and/or after the diversion or engineered control of transmission path of noise. The first step in the technique of using protective equipment is to gauge the intensity of the problem, identification of the sufferer and his exposure to the noise levels. The usage of protective equipment and the worker's exposure to the high noise levels can be minimized by –

1. Job rotation: By rotating the job between the workers working at a particular noise source or isolating a person, the adverse impacts can be reduced.

2. Exposure reduction: Regulations prescribe that, noise level of 90 dB for more than 8 hr continuous exposure is prohibited. Persons who are working under such conditions will be exposed to occupational health hazards. The schedule of the workers should be planned in such a way that, they should not be over exposed to the high noise levels.

3. Hearing protection: Equipment like earmuffs, ear plugs etc. are the commonly used devices for hearing protection. Attenuation provided by ear-muffs vary widely in respect to their size, shape, seal material etc.

Particularly, in our country the people generally lack consciousness of the ill effects which noise pollution creates. The target area should be educational institutions and more particularly school. The young children of impressionable age should be motivated to desist from playing with firecrackers, use of high sound producing equipments and instruments on festivals, religious and social functions, family get-togethers and celebrations etc. which cause noise pollution. The children should be taught civic sense and how to be good and responsible citizen which would include not to create noise pollution and to prevent if generated by others. Special talks and lectures should be organized in the schools to highlight the menance of noise pollution and the role of the children in preventing it.

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ARTIFICIAL INTELLIGENCE AND AAM ADMI

“Liberty lies in the hearts of men and women. When it dies there, no constitution, no law, no courts can save it. No one can do much to help it” - Learned Hand

Mobile has made an access to common man. SMS is bothering everyone if it is not asked for. But can it be used for common good cause also? Momentary early warning can be a god blessing to most if such bulk SMS is used for a cause to get alert.

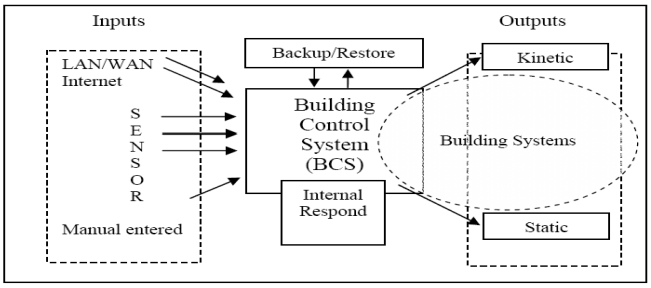
The hazards of disaster are causing significant disruption of socio economic life of communities leading to loss of life and property. India is one of the most disaster prone countries of the world. It has had some of the world’s most severe droughts, famines, cyclones, earthquakes, chemical disasters, mid-air head-on air collisions, rail accidents, and road accidents. India is also one of the most terrorist prone countries. Disasters have been endemic to our nation. India has gained considerable experience in the handling of a variety of major natural disasters like earthquakes, floods and cyclones. Thanks to technological advancements, some of these natural disasters can be predicted and emergency relief organs geared up before hand. In spite of technological advancement and our earlier experiences of tackling natural disasters, after every disaster there is a justified segment of the public who believes that suitable mechanisms do not exist for coordination and timely application of resources and prevention or mitigation of the effects of such disasters. It can be linked with community infrastructure development by Engineers.

Successful building design relies on an inter-disciplinary approach between building engineering, as well as architecture. An intelligent building is a dynamic and responsive architecture that provides every occupant with productive, cost effective and environmentally approved conditions. Some significant technologies for an intelligent building are new materials; embedded sensors technology; nano-technology; information technology and communications; photovoltaic; robotics; refined design, construction and facilities. The BAS controls and reports the following environment conditions, namely: temperature, humidity, air flow and air quality. Ambient Intelligence reflects an emerging and popular field of research and development that is oriented towards the goal of "intelligent" or "smart" environments that react in an attentive, adaptive, and active (sometimes even proactive) way to the presence and activities of humans and objects in order to provide intelligent/smart services to the inhabitants of these environments. The goal requires sensing capabilities, processing power, computing intelligence, and actuating capabilities distributed in the surrounding environment. While there will be quite a lot of technology involved, the goal is to hide it from the users by having the computer "disappear" in the users' perception and providing them with new forms of interactions that are rather implicit and not in the way one operates his/her programme on a personal computer.

Intelligent environments are invading every aspect of the modern city. In this new situation our place of work, entertainment, family and personal life may occupy the same location must be delimited by different information spaces and their digital ecologies. Let us see Building automation.

BUILDING AUTOMATION

Building automation is a programmed, computerized, intelligent network of electronic devices that monitor and control the mechanical and lighting systems in a building.



If such structure is provided with some sensors and automatic SMS service is utilized to warn common man, it will be few minutes/seconds early warning to a common Indian middle class man. We will get success in our mission if we will identify our responsibilities & try to behave in a responsible manner. It needs to change our mindset of “take everything but don’t give anything”. It’s our country, our people, our own family.

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PLASTIC HELPS SAVE WATER

Water is renewal source but its availability is limited and more so of fresh water. Total water available on the earth, below the earth or above the earth is a part of what is known as hydrologic cycle.

This water is put to multifarious such as drinking water, water for industries, water for power development & water for irrigation etc. With the increasing population, share of water per capita is decreasing. Same is true for irrigation as from the same land area or over decreased land area due to urbanization more & more food is to be produced to meet the needs of the growing population and this is possible only through irrigation.

We shall therefore concentrate on water for irrigation only. Irrigation is the application of water artificially for crop production. Excess as well as shortage of water for the crop results in reduced yield i.e. reduced production and productivity. In this light we can say that water management is maintenance of proper soil moisture regime in the crop root zone of crops.

Sources of irrigation water: Water for irrigation is available from reservoir through canal system, ponds, lakes, natural depression and ground water.

Reservoirs: Reservoirs are created by obstructing the flow path of water (a river) at a suitable site. The structure used to obstruct the flow path of water is a dam. This water is used for irrigation through a network of canal system and thus has to undergo a long journey before it reaches its end point i.e. Farmer's fields where crops are grown. As the soil both in reservoir and canal network is permeable lots of water is lost through seepage. To avoid this loss of water, lining of reservoir and canal are done. The lining material could be stone, brick, concrete, plastic lining etc. Out of the these lining materials, plastic lining are being practiced the most due to its lesser cost, effective seepage control and above all low repair and maintenance low cost of replacement.

Few of the advantages and disadvantages of canal liming are listed below:

Advantages of Lining:

The lining of an irrigation canal has the advantages (i) Reduce seepage losses by as much as 75 % means saving of water which otherwise would have required construction of bigger reservoir and dam for the same amount of actual water delivered to the field which implies more capital expenditure without much gain (ii) Reduction in losses and thereby making available more water for extension of irrigation to new areas and improvement of irrigation facilities in the areas already under irrigation, (iii) Brings more area under command due to very flat slope possible, (iv) Steeper side slopes and bed slope possible as the lined section is immune from erosion, (v) Higher velocity permissible, resulting in proportionate saving in cross sectional area, land width, quantum of earthwork excavation and construction of bridges and cross drainage works which in certain cases may offset completely the extra cost of lining, (vi) Prevents weed growth thereby resulting in saving of expenditure incurred on weed removal in the case of earthen channels,(vii) Environmental betterment, (viii) Reduction in erosion which occurs in unlined channels constructed in steep lands.

Disadvantages of Lining :

1. Higher initial investment, (ii) Costly repairs, (iii) Shifting of outlets is very costly because it involves dismantling and relaying of lining, (iv) More sophisticated construction equipment and skilled labour are required.

Ponds: Ponds are constructed at various places including Farmer's field. Such ponds

Can also be used for multiple purposes, but major use be used for irrigation purposes, but major use remains for irrigation purposes. To control seepage, plastic lining of 500 microns (Lldp) can be provided. In this case too, water to the extent of 50-70% is saved over unlined pond.

Apart from lining lot of water saving can be made by using efficient irrigation systems such as Drip Irrigation and Sprinkle Irrigation

Drip Irrigation:

Drip Irrigation system delivers water to the crop using a network of mainlines, sub- mains and lateral lines with emission points spaced along their lengths. Each dripper/ emitter, orifice supplies a measured, precisely controlled uniform application of water, nutrients, and other required growth substances directly into the root zone of the plant. Drip irrigation is today's need because Water- nature's gift to mankind is not unlimited and free forever. World water resources are fast diminishing.

Benefits of Drip Irrigation Systems.

- Increase in yield up to 150%.
- Saves water up to 70% compared to flood irrigation. More land can be irrigated with the water thus saved.
- Crop grows consistently, healthier and matures fast.
- Early maturity results in higher and faster returns on investment.
- Fertilizer use efficiency increases by 30%.
- Cost of fertilizers, inter- culturing and labour use gets reduced.
- Fertilizer and Chemical Treatment can be given through Micro Irrigation System itself.
- Undulating terrains, Saline, Water logged, Sandy & Hilly lands can also be brought under productive cultivation.

Sprinkler Irrigation:

Sprinkler Irrigation is a method of applying irrigation water which is similar to rainfall. Water is distributed through a system of pipes usually by pumping. It is then sprayed into the air and irrigated entire soil surface through spray heads so that it breads up into small water drops which fall to the ground.

- Sprinklers provide efficient coverage for small to large land and suitable for use on all types of properties. It is also adaptable to nearly all irrigable soils since sprinklers are available in a wide range of discharge capacity.
- Both drip system as well as sprinkler system (mostly) are made of plastic

Tubewells:

To tap the underground water. A tube well is a type of water well in which a long 100–200 mm (5 to 8 inch) wide stainless steel tube or pipe is bored into the underground aquifer. The lower end is fitted with a strainer, and a pump at the top lifts water for irrigation. The required depth of the well depends on the depth of the water table. Now a days the G.I. pipe is being replaced with plastic pipes which is cheaper & offers less friction to the moving water resulting into lower power consumption. Also due to lower friction, discharge capacity of tube well increases. Extra water available is due to the use of plastic pipe.

From the above it can be said in the field of irrigation "Plastic helps save water."

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(6) Aurangabad College of Engineering Gut No. 52, Tuljapur Shivar, (Savangi) Jalgaon Road, Aurangabad-431008 Maharashtra
✓ **Orissa**
(1) Dhaneshwar Rath Institute of Engineering & Management Studies, (Diploma Wing), Kairapari, Kotsahi (Tangi), Cuttack - 754022, Orissa

(2) Krupajal Engineering School Prasanti Vihar, Pubasason,Kausalya Ganga Bhubaneswar – 751002 Orissa
(3) KIIT University, AT/PO. : KIIT, Bhubaneshwar - 751024, Orissa
(4) Black Diamond College of Engineering & Technology, Jharsuguda (BDCET) At : Balijori, L & T Dhutra Road, Jharsuguda, Orissa-768202
(5) **Sanjay Memorial Institute of Technology,** Chandipadar, Via : Bhattakumarada, Berhampur,Dist.-Ganjam-761003 , Orissa
(6) Gopal Krishna College of Engineering & Technology, I.E.M., Gourahari Vihar, P.O.-Raniput, Jeypore, Koraput, Odisha-764005
(7) Orissa Engineering College, Nabajyoti Vihar, Nijigarh Kurki, P.O.-Harirajpur, Jatni, Bhubaneswar-752050, Orissa
(8) Suddhananda Engineering & Research Centre, At-Nachhipur, P.O. : Bhatapatana, Bhubaneswar, Dist : Khurda, Orissa -752115
(9) Raja Kishore Chandra Academy of Technology (Polytechnic), At/Po : Nilgiri, Dist : Balasore, Balasore-756040, Orissa
✓ **Punjab**
(1) Lovely Institute of Technology (Architecture), Jalandhar-Ludhiana, G.T.Road, Near Chehru Railway Bridge, Phagwara, Kapurthala-144402, Punjab
(2) Desh Bhagat Engineering College, Amloh Road, Mandi Gobingarh, Punjab
(3) Guru Nanak Dev Engineering College, Gill Road, Ludhiana, Punjab

✓ **Rajasthan**
(1) Sri Balaji College of Engineering & Technology, Benad Road (Dadi Ka Phatak), Jaipur - 302013, Rajasthan
(2) College of Engineering and Technology, Bikaner, Kani Industrial Area, Pugal Road, Bikaner-334005, Rajasthan
(3) Aayojan School of Architecture ISI-4, RIICO Institutional Block Sitapura, Goner RoadJaipur-302022 Rajasthan
(4) Aryabhatta College of Engineering and Reasearch Centre Ajmer- 305001 Rajasthan
(5) Saraf Institute of Engineering & Technology Tibbi Road- Extension, Hanumangarh Town Rajasthan-335513
(6) Siddhi Vinayak Engineering & Management College E-I, B-1, M.1.A., Institution Area Alwar-301001 Rajasthan
Uttrakhand
(1) Dehradun Institute of Technology, Mussoorle-Diversion Road, P.O. - Bhagwantpur, Dehradun, Uttrakhand
(2) Drona's College of Management & Technical Education Opposite Rajpur, Bypass, Sahastradhara Road, PO : Gujarada Dehradun-248001 Uttrakhand
✓ **Uttar Pradesh**
(1) Bundelkhand Institute of Engineering & Technology, Kanpur Road, Jhansi - 284128, Uttar Pradesh
(2) Radha Govind Engineering College, Anuyogipuram ,Near Medical College Garh Road, Meerut - 250004, Uttar Pradesh
(3) Gandhi Polytechnic, Muzaffarnagar, Uttar Pradesh
(4) Hewett Polytechnic, Lucknow, Mahanagar, Lucknow, Uttar Pradesh

(6) Lucknow Polytechnic Lucknow, Abhiyantrik Upnivesh, Krishna Nagar, Kanpur Road, Lucknow Uttar Pradesh
(7) Sevdie Institute of Management & Technology, (S.I.M.T), Chinhat Deva Road, Lucknow, Uttar Pradesh
(8) North India Institute of Technology 7th km Bundki Road,Najibabad Dist. Bijnor,Bijnor-246763 Uttar Pradesh
(9) Devprayag Institute of Technical Studies, Devprayag Technical Campus, Phaphamau, Allahabad, Uttar Pradesh
(10) Jaswant Singh Bhadauria Institute of Technology Kosi Khurd Bharatpur Road Mathura- 281005, Uttar Pradesh
(11) Sunderdeep College of Architecture NH-24, Sunder Deep Nagar Delhi-Hapur Road Dasna Ghaziabad-201001 Uttar Pradesh
(12) Goel Institute of Technology & Management Lucknow -Faizabad Road, Near Indiara Canal Lucknow-227105 Uttar Pradesh
(13) M G Institute of Management & Technology 8th Km. Mile Stone from Amausi Airport, Lucknow-Kanpur Highway, Banthara, Lucknow-227101 Uttar Pradesh
✓ **West Bengal**
(1) North Calcutta Polytechnic, 15, G.M. Lane, Kolkata-700002, West Bengal
(2) Camellia School of Engineering & Technology, Nadibhag, P.O.-Kajipara, Barasat, Kolkata-700124, West Bengal
(3) JIS College of Engineering, Block "A" Phase-III, Kalyani, Nadia, West Bengal-741235
(4) Rajmati Prichand Bothra Memorial Jiaganj College of Engineering & Technology (RPBM) At - Hatibhjan, PO. Jiagan, Dist. – Murshidabad-742123, West Bengal

ABSTRACT

S. No.	State	No. of MoUs
1.	Andhra Pradesh	9
2.	Assam	2
3.	Bihar	2
4.	Chhattisgarh	2
5.	Delhi	1
6.	Gujarat	4
7.	Haryana	5
8.	Himachal Pradesh	3
9.	Jammu and Kashmir	5
10.	Jharkhand	4
11.	Karnataka	2
12.	Kerala	3
13.	Madhya Pradesh	8
14.	Maharashtra	6
15.	Orissa	9
16.	Punjab	3
17.	Rajasthan	6
18.	Uttarakhand	2
19.	Uttar Pradesh	12
20.	West Bengal	4
	Total	92

Add to Your Vocabulary

- **House Sewer**
  The watertight soil pipe extending from the exterior of the foundation wall to the public sewer.

- **Hydrology**
  The science of water related to its properties and distribution in the atmosphere, on the land surface, and beneath the surface of the land.

- **Initial Stress**
  In prestressed concrete, the stresses occurring in the prestressed members before any losses occur.

- **Invert**
  The bottom or lowest point of the internal surface of the transverse cross section of a pipe.

- **Jambs**
  The top and slide of a door, window, or other opening. Includes studs as well as the frame and trim.

- **Klin**
  A furnace or oven for burning limestone to make lime; or a furnace for firing bricks.

- **Lacing**
  Small flat plates used to connect individual sections of built up members.

- **Negative Moment**
  Bending moment in a member such that tension stresses are produced in the top portions of the member; typically occurs in continuous beams and spans over the intermediate supports.

- **Perimeter Drain**
  The drainage system installed below ground around the exterior base of a foundation footing.

- **Ponding**
  A condition where water stands on a roof for prolonged periods due to poor drainage and /or deflection of the deck.

- **Roof Overhang**
  A roof extension beyond the endwall/sidewall of a building.

- **Spalling**
  The chipping or flaking of concrete, bricks, or other masonry where improper drainage or venting and freeze/thaw cycling exists.

Professional Vistas

- **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.
- **Recognition by Association of Indian Universities (AIU)**
  vide letter No. EV/III (366)/2008/71 Dated 11.04.2008.
- **Recognition by All India Council for Technical Education (AICTE)**
  vide letter No. Eqvi./AB/Gen.Corr./2008-09 Dated 16.09.2008.
- **Recognition by Union Public Service Commission (UPSC)**
  vide letter No. F.2/1/2007-EIB Dated 30. 06.2009.
- **Recognition for GATE by National Coordinating Board-Gate, Deptt. of Education, MHRD, GoI.**
- **Recognition by Government of Goa**
  vide letter No.12/11/87-PER/Vol.II Dated 06.03.2008.
- **Recognition by Directorate of Technical Education, Haryana**
  vide letter No.351-53/Dev. Dated 13.06.2008.
- **Recognition by Government of Kerala**
  vide letter No.3946/GI/08/H. Edn Dated 08.07.2008
- **Recognition by RITES Limited**
  vide letter No. RITES/RI/RCED/Misc/2008 Dated 14.07.2008.
- **Recognition by Delhi Development Authority (DDA)**
  vide letter No.F.7(98)2008/PBI/2399 Dated. 20.08.2008.
- **Recognition by Government of Meghalaya**
  vide letter No. FDN.156/2001/249-A Dated 21.08.2008.
- **Recognition by IRCON INTERNATIONAL LIMITED**
  vide letter No. IRCON/HRM/31/28/728 Dated 01.09.2008.
- **Recognition by Directorate General Border Roads**
  vide letter No. 13616/Gen/Rect /DGBR/97/E1A Dated 21.10.2008.
- **Recognition by Government of National Capital Territory of Delhi**
  vide letter No.1(1)/2008-DD/SB/1520/5609 Dated 29.10.2008.
- **Recognition by Shapoorji Pallonji & Co. Ltd.**
  vide letter No. Nil Dated 30.10.2008.
- **Recognition by Government of Andhra Pradesh**
  vide letter No. 10232/EC.2/2008-02 Dated 05.11.2008.
- **Recognition by Administration of Daman & Diu (UT)**
  vide letter No. 10.2 (PART-IV) EST-GP/2008-09/797 Dated 11.11.2008.
- **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.
- **Recognition by Visvesvaraya Technological University, Karnataka**
  vide letter No. VTU/Aca/OS-GC/2009-10/2118 Dated 04.06.2009
- **Recognition by Government of Nagaland**
  vide letter No. IT/10-1/04 Dated 30.07.2009
- **Recognition by Government of Uttarakhand, PWD, Pauri Garhwal**
  vide letter No.1011/20(15) E.A.-Parv./09-10 Dated 06.09.2009.
- **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.
- **Recognition by Government of Punjab, Technical Education and Industrial Training, Punjab Chandigarh.**
  vide letter No.1362 Dated 24.06.2010.
- **Rural Electrification Corporation Limited (A Government of India Enterprises)**
  vide letter No. REC/ED(HR)/Trg./2010-11/ Dated 10.08.2010
- **Cement Corporation of India Ltd. (A Government of India Enterprises)**
  vide letter No. PD/HRD/6/6/2010/6119 Dated 12.08.2010

- **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

- **Recognition by Anna University Chennai, Chennai-600025**
  vide letter No.2664?AU/DD1-DAC/2011/F21
  Dated 07.01.2011

- **Recognition by Government of West Bengal, Directorate of Technical Education & Training, Kolkata**
  vide letter No.728 TET
  Dated 28.03.2011

[TO BE PUBLISHED IN PART-1 SECTION -I OF GAZATTE 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

The Manager,
Government of India Press,
Faridabad.

..contd./-

Professional Vistas

(भारत के राजपत्र के भाग–। खण्ड–। में प्रकाशन के लिए)

भारत सरकार
मानव संसाधन विकास मंत्रालय
उच्चतर शिक्षा विभाग

शास्त्री भवन, नई दिल्ली

6 नवम्बर, 2007

अधिसूचना

सं.एफ. 24–1/2007–टी.एस.।।। शैक्षणिक योग्यताओं को मान्यता प्रदान करने के लिए उच्च स्तरीय 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 पदों पर रोजगार देने के उद्देश्य से शैक्षणिक सत्र, 2007–08 से सिविल इंजीनियरी संस्थान (भारत), लुधियाना (पंजाब) के अखिल भारतीय तकनीकी शिक्षा परिषद द्वारा अनुमोदित पाठ्यचर्या अनुसार संचालित सिविल इंजीनियरी और वास्तुकला इंजीनियरी पाठ्यक्रमों में एसोशिएट सदस्यता पाठ्यक्रम की धारा (क) और (ख) को डिग्री के समकक्ष और तकनीकी इंजीनियरों (त) के भाग । और ।। 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 अधिकृत दाखिला क्षमता से अधिक नहीं हो जिसके साथ सिविल इंजीनियरी संस्थान (भारत), लुधियाना (पंजाब) ने संगम 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
दूरभाषः 23381097

सेवा में,

प्रबंधक
भारत सरकार प्रेस

Please visit ICE(I) Notification At MHRD Website :
www.education.nic.in/Tech/Recoeduqualfs.pdf

SNIPPETS

29th MEETING OF BOARD OF GOVERNORS

The Meeting of Board of Governors of the Engineering Council of India was held on November 28, 2011 at Bhabha Hall, SCOPE Convention Centre, SCOPE Complex, 7, Lodhi Road, New Delhi. Er. S.L. Swamy, Chairman ICE (I) who is on the Board of Governors of ECI attended the meeting.

WINTER -2011 EXAMINATION RESULT

Results of Winter -2011 Examination is likely to be declared in 2nd week of February, 2012. Students can contact their respective students chapters/ ICE (I) office for the same.

INAUGURATION OF GIAYANI DEVI MEMORIAL ITI AT ABOHAR

Giani Devi Memorial ITI was inaugurated at Abohar, Fazilka, Punjab on 4th Oct 2011, by Chief Guest, Dr. Basant Garg, Depty Commissioner of Police, Fazilka, Punjab. Dr. Mahindra Kumar Rinwa, Ex MLA Fazilka, Punjab and Er. S.L. Swamy, Chairman, ICE(I) graced the occasion as Guests of Honor. This ITI is sponsored by the Institution of Civil Engineers Society for promoting skill based programmes in various trades in Abohar, Fazilka , Punjab.

The Chairman & Staff of

The Institution of Civil Engineers (India)

Wishes a very happy and prosperous

New Year- 2012

To all the Corporate & Non- Corporate

Members of the ICE(I) and the readers of the

"Civil Engineer" News Letter of ICE (I)